41st Annual Salmonid Restoration Conference

March 26-29, 2024 Santa Rosa, CA

Holding Space—Restoring Habitat and Making Room for Innovation

Conference Co-Sponsors

Alnus Ecological, American Rivers, Balance Hydrologics, Inc.,
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If You Produce It, Will They Come?

Reckoning with Ever Fluctuating Circumstances

Many restorationists are likely familiar with the experience of feeling like you have learned some hard lessons and integrated adaptive management to avoid making the same mistakes. You assume the adaptive, think smarter posture but somehow the framework that you are working in keeps shifting so even though you think you've hatched the best plan for the moment, the floor drops out.

Not to be overly dramatic, but I think we have collectively arrived at this moment. The restoration field faced with unprecedented opportunity dared to dream bigger, built capacity, and most projects are now reckoning with the cost of inflation, budget freezes, and no real road map to keep up with insurmountable opportunity lacking sustainable funding sources.

In the specifics of the SRF Conference, we decided to go bigger and better in 2024 since we learned the hard lesson of having our conference sell out so early last year to the dismay and disgruntlement of so many of our valued restoration partners. We invested both literally and figuratively in a hybrid way to produce the conference to increase accessibility and maintain affordability for what has become the largest salmon restoration conference in California.

What SRF Did in 2023 with Support from our State Partners:

- Produced the 40th Annual Salmonid Restoration Conference in Fortuna, CA
- Built ten-million gallons of water storage and for flow augmentation in the South Fork Eel River
- Produced the 25th Annual Coho Confab in the Mattole
- Launched the Redwood Creek, SF Eel Storage & Forbearance Program
- Completed flow enhancement implementation plans for Redwood & Sproul Creeks, SF Eel
- Creating a more robust Diversity, Equity, and Inclusion scholarship program

The state budget freeze and the lack of a federally-approved budget have thrown a wrench in our plan to go big, to create a venue where on-the-ground practitioners and their state, federal, and county cohorts get to really engage and make person-to-person progress on the "wicked problems" of water scarcity, salmonid recovery, and watershed restoration in a landscape of fire, climate change, and extended droughts.

When faced with the political construct of what is essential, it is hard not to ponder what we consider essential. SRF considers our restoration partners essential to the function, operation, and vision of restoring salmonids in California. We consider the California Conservation Corps and Watershed Stewards Program essential to the training of young professionals. We consider our colleagues at CDFW, Wildlife Conservation Board, the State and Regional Water Board, Department of Water Resources, and State Coastal Conservancy essential to the vision and execution of grant programs and policies in which we work to protect and restore salmon and their habitats. Your presence, participation, and myriad voices are essential to carry on the hard work of restoration.

Ever the pollyanna, I hope that something resolves that enables the level of participation that we value and depend on. I realize that SRF's conference concerns are a microcosm of a much larger problem that is impacting each CA state agency right now from health care to the environment and everything in between. Let's all take a moment to realize the magnitude of what it means to work collaboratively and to recognize the essential nature of what each partner brings to our ever-evolving table.

—Dana Stolzman, Executive Director

Salmonid Restoration Federation

Restoring Habitat and Making Room for Innovation

A new chapter unfolds in the Klamath River Basin as the river reveals long-buried habitat in the upper Iron Gate Reservoir reach. Dam removal represents the beginning of an era of restoration, as well as an end of an era of reservoirs and their associated localized benefits and impacts.
Credit: Shane Anderson, Swiftwater Films. Drone footage below IronGate dam

Salmonid Restoration Federation (SRF) produces the largest salmon restoration in California that convenes a diverse range of people in the watershed restoration field including planners, engineers, policy makers, students, Watershed Stewards Program members, consultants, academics, tribal members, on-the-ground practitioners, and landowners. It is these wide range of practitioners and intersectionality of science and application that animates our conference and creates a dynamic venue for learning from one another's experience and expertise.

SRF will host the 41st Annual Salmonid Restoration Conference in Santa Rosa, CA on March 26-29, 2024. To ensure that we do not sell out early like we did last year, we are hosting the conference at the Sonoma Fairgrounds for the workshops and tours, and at the Hyatt Regency in downtown Santa Rosa for the main conference days. This is a state-of-the art facility that will have room for all of our multifaceted events including the Plenary session, a mentor-mentee program, a lively poster session, exhibitor space, and a banquet dinner and awards ceremony.

This year's Plenary will include keynote addresses from Mark Bransom (CEO of the Klamath River Renewal Corporation) and Frankie Myers (Yurok Tribe Vice-Chair) about the Environmental and Cultural Significance of the Klamath dam removal— the largest dam removal in history. Other keynotes include Armando Quintero, Director of California State Parks who will present on how language shapes our view and ability to achieve environmental justice. Jen Quan (West Coast Regional Administrator of NOAA Fisheries) will give a talk Making the Most of Opportunities for Salmon Recovery in a Warming World. Ann Willis, California Regional Director of American Rivers will present on the protecting rivers through science.

Participants will have the opportunity to explore innovative restoration projects and participate in technical workshops. The conference will include technical and practical workshops on forward-thinking restoration topics including:

- Community Outreach, Collaboration Tools, and Tribal Engagement Workshop
- Nature-like Fishways: Modern Perspectives and Techniques
- The Role of Conservation Hatcheries in Salmon Recovery
- Fish and Fire Conversation: Where Do We Go From Here?

Field tours include restoration projects in Lagunitas Creek, Napa River Restoration, the Garcia River Estuary Habitat Enhancement, Dry Creek, Process-Based Restoration in the Uplands of Western Sonoma, Urban Creek restoration, and the Laguna de Santa Rosa.

Concurrent sessions will highlight groundwater recharge planning, effectiveness monitoring, streamlined permitting pathways, Klamath post-dam removal restoration actions, fish passage, low-tech Process-Based Restoration and so much more.

Please visit the SRF website to see full descriptions of the workshops, field tours, and concurrent sessions. SRF also has a scholarship fund to ensure that the conference is accessible to students, tribal members, and landowners, who may not otherwise be able to attend. SRF will match each dollar contributed. Here is the link to our scholarship fund. *https://calsalmon.nationbuilder.com/srf_conf_scholarship_fund*

To learn more about the conference, please visit *https://www.calsalmon.org/conferences/41st-annual-salmonid-restoration-conference*

SRF 2024 Conference Registration

41st Annual Salmonid Restoration Conference, March 26-29, 2024

Name: _____ Phone (work): _____

Address: _____ (cell): _____

_____ Email: _____

Affiliation: _____ Advanced Registration Closes January 31, 2024

Workshops and Field Tours

	Advanced Registration	Late Registration	Fee
Tuesday, March 26			
1. Community Outreach, Collaboration Tools, and Tribal Engagement Workshop	$95	$105	_____
2. The Role of Conservation Hatcheries in Salmon Recovery Workshop and Tour	$95	$105	SOLD OUT
3. Nature-like Fishways: Modern Perspectives and Techniques (2-day workshop)	$190	$210	_____
4. City of Santa Rosa Urban Creek Tour	$85	$95	SOLD OUT
5. Process-Based Restoration in the Uplands Tour	$85	$95	SOLD OUT
Wednesday, March 27			
6. Forwarding the Fish & Fire Conversation Workshop	$95	$105	_____
7. Garcia River Estuary Habitat Enhancement Project Tour	$85	$95	SOLD OUT
8. Lagunitas Watershed Tour	$85	$95	SOLD OUT
9. Dry Creek Field Tour	$85	$95	SOLD OUT
10. Napa River Restoration: Mid - Upper Napa River Tour	$85	$95	SOLD OUT
11. Laguna de Santa Rosa Workshop and Tour	$95	$105	SOLD OUT
SRF Membership Dinner Soiree	$35	$40	_____

Conference

Thursday and Friday, March 28 & 29

SRF Member	$375	$425	_____
Non-Member	$425	$475	_____
Student (With ID)	$200	$200	_____
Friday Evening Banquet	$100	$115	_____

SRF Membership

❍ $50 Alevin ❍ $100 Fry ❍ $250 Smolt ❍ $500 Jack ❍ $1000 Spawner *Membership:* _____

Conference Scholarship Fund

$50 $100 $250 $500 $1,000 Other _____

Method of Payment: ❍ Check ❍ Money Order ❍ Purchase Order ❍ Credit Card **Payment Total:** _____

Purchase Orders will only be accepted for 5 or more people. Each registrant is required to fill out an individual registration form.

❍VISA ❍MasterCard Credit Card#_____ Exp. Date_____

Mail form and payment to: 1018 2nd Street, Eureka, California 95501 • Make checks payable to SRF.
Phone: (707) 923-7501 • Fax: (707) 923-3135 • info@calsalmon.org
Please Note: We do not offer refunds but conference passes can be transferred to another person or deferred until 2025.
Receipts are emailed, so print legibly • This form is available at www.calsalmon.org

Workshops & Tours

Tuesday, March 26

Community Outreach, Collaboration Tools, and Tribal Engagement Workshop

Workshop Coordinators: Kristen Wright, National Policy Consensus Center, Portland State University; Leslie Wolff, NOAA Fisheries, West Coast Region; Mary Burke, California Trout North Coast Program Manager; and Robin Hoffman, Cultural Resources Program Manager, and Jason White, Engineer, Environmental Science Associates

This workshop will build your knowledge and personal tools for collaborative success. The tools and practice sessions with case studies will deepen your understanding of the "science of collaboration." The morning will focus on the Fundamental Dynamics and Principles of Collaboration and provides a framework for evaluating and improving collaborative efforts as well as Personal Tools for Collaborative Success.

The afternoon session will focus on providing the regulatory background for tribal consultation, highlighting the benefits of tribal engagement early in project development, providing best practices/processes for tribal engagement, and reviewing multiple case studies that address these issues. The session will include round-table and panel discussions, as well as presentations, with the aim to provide project proponents, sponsors, and agencies with additional tools to develop and implement approaches to successful tribal engagement and project design/implementation.

The Role of Conservation Hatcheries in Salmon Recovery Workshop and Tour

Workshop Coordinators: Mariska Obedzinski, California Sea Grant, Rory Taylor, U.S. Army Corps of Engineers, Gregg Horton, Sonoma Water, and Bob Coey, National Marine Fisheries Service

WSP member releases juvenile coho salmon into a Russian River tributary
Credit: California Sea Grant

In coho salmon populations near the southern extent of the species' range in coastal California, undoing centuries of habitat loss and degradation cannot always happen at a fast enough pace to prevent local extirpation. Increasingly, supplementation of wild fish via conservation hatchery releases is being used to maintain populations until self-sustaining runs can be re-established. The workshop will explore the role of conservation hatcheries in salmon recovery through a combination of talks, a tour of the Don Clausen Fish Hatchery at Warm Springs Dam, and a panel discussion. Topics will include hatchery practices, spawning approaches to maximize genetic diversity, release strategies, and monitoring approaches and results.

Nature-like Fishways: Modern Perspectives and Techniques

Workshop Coordinators: Tyler Kreider, PE, Kleinschmidt; Mike Garello, PE, HDR, Inc.; and Mike Love, PE, Michael Love & Associates

This two-day Nature-like Fishways (NLF) workshop will be instructed by nine leading practitioners in the field of NLF implementation, including representatives from both private and public agencies. The goal of the workshop is to share knowledge of nature-like fishway design and long-term stability observations among practitioners, regulators, and operators to improve the collective awareness of contemporary NLF science and design methodologies to ultimately provide more effective and sustainable passage for fish.

Pool and Weir Nature-like Fishway constructed on small stream
Credit: Bjorn Lake, NOAA

City of Santa Rosa Urban Creek Tour

Field Tour Coordinator: Steve Brady, City of Santa Rosa

Join the City of Santa Rosa's (City) Storm Water & Creeks Team on a full-day tour to learn about urban creek challenges and tour a few of our past, present, and future creek restoration projects in Santa Rosa. The tour will highlight the City and Sonoma Water's Creek Stewardship Program, showcase low impact development (LID) features, and explore multiple creek restoration projects including: the Prince Memorial Greenway on Santa Rosa Creek; the 1.3 mile-long Lower Colgan Creek Restoration; and native plant revegetation project along Santa Rosa Creek. While traveling between sites, we will discuss illegal camping impacts, invasive vegetation management, stewardship initiatives, volunteer activities, and small-scale restorations throughout the City.

Lower Colgan Creek Restoration in southwest Santa Rosa. Credit: City of Santa Rosa

Process-based Restoration on the Uplands Tour

Field Tour Coordinators: Brock Dolman and Kate Lundquist, Occidental Arts & Ecology Center

Field Tour Contributors: Damion Ciotti, U.S. Fish and Wildlife Coastal Program; Kevin Swift, Swift Water Design; and Loren Poncia, Stemple Creek Ranch

This full-day field tour will focus on low-tech process-based restoration projects in two watersheds. The first half of the tour will take place in the headwaters of Dutch Bill Creek at the 80-acre Occidental Arts & Ecology Center (OAEC) site. The second part of the field tour will be to Little Fallon Creek, a sub-tributary of Stemple Creek. Here the U.S. Fish and Wildlife Service, OAEC and Swift Water Design partnered with Stemple Creek Ranch owner to install a pilot beaver dam analogue (BDA) complex in 2023. Building upon this existing riparian stewardship effort presents an opportunity to employ low-tech process-based restoration techniques at a spatial scale necessary to trap and store significant sediment before it reaches Estero de San Antonio lagoon.

Wednesday, March 27, 2024

Forwarding the Fish & Fire Conversation Workshop

Workshop Coordinators: Lenya Quinn-Davidson, University of California Agriculture and Natural Resources Fire Network; Josh Smith, Watershed Research and Training Center; and Will Harling, Mid Klamath Watershed Council

This workshop will include three major themes for learning and dialogue: 1) Managing the Post-Fire Landscape, delving into the McKinney Fire as an example; 2) Examples of Integrated Management and Restoration, including projects that consider and address both upland and aquatic values; and 3) Prescribed Fire 101, an interactive session where participants will begin to see the landscape through the lens of fire, and learn the nuts and bolts of prescribed fire planning and implementation.

Landscape-Scale Firing Operations During the 2023 SRF Lightning Complex Wildfires, Zeke Lunder, The Lookout

Fish and Fire: Time for a New Perspective?, Gordon Reeves, Ph.D, Oregon State University

2023 saw several fires burning in important watersheds, including the Smith River Complex in Del Norte County. Credit: Lenya Quinn-Davidson

Part 1: Managing the Post-Fire Landscape: The McKinney Fire Example

Facilitated by Josh Smith, Watershed Research and Training Center

McKinney Fire Debris Flows and the 2022 Klamath River Fish Kill, Toz Soto, Karuk Tribe

Discussion on Post-Fire Restoration

Part 2: Examples of Integrated Management and Restoration

Facilitated by Will Harling, Mid-Klamath Watershed Council

Post Wildfire Observations—A Whole Lot of Gray Area, Josh Smith, Watershed Research and Training Center

Post-Fire Process-Based Restoration (PBR), Karen Pope, Ph.D., USDA Forest Service, Pacific Southwest Research Station

Long-Term Impacts of Natural Forest Fires on Streamflow, Gabrielle Boisrame, Desert Research Institute

Restoring Beneficial Fire Processes in the Klamath Mountains to Improve Instream Habitat and Bring our Salmon Home, Will Harling, Mid-Klamath Watershed Council

Part 3: Prescribed Fire 101

Led by Lenya Quinn-Davidson

This will be an interactive working session that helps participants see the landscape through the lens of fire, and helps them think about what it would look like to bring prescribed fire into their management toolbox. Topics will include laws and regulations, liability, burn planning, the basics of implementation, and how to connect with key partners and leaders at the local level to put fire on the ground.

Other collaborators will include: Sasha Berleman, Audubon Canyon; Ranch/Good Fire Alliance; and Sarah Gibson, The Nature Conservancy

Large-Scale Restoration in a Dynamic Estuary System: A Tour of the Garcia River Estuary Habitat Enhancement Project Tour

Field Tour Coordinators: Peter Van De Burgt, TNC and Lauren Hammack, Prunuske Chatham, Inc.

The Garcia River, in southern Mendocino County, supports populations of Coho salmon, Chinook salmon, and steelhead trout. This field tour will provide an opportunity to catch a bird's eye view of the entire Garcia River Estuary Enhancement project from atop the bluffs on the south side of the estuary, before hiking down to see some of the project features up close. Staff from TNC, PCI, and other project partners will lead a wide-ranging discussion about the realities of implementing a complex restoration project in a dynamic and sensitive estuary environment including planning, design, permitting, construction methods, monitoring, lessons learned, and everything in-between.

Garcia River estuary Credit: Keane Flynn

Lagunitas Watershed Tour

Field Tour Coordinators: Sarah Phillips, Marin RCD and Eric Ettlinger, Marin Water District

Lagunitas Creek watershed supports the largest population of wild coho salmon in the CCC ESU. A key factor limiting coho salmon survival in Lagunitas Creek is access to high quality winter habitat. Such habitat provides shelter from predators, high flow refuge, and opportunities for feeding and growth. This tour will visit Marin Municipal Water District's (Marin Water) over-wintering project site(s) that include over two miles of lower Lagunitas Creek that reconnected historic secondary channels and installed large wood structures. While the project achieved many of its design objectives, this tour will highlight aspects of the project that were less than successful to gain insight toward future projects. Additionally, the tour will visit the most productive tributary to Lagunitas, San Geronimo Creek, to check out a more recently implemented project by SPAWN, designed by ESA. It created and restored an estimated five acres of creek habitat, including activities such as; widening of floodplains, a new side channel, innovative 'tree islands,' and upland habitat vegetation restoration. Finally, we'll hear about an exciting up and coming project on that same former golf course property where many partners have come together in a collaborative means to design an innovative habitat restoration project with ESA's design team. The lead on the project includes TU with its supporting partner who is also the landowner, the Trust for Public Lands.

Winter habitat in Lagunitas Creek. Credit: Sarah Phillips, Marin RCD

Dry Creek Field Tour: Partnerships in Habitat Enhancement and Monitoring for Salmonid Recovery

Field Tour Coordinators: Justin Smith and David Cuneo, Sonoma Water

This all-day tour features salmonid habitat enhancement projects and monitoring programs on both private and public lands within the Dry Creek Basin. Since 2012, Sonoma Water and USACE have implemented projects in 17 enhancement reaches encompassing nearly four non-contiguous miles stretching from just upstream of the confluence with the Russian River to Warm Springs Dam.

A Dry Creek habitat enhancement under construction on private property. This project was built by McCullough Construction. Implementation of the project was managed by the USACE. The photo of this newly constructed project was taken during the 2023 construction season. Credit: Justin Smith

Napa River Restoration: Mid-Upper Napa River Tour

Field Tour Coordinators: Rick Thomasser and Jeremy Sarrow, Napa County Flood Control and Water District; Jorgen Blomberg, Principal ESA; Jason White, Restoration Engineer ESA; Leslie Ferguson, Restoration Specialist, SFRWQCB; and Napa County RCD

The Napa River Restoration Project (Project) is a 13.5-mile large scale river restoration project located in the mid-upper Napa River between St. Helena and Oak Knoll in Napa County. The Project restores spawning and winter/spring rearing habitat for steelhead and Chinook salmon. Both projects included the removal and setback of vineyards; expansion of riparian and channel habitat through channel widening, and floodplain, secondary channel and alcove grading; and addition of large wood and boulder features that will support resilient geomorphic processes. Secondary components of the Project included biotechnical stabilization, vegetation management, and site revegetation.

Riparian corridor expansion and increased channel complexity for velocity refuge and improved food production. Credit: Jorgen Blomberg

Realizing a Vision of Multi-benefit Restoration in the Laguna de Santa Rosa/Mark West Creek Watershed and Tour

Workshop & Tour Coordinator: Anne Morkill, Laguna de Santa Rosa Foundation

The Laguna de Santa Rosa/Mark West Creek watershed is the largest sub-watershed of the Russian River, encompassing 254 square miles in Sonoma County. This workshop will highlight a range of collaborative multi-benefit restoration efforts focused on improving conditions for fish and wildlife and the local community.

Topics will include examples of innovative regulatory and voluntary conservation measures that can facilitate both small and large-scale restoration on both private and public lands. The workshop will be held at the Laguna Environmental Center and will include presentations, participant discussion and afternoon field tour completed and proposed restoration projects along the Laguna de Santa Rosa.

Water Quality in the Laguna de Santa Rosa Watershed, Matt Graves, North Coast Regional Water Quality Control Board

Salmon in the Laguna?, Charlie Schneider, California Trout

Projects and Policies in the Lower Laguna Watershed Designed to Support Habitat Restoration, Neil Lassettre, Ph.D., Sonoma Water; and Sean McNeil, City of Santa Rosa

Streamflow and Beyond: The Multiple Benefits of Small-scale Water Storage and Forbearance Projects, Jessica Pollitz, P.E., Sonoma Resource Conservation District; Mary Ann King and Troy Cameron, Trout Unlimited

Collaboration in the Laguna de Santa Rosa Watershed: Regulators and the Regulated Community, Sean McNeil, City of Santa Rosa; and Matt Graves, North Coast Regional Water Quality Control Board

A Look to the Future: Restoration Plan for the Laguna de Santa Rosa, Neil Lassettre, Ph.D., Sonoma Water; and Scott Dusterhoff, San Francisco Estuary Institute

Aerial photo of the Laguna de Santa Rosa which is the largest wetland complex on the North Coast. Credit: Steve Gibbs

Conference Sessions

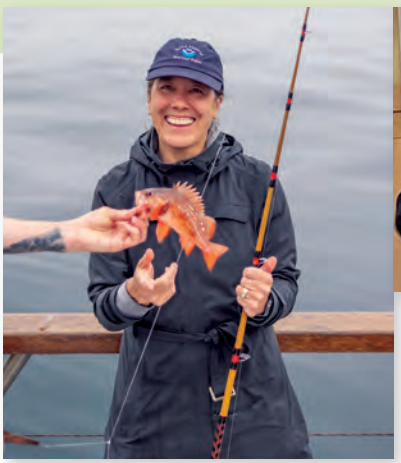
Plenary

Through the Evolution of Language, We Weave a Narrative for the Future, Armando Quintero, Director of California State Parks

Making the Most of Opportunities for Salmon Recovery in a Warming World, Jen Quan, West Coast Regional Administrator, NOAA Fisheries

The Cultural and Environmental Significance of the Klamath Dam Removal, Frankie Myers, Yurok Tribe Vice-Chair and Mark Bransom, CEO, Klamath River Renewal Corporation

Healthy Rivers, Healthy Communities: How River Conservation Heals Climate Change, Biodiversity Loss, and Environmental Justice, Ann Willis, Ph.D., California Regional Director, American Rivers



Frankie Myers, Yurok Tribe Vice-Chair, will give a keynote address on The Cultural and Environmental Significance of the Klamath Dam Removal

Jen Quan, NOAA Fisheries West Coast Regional Administrator, will give a keynote address on Making the Most of Opportunities for Salmon Recovery in a Warming World

Thursday Afternoon Concurrent Sessions

Klamath Dam Removal —Meeting the Moment and Planning for the Future

Session Coordinators: Bob Pagliuco, Marine Habitat Resource Specialist, NOAA Fisheries Restoration Center; and Mike Belchik Sr., Water Policy Analyst, Yurok Tribe

Klamath Dam Removal—Deconstruction Update, Mort McMillen, Executive Vice-President, McMillen Inc., Owner's Representative

Klamath Dam Removal—Restoration Update, Dave Coffman, PG., Director, Northern California and Southern Oregon RES

Researching What "Water Quality" Means as it Relates to the Future of the Klamath River with Dam Removal, Brook M Thompson, Yurok Tribal Member, Ph.D. Student Environmental Studies, UC Santa Cruz.

A Release Study Assessing the Survival of Juvenile Spring-Run Chinook Salmon in the Upper Klamath River Basin to Inform Reintroduction, Rachelle Tallman, UC Davis

The Klamath Basin Fisheries Collaborative: Science and Collaboration across a Newly Connected Basin, Summer Burdick, USGS and Betsy Stapleton, Scott River Watershed Council

Evaluating the Effectiveness of Dam Removal on the Klamath River Using SONAR and Radio Telemetry, Damon H. Goodman, California Trout

Klamath River Dam Removal and the Future of Dam Removal in California: 4 Down, 150 to Go, Ann Willis, Ph.D., California Regional Director, American Rivers

Group of river advocates viewing the release at Iron Gate Dam on 01/11/24 .
Credit: Sarah Beesley

Lightning Tales: Sharing Stories of Inspiration and Hope

Session Coordinators: Eli Asarian, Riverbend Sciences; and Sarah Phillips, Marin RCD

The Future of Restoration is Bright, Alison O'Dowd, Ph.D., Department of Environmental Science & Management, Cal Poly Humboldt

Listening to the River with Youth, Shannon Wedgley, Scott River Watershed Council

A Watershed Runs Through You —Wisdom from Freeman House, Cassie Pinnell, Vollmar Natural Lands Consulting

Sapiens, Braiding Sweetgrass, and Re-Envisioning Humanity's Role on Planet Earth, Eli Asarian, Riverbend Sciences

Recovery: the Common Ground Between Coho Salmon and Major Depressive Disorder, Elizabeth Ruiz, California Department of Fish and Wildlife

Help the Fish *and* Help the People, Julie Weeder, NOAA Fisheries

Lessons from Tyson Yunkaporta's Aunties, Mary Power, UC Berkeley, Angelo Coast Range Reserve

Hitch Magic, Kevin Swift, Swift Water Design

Everything but the Kitchen Sink Approach to Keeping Your Batteries Charged: One Fish Biologist's Perspective on Inspiration & Lesson Learned, Sarah Beesley, MS, Yurok Tribe Fisheries Department

River Ecologist: Profession or Disease?, Bill Trush, Cal Poly Humboldt River Institute

Close Encounters of the Coho Kind, Jonathan Warmerdam, North Coast Regional Water Quality Control Board

Proof of Concept, Erik Stromberg, PLA, CERP, Restoration Design Group, Inc.

A Lightning Lightning Tale, Karen Pope, Ph.D., USDA Forest Service, Pacific Southwest Research Station

Fire, Floods & Finding Hope: The Hulsman Ranch Story, Garrett Costello, Symbiotic Restoration

Mostly Natural—Collaborative Management Strategies in the Trinity River, CA, Justin Alvarez, Hoopa Valley Tribal Fisheries

It Takes More Than a Village: Restoration / Reconciliation of the Laguna de Santa Rosa, Clayton Creager, Laguna de Santa Rosa Foundation

Thiamine Deficiency in California Salmon and Steelhead

Session Coordinators: Nate Mantua, Ph.D., NOAA/NMFS Southwest Fisheries Science Center, and Abigail Ward, Center for Watershed Sciences, UC Davis

Widespread Thiamine Deficiency Found in California Salmon and Steelhead, Nate Mantua, Ph.D., NOAA/NMFS Southwest Fisheries Science Center

Bridging the Gap: Steelhead Ocean Foraging Ecology and the Link to Thiamine Deficiency Complex, Abigail Ward, Center for Watershed Sciences, UC Davis

Baseline Forage Fish Nutritional Quality in the California Current Ecosystem, Freya Rowland, Ph.D., U.S. Geological Survey Columbia Environmental Research Center

Developing a Dose-Response Model for Thiamine Deficiency in Central Valley Chinook, Miles Daniels, Ph.D., University of California, Santa Cruz and NOAA/NMFS/SWFSC

High School Students Investigating Thiamine Deficiency in Central Valley Salmon Alongside Researchers, Peggy Harte, *M.Ed.*, University of California, Davis and Center for Community and Citizen Science

Aquatic Ecology, Disturbance, and Floodplains

Session Coordinator: JD Wikert, USFWS

Timing of Periphyton Scour and Recovery for Food Web Dynamics in a Mediterranean System, Eric Peterson, Trinity River Restoration Program

Effects of Scour and Marginal Habitat Inundation of Trinity River Invertebrate Communities, Ben King, Cal Poly Humboldt

Applying Ecological Models to Pacific Salmon Predators, Katie McElroy, University of Washington

A Vision for Enhancing and Managing the Lower Stanislaus River for Fish, Wildlife, and People, JD Wikert, USFWS, and Rocko Brown, Cramer Fish Sciences

Fish Friendly Farms and Floodplains, Erik Stromburg, Restoration Design Group

O. mykiss Resilience, a Remarkable Example within the Lower Santa Ynez River Basin Santa Barbara County, CA , Timothy Robinson, Cachuma Operation and Maintenance Board

Wildfire and the Recovery of Southern California Steelhead, Mark Capelli, NOAA Fisheries

Stanley Wakefield Wilderness Area Restoration Project on the Stanislaus River initial post-project inundation.
Ccredit: Jesse Anderson, Cramer Fish Sciences

Accelerating Restoration—Updates and Examples to Help Get the Job Done

Session Coordinators: Erika Lovejoy, Sustainable Conservation, and Brad Henderson, CDFW

Less Paperwork, More Restoration—Hot Tips and New Tools for Expedited Habitat Restoration Permitting, Katie Haldeman and Stephanie Falzone, Sustainable Conservation

Three Years of Cutting the Green Tape: Program Updates and Case Studies from the California Department of Fish and Wildlife, Jennifer Olson, CDFW

Updates on New Regulatory Tools to Accelerate Restoration, Jake Shannon, North Coast Regional Water Quality Control Board

Programmatic Permitting for Restoration Projects Through NOAA Restoration Center—Insider Tips on How to Use Efficient Permitting Tools for Your Good Work!, Ruth Goodfield, NOAA Restoration Center

A Practitioner's Perspective, Jim Robins, Alnus Ecological and April Zohn, Ducks Unlimited, Inc.

Fire and Fish: Landscape-Level Fuels Reduction and Fisheries Habitat Enhancement Through the CA Vegetation Treatment Program (CalVTP), Cassie Pinnell and Drew Barber, Vollmar Natural Lands Consulting

Friday Morning Concurrent Sessions

Assessing the Patient(s): Status, Trend, and Validation Monitoring to Understand the State of Salmon Populations and Recovery Efforts in Coastal California

Session Coordinator: Gabe Rossi, UC Berkeley and California Trout Coastal River Ecologist, Ecosystem Sciences Division, UC Berkeley

Sequential Monitoring to Inform Reintroduction and Restoration of Anadromous Salmonid Populations in Watersheds Along the California Coast, Tommy Williams, NOAA Fisheries

Leveraging a 25 Year Monitoring Program to Evaluate Restoration Actions in the Yolo Bypass Floodplain, Nicole Kwan, California Department of Water Resources

An Integrated Monitoring Approach to Support Salmonid Recovery in the Russian River Watershed, Mariska Obedzinski, California Sea Grant

Fifty Years of Juvenile Salmonid Monitoring in Lagunitas Creek and Why It's Time to Try Something New, Eric Ettlinger, Marin Municipal Water District

Low Mainstem Survival of Juvenile Salmonids in Coastal California Rivers Impairs Recovery and Masks Survival Bottlenecks, Gabe Rossi, University of California, Berkeley; and Gregg Horton, Sonoma County Water Agency

Monitoring Adult Salmon and Steelhead Abundance in the Eel River Watershed and Future Monitoring Concepts to Inform Factors Limiting the Recovery of Salmonids in the Eel, David Kajtaniak, California Department of Fish and Wildlife

Did this Thing Come with Instructions? Exploring Engineering Overkill in Restoration

Session Coordinators: Eric Ginney, ESA, and Brian Cluer, NOAA Fisheries

Reflections of A Grumpy Old Engineer on the Design Process, Rachel Shea, PE, Michael Love & Associates, Inc

Pragmatic Aspects of Engineering and Geologic Involvement in Restoration, Jon Mann, PE, and Colin Hughes, PG, CEG, CDFW

It's All Relative—Why Context is Important in Ecosystem Restoration, Jeff Sanchez, PG, PH, California Department of Fish and Wildlife

Toward a Next Generation of Project Planning, Design, and Implementation, Darren Mierau, California Trout

Considering Construction at the Inception, Mark Cederborg, Outset Advisors

Employing Non-Engineered Techniques to Allow Fish Passage in Heavily Disturbed, Industrially Logged Landscapes, Thomas Leroy, Pacific Watershed Associates

Eel River Dam Removal: Opportunities and Considerations

Session Coordinator: Charlie Schneider, Cal Trout

Why Eel River Dam Removal Is Urgent: Safety, Supply, and Salmonid Recovery, Alicia Hamann, Friends of the Eel River

An Explanation of Regulatory Pathways for Potter Valley Project Decommissioning (and Other Boring Stuff), Steve Edmondson, NOAA Fisheries

Hydropower Dam Decommissioning—Data and Decision-Making, Meghan Quinn, American Rivers

Identifying Instream Flow Needs in the Eel River in a Post-Potter Valley Project Ecosystem, Scott McBain, McBain Associates

Designing a New Eel-Russian River Diversion Facility: Fish Passage Alternatives after Removal of Cape Horn Dam, Kevin Jensen, PE, McMillen, Inc., and David Manning, Sonoma Water

Columbia helicopter transporting a whole spruce tree from the Table Bluff Ecological Reserve to the Ocean Ranch Unit to help enhance tidal marsh habitat. Credit: Marisa McGrew, Wiyot Tribe Natural Resources Department.

Scott Dam on the Eel River. Credit: Kyle Schwartz

Evaluating the Trojan Y Chromosome Strategy for the Removal of Invasive Sacramento Pikeminnow from the Eel River, CA, Alex Juan, Cal Poly Humboldt,

Eel River Watershed, a Resilience Refuge: Identifying a Riparian Corridor Strategy for Climate Resilience Following Dam Removal, Christine Davis, California Trout

From Groundwater to Streamflow: Exploring the Science, Projects and Policies to Manage Groundwater Resources to Support Streamflows for Salmon and Public Trust Resources

Session Coordinators: Monty Schmitt, The Nature Conservancy; David Dralle, Ph.D., USDA; and Matt Clifford, Trout Unlimited

Evaluating Hydrologic Effects of Scott and Shasta River Irrigation Curtailments Using Remote Sensing and Streamflow Gage, Eli Asarian, Riverbend Sciences

Small-Scale Groundwater Recharge Opportunities for Streamflow Augmentation, Little Mill Creek, Navarro River Watershed, Christopher Woltemade, Ph.D., Prunuske Chatham, Inc.

Regional Approaches to Groundwater Management to Mitigate Streamflow Depletion: Case Studies from Napa, Sonoma, and Lake Counties, Matthew O'Connor, O'Connor Environmental, Inc.

Incorporating Site Characterization into Natural Landscape Engineering and Streamflow Enhancement Projects, Tasha McKee, Sanctuary Forest, Inc; and Wyeth Wunderlich, EBA Engineering

Groundwater into Streamflow: Principles and Guidelines for Cities and Counties to Develop Well Ordinance to Protect Streamflow for Salmon Habitat, Monty Schmitt, The Nature Conservancy

An Overview of Existing Legal and Policy Tools for Regulating Groundwater Withdrawals to Protect Surface Streamflow in California, Matthew Clifford, J.D. Trout Unlimited and Redgie Collins, J.D., California Trout

Beaver and Process-Based Restoration: Opportunities and Obstacles 1

Session Coordinator: Karen Pope, Ph.D., USDA Forest Service

Re-beavering California: Adding a New Tool to the Restoration Toolbox, Valerie Cook, California Department of Fish and Wildlife

The Process Paradox: Overcoming Challenges for Process-Based Restoration in the Regulated Rivers of California's Central Valley, Rocko Brown, Ph.D., PE, Cramer Fish Sciences

Evaluating and Forecasting Restoration Benefits for Trout and Salmon with Spatially Explicit Modeling, Bret Harvey, Ph.D., USDA Forest Service Pacific Southwest Research Station

Short-Term Hydrologic Responses to Process-Based Restoration, Emma Sevier, MS, California Polytechnic State University Humboldt, Pacific Watershed Associates

Scale Dependence and Habitat Selection by American beaver (*Castor canadensis*), Caroline Gengo, UC Davis, Center for Watershed Sciences

Process-Based Restoration in the Upper Klamath Basin: Stories, Lessons Learned, and Continued Challenges, Charlie Erdman, Trout Unlimited

The Bright Green Future for Process-Based Restoration, Michael M. Pollock, Ph.D., NOAA Fisheries

Friday Afternoon Concurrent Sessions

CDFW's first beaver release in 75 years! Credit: CDFW

Assessing the Patient(s): Status, Trend, and Validation Monitoring to Understand the State of Salmon Populations and Recovery Efforts in Coastal California

Session Coordinator: Gabe Rossi, California Trout Coastal River Ecologist, Ecosystem Sciences Division, UC Berkeley

Juvenile Salmonid Spatial Structure Surveys as a Platform for Assessing Drought Effects and Informing Management Decisions on a Landscape-Scale, Chris Loomis, CDFW

Implementing and Monitoring Lateral Connectivity for a Large Scale Salmonid Rearing Habitat Restoration Project on the Yuba River, Kirsten Sellheim, Cramer Fish Sciences

Ocean Ranch, Episode II: Return of the Sculpin, Smelt… and salmon. Estuarine Monitoring in Wiya't, Marisa McGrew, Wiyot Tribe

Drought Refuge Monitoring in Selected Central California Coho Salmon (*Oncorhynchus kisutch*) Watersheds, Elizabeth Ruiz, California Department of Fish and Wildlife

Controlling Sacramento Pikeminnow in the South Fork Eel River to Benefit Native Salmon, Phil Georgakakos, Ph.D., UC, Berkeley

Assessing the Outcomes of a Half Century of Hatchery Intervention for a Critically-Endangered Coho Population, Alexander Johanson, UC Davis

Collaborative Conservation of Ishyâat in a Spring-Run Chinook Salmon (*Oncorhynchus tshawytscha)* Stronghold: Results from the First Year, Amy Fingerle, University of California, Berkeley

From Groundwater to Streamflow: Exploring the Science, Projects and Policies to Manage Groundwater Resources to Support Streamflows for Salmon and Public Trust Resources

Session Coordinators: Monty Schmitt, The Nature Conservancy; David Dralle, Ph.D., USDA; and Matt Clifford, Trout Unlimited

Unified Modeling Approaches to Estimating Streamflow Depletion Due to Groundwater Pumping, Nick Murphy, The Nature Conservancy

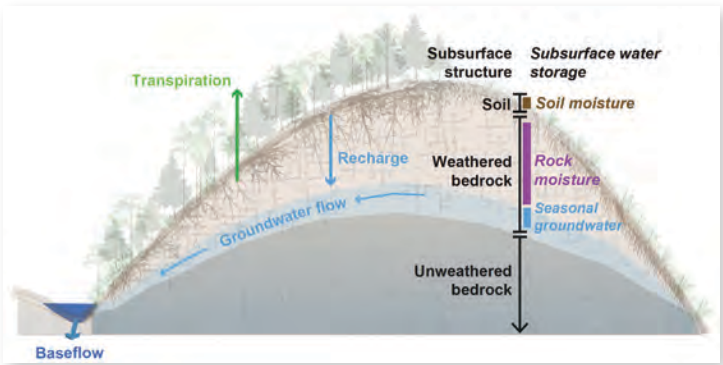
The Other Water Users: How Plant and Human Water Use Impact Streams, Dana A Lapides, USDA-ARS Southwest Watershed Research Center

Quantifying Streamflow Depletion from Groundwater Pumping Using Storage-Discharge Functions in Headwater Catchments, Phil Georgakakos, Ph.D., UC Berkeley

Approaches for Evaluating Streamflow Depletion; Shedding Some Light on the Secret, Occult, and Concealed Nature of Surface Water/Groundwater Interactions, Jeremy Kobor, MS, PG, OEI, Inc

Process Controls on Low Flows in Salmon-Supporting Headwater Catchments: What do we Know (and Not Know, but Could) that Can Help Inform Management?, David Dralle, Ph.D., USDA Forest Service

Effects of Short-Term Flow Reductions on Juvenile *O. mykiss*: An Experiment at the Sierra Nevada Aquatic Research Lab, Kelly Goedde-Matthews, UC Davis, Center for Watershed Sciences



Hillslope cross-section illustration demonstrates typical pathways of water flow below ground, tree water sources in soil and weathered bedrock, and fractured rock aquifers that drive streamflow generation in forested, salmon-supporting watersheds. Credit: David Dralle and Daniella Rempe

Oops! I Didn't Mean to Do That. Restoration Endeavors with Unintended Outcomes

Session Coordinator: Rachel Shea, Mike Love and Associates

A River Ran Through It…, Paul DeVries, Ph.D., PE, FP-C, Kleinschmidt Associates

Unanticipated Outcomes after Wildfire in the York Creek Dam Removal Project, Aaron Sutherlin, Riverscapes and Shorelines Director, WRA

Dredge Tailings are Made of Giant Drain Rocks, Charnna Gilmore, Scott River Watershed Council and Betsy Stapleton, Scott River Watershed Council

Honolulu Bar Restoration—A Decade Later, How Did We Do?, J.D. Wikert, USFWS

Lessons Learned—Hemphill Diversion Facility Fish Passage and Screening, Jon Burgi, P.E., McMillen Inc.

Learning from What Does Not Work—The Experimental Nature of Streamflow Restoration, Tasha McKee, Sanctuary Forest

Beaver and Process-Based Restoration: Opportunities and Obstacles 2

Session Coordinator: Karen Pope, Ph.D., USDA Forest Service

Expanding Process Based Restoration in California with a Network Approach, Carrie Monohan, Ph.D., The Sierra Fund

Process-Based Restoration Enhances Geo-Hydro-Bio-Diversity in Riparian Systems Post Dam Removal: A Case Study of Dry Creek in the Northern Sierra Nevada Foothills, Matt Berry, Sierra Streams Institute

Symbiotic Restoration on Martis Creek, Truckee California—A Story of Inter-Species Cooperation, Catherine Schnurrenberger, C.S. Ecological Surveys

Well? Did it Work?, Kevin Swift, Swift Water Design

Process-Based Restoration in Burned Headwater Meadows: Exploring Potential for Sediment Storage and Floodplain Reconnection, Kate Wilcox, USDA Forest Service, Pacific Southwest Research Station

Do Beaver Dam Analogs Facilitate More Optimal Foraging by Juvenile Coho?, Brandi Goss, UC Davis

10 Years of Experience Working with Beaver for Restoration in a Human Dominated Landscape, Betsy Stapleton, Scott River Watershed Council

Fish Passage and Other Intriguing Talks

Session Coordinator: Shane Scott, SSA Environmental

Aquatic Organism Passage (AOP) Solutions at Culverts and Fish Barrier Management in North America, Shane Scott, SSA Environmental

Going Slow and Going Together—Navigating Project Meanders and Building Consensus to Restore Fish Passage in the Napa River Watershed, Frances Knapczyk, Napa County RCD; Patrick Samuel, Cal Trout, and Matt Erikson, CDFW

Explosives, Helicopters and Hard Work: Restoring Steelhead to Jalama Creek, Laura Riege, TNC

Pulling Back the Redwood Curtain: Revealing the Ecological Challenges of Abandoned Cannabis Cultivation Sites in Remote Landscapes, Drew Barber, Vollmar Natural Lands Consulting

Assessment of Juvenile Chinook Salmon Migration in the Sacramento Valley, Alexandra Wampler, UC Davis

If you Build It, Will Coho Run?

Marshall Ranch Ponds Constructed to Maintain Redwood Creek Summer Flows

Coho salmon persist in scattered watersheds throughout the North Coast of California especially in forested tributaries that provide habitat refugia. Redwood Creek is a rare example of a populated watershed that still retains intrinsic potential for Coho salmon recovery. For over ten years, SRF has studied low flow trends in Redwood Creek, a critical salmon-bearing tributary to the South Fork Eel River.

After many years of feasibility analysis, monitoring, and outreach, SRF and Stillwater Sciences identified the historic Marshall Ranch that bridges Redwood Creek, Somerville Creek, and Sproul Creek Sproul and Redwood Creek as the optimal location for a large-scale flow enhancement project that could augment flows in Redwood Creek.

The Marshall Ranch is the largest contiguous private holding in Redwood Creek and is fully protected under a conservation easement. This working ranch has been in the Marshall family ownership since the 1800s and is protected in perpetuity with conservation "envelopes" for restoration opportunities such as a flow-enhancement project that includes the ten-million gallons of winter water storage between two off-channel ponds and over 100,000-gallons stored in water tanks that are plumbed for fire-fighting emergencies. The purpose of this project is to release cool water into Redwood Creek during the five-month dry season to benefit threatened salmonids and other aquatic species. The flow releases will benefit the mainstem of the creek from the Marshall Ranch all the way to the confluence with the South Fork Eel River.

In the summer of 2023, two large offstream ponds were excavated on geologically stable flats on the Marshall Ranch adjacent to Redwood Creek. The restoration project worked with Edwards Excavation and included: excavating and lining the two large ponds, large wood installation to enhance fish habitat in Redwood Creek, rock grade control structures to stabilize incised gullies; installing a French drain and an infiltration gallery, as well as all the associated plumbing to allow for metered and adaptively managed flow releases. The project site was then seeded with native grasses for erosion control and enhancement projects combined would help accomplish our target flow goal of an average of 50 gallons per minute of flow release, providing flow connectivity that sustains fish during the dry season.

Creating grade control structures on the cooling gallery. Credit: Joaquin Courtemanche

In summary, after years of outreach, monitoring, and a Redwood Creek feasibility analysis, SRF and Stillwater Sciences have successfully developed and are pursuing a variety of flow-enhancement opportunities ranging from groundwater recharge in the headwaters of Redwood Creek to flow-release projects in the mainstem on the Marshall Ranch, storage and forbearance projects downstream, and a recently funded forest-thinning component that will study the nexus between selective forest thinning and dry season stream flows.

This evolving work proves the adage that it takes a community to raise a Coho!

West pond (left) was full in January. Credit: Joel Monsehke

The meadow area (above) that was reseeded with native grasses. Credit: Hugh McGee, Native Ecosystems