40th Annual Salmonid Restoration Conference April 25-28, 2023 Fortuna, CA

Deep Roots —Celebrating 40 Years of Watershed Restoration



Conference Co-Sponsors

Balance Hydrologics, Inc., Cachuma Operation and Maintenance Board, Caltrans, Cal Trout, California Department of Fish and Wildlife, cbec, inc., Department of Water Resources, East Bay Municipal Utility District, Environmental Science Associates, GHD, Green Diamond Resource Company, Guadalupe-Coyote Resource Conservation District, Hanford, HDR, Inc., Humboldt Redwood Company, ICF, Mainspring Consulting, Marin Municipal Water District, McBain & Associates, McMillen, Michael Love and Associates, NOAA Restoration Center, Northern California Water Association, Pacific States Marine Fisheries Commission, Prunuske Chatham, Inc., Redwood Forest Foundation, Inc. and Usal Redwood Forest Co., Redwood Timber Company, RES, Restoration Design Group, Samara Restoration, Stillwater Sciences, Tenera Environmental Inc, Trees Foundation, Trinity River Restoration Program, Trout Unlimited, The Nature Conservancy, Valley Water, Wildlife Conservation Board















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Design & Layout by Jeri Fergus, Trees Foundation



Watershed Opportunities Can We Meet the Moment?

The California watershed restoration field faces unprecedented climate extremes of catastrophic fire, extended drought, atmospheric rivers and historic flooding and yet we are in a time of unparalleled opportunities. As we inch towards Klamath dams drawdown for the largest dam removal project on Earth and ponder how to capture rain events to meet California's water demand, there is more funding and opportunity than the restoration field has ever had access to. As the Peanuts cartoon or Yogi Berra once said, "we are overwhelmed by insurmountable opportunities."

SRF and many of our restoration partners are poised to increase the scope of our work and grow our respective organizations to meet this watershed moment. Like many of our restoration partners, we are building the capacity needed to take on additional work and projects. It is both exciting and daunting that the CA funding climate finally aligns with the pace and scale of watershed restoration needed across California's diverse landscapes.

Will the rapid rollout of new funding and streamlined permitting pathways, can the restoration field meet this unique moment? The SRF Conference agenda this year takes both a 30,000 foot view and a granular approach to restoration issues large and small. *How do we build trust amongst diverse constituents so we can collectively build the support required for truly collaborative projects? How can we utilize large working landscapes to sustain land uses and restore ecosystem processes? How can policies and permitting evolve to meet the scale of restoration needed to restore functioning ecosystems?*

As the watershed restoration field matures, we will need to develop sustainable approaches to restoration in a changing climate so that science-based decision making, resilience, and ecosystem processes remain the defining criteria for good projects. Like the evertrue maxim that *Fish Need Water*, the restoration field needs capacity and fish-centric results.

As SRF reflects on our 40 years of growing up with the watershed restoration field, we remain grateful for the support of our members, restoration leaders, and our many partners. Your ongoing support made it possible for us to return to in-person events in 2022 with the long-awaited conference in Santa Cruz, a Sediment and Erosion Control Field School in Trinity County, the Coho Confab in the South Fork Eel River, and a Klamath Dam Removal event in Siskiyou County.

SRF's Plans and Scope of Work for 2023 are even greater including:

- The 40th Annual Salmonid Restoration Conference in Fortuna
- \bullet 25th Annual Coho Confab in the Mattole
- Implementing a ten million gallons water storage and flow release project in the South Fork Eel
- Launching the Redwood Creek, SF Eel Storage & Forbearance Program
- Forest thinning planning study in Redwood Creek
- Completing Implementation Plans for Redwood & Sproul Creeks, SF Eel
- Initiating a multi-year hydrologic and restoration feasibility study in Cahto Creek
- Creating a more robust Diversity, Equity, and Inclusion scholarship program

As our scope and budget grows, we value our individual members and supporters even more. You are our backbone, our true north, and the reason our small non-profit has been able to accomplish big things!

-Dana Stolzman, Executive Director

Deep Roots—Celebrating 40 Years of Watershed Restoration

Salmonid Restoration Federation (SRF) is excited to host the 40th Annual Salmonid Restoration Conference in Fortuna, CA, where participants will have the opportunity to explore innovative restoration projects and participate in technical workshops. The conference will highlight various estuary projects, dam removal, process-based strategies, and a wide range of restoration techniques to enhance salmonid recovery efforts.

This year participants will have the opportunity to visit completed projects in Humboldt Bay Estuary, as well as tour a variety of projects in the Lower Mattole River and Estuary. There will be a tour of Prairie Creek and Redwood Creek to highlight collaborative efforts in a critical salmon stronghold. Participants can also visit process-based restoration projects on McGarvey Creek, a tributary to the lower Klamath River. Additionally, participants can tour the recently completed 850-acre tidal marsh, slough, and dune restoration projects completed at CDFW's Ocean Ranch Unit in the Eel River Estuary and restoration projects in the Eel River estuary.

Conference technical workshops include California Lamprey Considerations for People Restoring Streams Workshop and Field Tour. The classroom session will include presentations covering lamprey biology and systematics, cultural and ecological importance, and differences in life history and habitat requirements from salmonids. The afternoon field tour will visit local



Restoring Working Landscapes is a theme throughout the Conference Agenda. Photo credit: Keith Lackey, Humboldt Redwood Company

streams to observe lampreys and their habitats. The tour will include discussions of techniques for lamprey sampling and salvage, best management practices, and opportunities to integrate lamprey into salmonid-focused restoration projects.

Other outstanding workshops include: Healthy Fire, Healthy Fish: Fates Intertwined, Strategies Aligned; The Future Is Now: How To Use Practical Remote Sensing Tools To Gain New Perspectives In River Restoration And Watershed Assessment; and a Flow Enhancement Workshop.

The Plenary session will include inspiring keynote addresses from Cutcha Risling Baldy, chair of the Native American Studies department at Cal Poly HSU who will present on Why We Fish: Decolonizing Salmon Rhetorics & Governance for Climate Resilient

Drone fiotage of Elk River, Humboldt County. Photo credit: Jay Stallman

Futures. Co-authors of the Klamath Mountains-A Natural History book, Justin Garwood and Michael Kaufmann, will also speak about the comprehensive history of one of the most biodiverse temperate mountain ranges on Earth. Keith Parker, Senior Biologist with the Yurok tribe, will give the presentation, Connecting the Omics: Genomics, Phenomics, and TEK are Keys in Restoring the Klamath Basin Post Dam Removal. Yurok tribal member and former Yurok tribe General Counsel, Amy Cordalis (Founder of Ridge to Riffles) will speak about following indigenous knowledge and utilizing the law to restore ecosystem resilience in the Klamath Basin.

The conference agenda will explore a range of issues including fish habitats and passage, process-based restoration, lessons learned on the Trinity, evolving restoration policies, accelerating restoration, and opportunities on the Eel River.

Conference events include: the SRF Membership dinner and Film Screening of *The Lost Salmon*, an informative poster session, the SRF Banquet and Cabaret, and a Mentor-Mentee experience for young professionals.

To learn more about the conference, please visit *www.calsalmon.org*

SRF 2023 Conference Registration 40th Annual Salmonid Restoration Conference, April 25-28, 2023

Name:				_ Phone (work):				
Address:					(cell): _			
				Email:				
Affiliation:					Advanced Registration Closes February 24, 2			2022
Workshops and Field Tours						Advanced Registration	Late Registration	Fee
Tuesday,	April 25							
1. Healthy Fire, Healthy Fish Workshop						\$80	\$90	
2. Flow Enhancement Workshop						\$80	\$90	
3. Habitat Restoration Projects in the Lower Mattole River						\$80	\$90	SOLD OUT
4. Process-based Restoration and Effectiveness Monitoring in McGarvey Cre						\$80	\$90	SOLD OUT
5. Humboldt Bay Estuary Restoration Field Tour						\$80	\$90	SOLD OUT
6. JUST ADDED: Prairie and Redwood Creek Restoration Projects Tour						\$80	\$90	
Wednesd	ay, April 26							
7. CA Lamprey Considerations Workshop & Field Tour						\$80	\$90	SOLD OUT
8. How to Use Practical Remote Sensing Tools Workshop						\$80	\$90	
9. Collaborative Watershed Restoration on Working Lands in the Van Duzen Tour						\$80	\$90	SOLD OUT
10. Prairie and Redwood Creek Restoration Projects Tour						\$80	\$90	SOLD OUT
11. Ocean Ranch and Eel River Estuary Field Tour						\$80	\$90	SOLD OUT
12. JUST ADDED: Elk River Stewardship: A Watershed-Scale Remediation and Restoration Program						\$80	\$90	SOLD OUT
SRF Mem			\$30	\$35				
Confere	nce							
Thursday	and Friday,	April 27 & 28						
SRF Member						\$200	\$250	SOLD OUT
Non-Member						\$250	\$300	SOLD OUT
Student (With ID)						\$100	\$125	SOLD OUT
Friday Evening Banquet						\$60	\$70	
SRF Me	mbership							
O \$50 Alevin O \$100 Fry O \$250 Smolt O \$500 Jack O \$1000 Spawner							Membership:	
Confere	nce Schola	rship Fund						
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Please N	lote: We do not Rec	t offer refunds but eipts are emailed,	conference passe so print legibly •	es can be tr This form is	ansferi s availa	red to another p ble at www.cals	person or deferred salmon.org	until 2024.

Workshops & Tours

Tuesday, April 25

Healthy Fire, Healthy Fish: Fates Intertwined, Strategies Aligned Workshop

Workshop Coordinators: Lenya Quinn-Davidson, UC Cooperative Extension, and Director, Northern California Prescribed Fire Council; Damon Goodman, Cal Trout; Will Harling, Mid Klamath Watershed Council; Eli Asarian, Riverbend Sciences; and Josh Smith, The Watershed Research and Training Center

In recent decades, it has become increasingly clear that the West suffers simultaneously from too much fire and not enough. Fire exclusion has created vulnerable landscapes, far departed from the fire regimes through which they evolved. Losses are multifaceted: unprecedented highseverity fire is causing widespread forest loss, while other systems wither in the absence of needed fire. The effects of fire on fish are equally complex. There are direct impactsretardant drops and dozer lines in streams, post-fire debris flows and fish kills, erosion, loss of riparian cover-but there are indirect connections that also require attention. Fire can improve streamflow, stream temperatures, and inputs like gravel and wood, providing many unrealized opportunities for alignment between the two fields. Likewise, fire management has largely failed to account for fish, and nascent approaches in fire planning should work to identify areas of overlap and mutual benefit. In this era, which some call the Pyrocene, process-based restoration for fish will necessarily involve fire as a process. This workshop will explore the many dimensions of fire and fish, including fire ecology for fisheries, impacts of fire on fish, opportunities for joint projects and policy, and a shared vision and strategy for healthier fire and healthier fish.

- Fire and Water: The Essentials of Life, Margo Robbins, Cultural Fire Management Council
- Fire and Landscape Change in California: Lessons From Fire History, Carl Skinner, Retired USDA Forest Service Pacific Southwest Research Station
- Fish and Fire—Big Picture, Gordon Reeves, Oregon State University
- An Exploration of Fish and Fire in California, Damon H. Goodman, California Trout
- Fire and Smoke Effects on Water Temperature: Fine Most of the Time, Eli Asarian, Riverbend Sciences
- Toxicity of Fire Retardants to Chinook Salmon with Different Life Histories as Fry and Smolts, Joseph Dietrich, NOAA Fisheries—Northwest Fisheries Science Center
- McKinney Fire Debris Flows and the 2022 Klamath River Fish Kill, Toz Soto, Karuk Tribe
- Food Webs of 10 lakes Before and After a Mega-Wildfire, Christine Parisek, UC Davis
- Preparing Fish for Fire: Thoughts from the Modoc Sucker, Stewart Reid, Western Fishes

- Integrated Meadows Restoration and Fuels Reduction in the Sierra Nevada to Manage Carbon and Water Stocks and Protect Native Trout, Sandi Jacobson, California Trout
- Observations from the Fireline, Josh Smith, Watershed Research and Training Center
- Strategic Post-fire Stream and Meadow Restoration to Benefit Aquatic Diversity, Karen Pope, USDA Forest Service, Pacific Southwest Research Station
- Restoring Instream and Upslope Processes in the Western Klamath Mountains to Bring our Salmon Home and Put an End to Megafires, Will Harling, Mid Klamath Watershed Council
- Using Fire to Change Hearts, Minds, Policies, and Landscapes, Lenya Quinn-Davidson, University of California Cooperative Extension



Flow Enhancement Workshop

Workshop Coordinators: Amy Cambell, The Nature Conservancy; and David Dralle, Research Hydrologist. U.S. Forest Service, Pacific Southwest Research Station

This workshop will delve into the science and tools available to inform flow enhancement projects. Topics will include water budgets, water rights, permitting, infrastructure retrofits, long-term maintenance, and navigating the complexity of coupled human and natural systems under a changing climate.

Assessing and Ensuring That Streamflow Enhancement Projects Result in Real Water for the Environment, Amy Campbell, The Nature Conservancy

Water Budget Modeling Methods: Applications to Assessing Flow Augmentation Strategies for Salmonid Recovery in California, Christopher Woldtemade, Ph.D., Prunuske Chatham

- Water Budgets for Agricultural Streamflow Enhancement Projects, Katie Klug and Tommy Ostrowski, Davids Engineering
- Slash Ain't Trash, It's Beneficial Biomass, Brock Dolman, Occidental Arts & Ecology Center's WATER Institute
- Slow the Flow: Large-scale Flow Enhancement Implementation Strategies, Joel Monschke, Stillwater Sciences
- Did it Work? Methods of Hydrograph Analysis and Inference for Quantifying and Attributing Flow Enhancement in Headwater Catchments, Mia van Docto, Trout Unlimited



Beaver dam analogue slows and spreads flow in Middle Creek Meadow in the Plumas National Forest, part of the USFS Pacific Southwest Research Station Process-based Meadow Restoration Research Initiative. Photo credit: David Dralle, USFS

Habitat Restoration Projects in the Lower Mattole River Field Tour

Tour Coordinator: Richard Sykes, Mattole Salmon Group

This tour focuses on the lower Mattole River and estuary to view and discuss past, present and future projects to improve conditions for salmonids. The tour will include visits to Mattole Estuary and Slough, Lower Bear Creek and McGinnis Creek. This will include examples of floodplain restoration, slough rehabilitation and reconnection, large wood structure installation, and a proposed stream restoration-reconnection project. The tour will be provided by staff from the Mattole Salmon Group, Mattole Restoration Council, the U.S. Bureau of Land Management and Mike Love and Associates.

Just Added: Prairie and Redwood Creek Restoration Projects

Field Tour Coordinators: Leslie Wolff, NOAA Fisheries, and Mary Burke, Cal Trout

Please see full description on page 8.



Mattole River Estuary Photo credit: Mattole Salmon Group.

Humboldt Bay Estuary Restoration Tour

Field Tour Coordinators: Mike Love, Michael Love & Associates; and Bob Pagliuco, NOAA Fisheries

The tour will visit recently completed estuary restoration projects around Humboldt Bay, exploring a variety of project types. The tour will include discussion of the project planning process, construction challenges, and results from post-implementation physical and biological monitoring for both newly constructed projects and those implemented several years prior. The tour includes stops at the following sites: White Slough tidal marsh restoration project on the Humboldt Bay National Wildlife Refuge; The City of Eureka's Elk River estuary enhancement project. completed in 2022; Martin Slough enhancement project, completed in 2021; Wood Creek tidal restoration project; and South Jacoby Creek Floodplain Restoration Project, completed in 2019, captures out of bank floodwaters and routes them into a constructed freshwater wetland at the head of tide to reduce floodplain stranding while providing slow-water habitat for non-natal fish on a cattle ranch owned by the City of Arcata.



One of the several complex channels found in the South Jacoby Creek Floodplain Restoration Project. Photo credit: Conor Shea

Process-Based Restoration and Effectiveness Monitoring in McGarvey Creek Tour

Field Tour Coordinators: Sarah Beesley, Yurok Tribal Fisheries Department and Rocco Fiori, Fiori Sciences

Attendees on the McGarvey Creek field tour will be able to see a variety of restoration features including constructed wood jams, off-channel wetlands, and beaver dam analogues / wood-based check dams as well as fisheries monitoring sites within a coastal tributary of the Lower Klamath River. We will be discussing everything from restoration objectives and approaches, planning, design, permitting, construction, lessons learned, and how our long-term and on-going physical and biological monitoring is informing the process.



New structure type: ground water palisade in Upper McGarvey Creek (constructed in 2022) Photo credit: Sarah Beesley (Yurok Fisheries)

Wednesday, April 26

California Lamprey Considerations for People Restoring Streams Workshop and Field Tour

Workshop Coordinators: Katrina Nystrom, Salmonid Restoration Federation; Marisa McGrew, Wiyot Tribe; and Abel Brumo, Stillwater Sciences

Most of the restoration and conservation activities that occur in Pacific coastal streams are intended to promote salmonid recovery but could also benefit native lampreys. The workshop will include a morning classroom session and an afternoon field tour. The classroom session will include presentations covering lamprey biology and systematics, cultural and ecological importance, and differences in life history and habitat requirements from salmonids. The afternoon field tour will visit local streams to observe lampreys and their habitats. The tour will include discussions of techniques for lamprey sampling and salvage, best management practices, and opportunities to integrate lamprey into salmonid-focused restoration projects.

Fostering Enthusiasm and Partnerships to Advance Pacific Lamprey Conservation, Josh Boyce, U.S. Fish and Wildlife Service

- Seeking Sand: Habitat Constraints for Lampreys, Stewart Reid, Western Fishes
- Reconnecting Pacific Lamprey with their Historical Habitats in California, Damon Goodman, Cal Trout

- Pacific Lamprey: Anthropocene Sentinel Species for Pacific Northwest Water Quality, Cynthia Le Doux-Bloom, Ph.D., Cal Poly Humboldt
- Filter Feeding by Larval Pacific Lamprey for Reducing Escherichia Coli and Improving Water Quality, Parker Kalan, MS, Tenera Environmental
- Central Valley Lamprey; an Overlooked Presence in High Use Watersheds, Christina Parker, MNR, California Department of Fish and Wildlife
- Lamprey Diversity in California: Genomic Approaches for Untangling an Understudied Species Complex, Grace Auringer, University California, Davis



Pacific Lamprey climbing their way up the Eel River to reach spawning grounds. Photo credit: Steward Reid and Damon Goodman

The Future is Now: How to Use Practical Remote Sensing Tools to Gain New Perspectives in River Restoration and Watershed Assessment Workshop

Workshop Coordinators: Emily Fairfax, California State University, Channel Islands; Eli Asarian, Riverbend Sciences; Adam Cummings, U.S. Forest Service Pacific Southwest Research Station; and David Dralle, U.S. Forest Service Pacific Southwest Research Station

This workshop will provide a gentle hands-on introduction to easy-to-use "no-code" and "low-code" remote sensing tools for restoration planning and assessment. Morning lectures will cover: 1) available data types (e.g. aerial/ satellite imagery, vegetation, land cover, topography, and climate) and their uses, and 2) how to efficiently access and analyze these data to understand landscape conditions and response to disturbances and/or restoration work. In the afternoon, participants who bring laptops can explore data, test-drive tools, and work on their own projects with instructor guidance.

Changing Tides; Managing CDFW Lands for Marsh, Slough, and Dune Habitat in the Eel River Estuary Tour

Tour Coordinators: Chris Loomis and Allan Renger, CDFW; Alex Blessing, The Wildlands Conservancy; and Jeremy Svehla, GHD

This tour will showcase a recently completed 850acre tidal marsh, slough, and dune restoration project completed at CDFW's Ocean Ranch Unit and the Wildlands Conservancy's Eel River Estuary Preserve portion of the Centerville Slough and Russ Creek Restoration Project in the Eel River Estuary. The Ocean Ranch tour will include a walk along the newly created trail network and viewing opportunities of project elements including levee and tide gate removal, designed channel reconfiguration, constructed habitat features for fish, wildlife, and plant communities, invasive plant eradication, and improved public infrastructure. The Wildlands tour will discuss previous and current restoration planning efforts and future implementation strategies. The tour will include stops on the Preserve to highlight future restoration opportunities including coastal dunes, tidal wetlands, fresh-brackish ecotones, and public access amenities.



This tour will showcase a recently completed 850-acre tidal marsh, slough, and dune restoration project completed at CDFW's Ocean Ranch Unit in the Eel River Estuary. Photo credit: Chris Loomis, CDFW

Securing a Stronghold: Different Approaches for Design and Collaborative Process in Prairie Creek and Redwood Creek Restoration Projects Tour

Tour Coordinators: Mary Burke, California Trout; Leslie Wolff, NOAA Fisheries; and Bob Pagliuco, NOAA Restoration Center

Join us for a field tour of lower Prairie Creek, a salmon and climate stronghold, and view past, present, and future habitat restoration and monitoring projects. We will also visit Redwood Creek's estuary and discuss the exciting possibility of levee modification and estuarine habitat restoration with project partners. We will see examples of, and discuss with technical experts: small stream restoration, large wood additions, floodplain connectivity, backwater habitat, levee modification, associated revegetation and invasive plant controls, and project effectiveness monitoring.



Prairie Creek Implementation Pond at winter base flows shortly after implementation Fall 2022 Photo credit: Bob Pagliuco, NOAA Fisheries

Collaborative Watershed Restoration on Working Lands in the Van Duzen Tour

Field Tour Coordinators: Anna Halligan, Trout Unlimited, Isaac Mikus, Eel River Watershed Improvement Group, Leah Tolley, NOAA Fisheries; Tom Leroy, PWA; and Keith Lackey, HRC

Tour attendees will be provided with an overview of the watershed including a description of its geology, fishery assemblages, historic land use impacts, and restoration objectives. The tour will include site visits to three off channel pond restoration features, instream large wood installations, and fish passage barriers. Discussions will be focused on collaborative restoration efforts, restoration planning at a watershed scale, effectiveness monitoring, how to consider non-native fish, permitting, and much, much more.

Just Added: Elk River Stewardship: A Watershed-Scale Remediation and Restoration Program

Field Tour Coordinators: Darren Mierau and Katy Gurin, California Trout; Jay Stallman, Stillwater Sciences; Tim Metz, Restoration Forestry, Inc.

The recently added Elk River tour will feature tour-stops at strategic locations along the lower 13 miles of the Elk River mainstem and South Fork Elk River into the BLM Headwaters Forest Reserve.



Cooper Mill Creek Photo courtesy Trout Unlimited

Salmonid Restoration Federation

2023 Conference Logistics & Events

Conference Location

River Lodge Conference Center 1800 Riverwalk Dr. Fortuna, CA 95540

Conference Events and Schedule

Tuesday and Wednesday Workshops and Field Tours are 9 am to 5 pm on April 25 and 26. Field Tours depart promptly from River Lodge Conference Center at 9 am so please come early to pick up your registration packet and pack a lunch for the day. Registration for the main conference will begin at 8 am on Thursday, April 27.

2023 Conference Mentorship Program Sign up as as Mentor or Mentee!

To welcome first-time attendees, students, young professionals, and people from historically underrepresented groups, SRF is evolving our mentorship program. Each Mentee will be matched with one Mentor. Through a series of brief one-onone meetings before, duri ng, and after the annual conference, Mentors will help Mentees make good use of their time at the conference, provide networking opportunities, share career advice, and perhaps even build lasting connections. This event is only for conference attendees. Visit our website to learn more and sign up!

Membership Dinner and Film Screening

The Annual Membership Meeting will be at 5:15 pm followed by the Membership Dinner at the River Lodge and will be a great opportunity for networking, enjoying fine food and libations, and a special film screening of Shane Anderson's new film The Lost Salmon. You do not need to be a member to attend the event, but you do need to register.

Plenary Session

9 am on Thursday, April 27 at the River Lodge Conference Center.

Book Signing

Following the Plenary Session join co-editors Michael Kauffmann and Justin Garwood for a book signing of *The Klamath Mountains: A Natural History.*

Poster Session

The Poster Session on Thursday evening from 7 pm to 10 pm is free to attend for all conference participants and is an excellent networking opportunity. For info about how to present at the poster session, please email info@calsalmon.org or refer to the Events or FAQ section of the conference website.

Friday Evening Banquet

The banquet includes a wild salmon dinner, local wine and beer, an awards ceremony, a fun-filled Cabaret, and a lively band. Because the SRF banquet usually sells out, please purchase your tickets in advance.



Canary and the Vamp will play at the conference banguet.



SRF Conference Scholarships

Thanks to the generous contributions from members and co-sponsors, SRF will be expanding our conference scholarship (conference registration fee waiver) opportunities this year. Scholarships are specifically for underrepresented members of the watershed restoration field, tribal members, students, and rural landowners.

To apply for a scholarship, please email *info@calsalmon.org* a 200 word explanation of why you would like to attend the SRF Conference, how it would benefit the work / studies you are doing, and how you anticipate applying what you learn.

Scholarship requests are due on March 1 and SRF will be in touch with scholarship recipients by March 17.

Conference Lodging

To see Conference Lodging options, please visit the Conference FAQs page at *https://www.calsalmon.org/conferences/40th-annual-salmonid-restoration-conference/faqs*

The Lost Salmon

Membership Dinner and Film Screening Introduction with filmmaker Shane Anderson





Conference Sessions

Plenary

- Natural History of the Klamath Mountains: How Honesty, Accuracy, and Receptivity Guide us to Better Stewardship of Definable Landscapes, Justin Garwood and Michael Kauffmann (Co-authors of Klamath Mountains Natural History)
- The Water Remembers: A Calling to Follow Indigenous Knowledge and Law to Restore Ecosystem and Community Resiliency in the Klamath Basin, Amy Cordalis, Ridge to Riffles
- Connecting the Omics: Genomics, Phenomics, and TEK are Keys in Restoring the Klamath Basin Post Dam Removal, Keith Parker, Senior Fisheries Biologist, Yurok Tribe
- Why We Fish: Decolonizing Salmon Rhetorics & Governance for Climate Resilient Futures, Cutcha Rising Baldy, Department Chair Native American Studies, Cal Poly Humboldt

- How CDFW's Cannabis Restoration Grant Program Can Contribute to Salmonid Restoration, Virginia O'Rourke, California Department of Fish and Wildlife
- Modeling Streamflow Depletion from Cannabis Cultivation in California's North Coast Salmon-Bearing Streams, Philip Georgakakos, University of California-Berkeley
- Efficient Science Tools to Identify Streamflow Objectives to Support Flow Enhancement Project Development and Implementation, and Trigger Management Actions Under Critically Dry Conditions, Jennifer Carah, The Nature Conservancy
- Water From Bedrock: Efforts to Condition New Groundwater Wells to Protect Streamflow for Salmon in Sonoma County, Monty Schmitt, The Nature Conservancy and Matt Clifford, Trout Unlimited
- Granting Equity. The Future of CDFW's Granting Programs, Timothy Chorey, California Department of Fish and Wildlife



Amy Bowers-Cordalis is a fisherwoman, attorney, mother, and member of the Yurok Tribe. She was formerly general counsel of the Yurok Tribe and a staff attorney at the Native American Rights Fund.

Amy continues her family legacy by focusing her work on Klamath River restoration, including dam removal, water rights, and fisheries issues.

Thursday Afternoon Concurrent Sessions

Evolving Policies and Tools to Advance Salmon Restoration: Flows, Cannabis, and Funding Opportunities

Session Coordinators: Kelly Souza, California Department of Fish and Wildlife; Matt Clifford, Trout Unlimited; and Monty Schmitt, The Nature Conservancy

- Cannabis in Context: Water Demand of Permitted and Unpermitted Cannabis Irrigation in Northern California, Chris Dillis, University of California-Berkeley
- Using Satellite Imagery to Assess Watershed Conditions and Anthropogenic Water Use, Redwood Creek, Kelly Souza, California Department of Fish and Wildlife



TNC's Garcia Estuary project this summer. photo credit: TOPO-Collective/PCI.

Large-Scale Fisheries Habitat Restoration in Working Landscapes

Coordinators: Jay Stallman, Stillwater Sciences, and Ann Willis, American Rivers, California Regional Director

- Klamath Reservoir Reach Restoration Plan: Assessing Habitat Conditions and Prioritizing Restoration Post-Dam Removal, Bob Pagliuco, NOAA Restoration Center
- Forest and Mountain Meadow Resiliency, Fisheries Restoration and River Recovery Actions on Working Lands in the Scott River,

Charnna Gilmore, Scott River Watershed Council

Habitat Restoration on the Working Landscapes of the Smith River Plain, Marisa Parish Hanson and Monica Scholey, Smith River Alliance A Vision, Plan, and Strategy for Comprehensive Recovery of Lower Elk River, Darren Mierau, North Coast Regional Director, California Trout

Trout Unlimited's North Coast Coho Project —Over 20 Years of Restoration on Working Forest Lands, Anna Halligan, Director of the North Coast Coho Project, Trout Unlimited

Garcia River Estuary Enhancement Project and TNC's Approach to Restoration on the Mendocino Coast, Peter van de Burgt, The Nature Conservancy and Lauren Hammack, PCI Ecological Design and Planning

Fish Passage Design and Implementation Lessons Learned

Session Coordinators: Jason White, Environmental Science Associates; Travis James, Michael Love & Associates; and Lucas Walton, Prunuske Chatham, Inc.

Lesson Learned Constructing a Horizontal Fish Screen at Derby Dam, Dan Kaler, PE, Farmers Conservation Alliance

- Carmel River Reroute and Dam Removal Project: Challenges in Design and Construction of a Steppool Channel, Robert Mussetter, Program Manager, Tetra Tech, Inc.
- Mill Creek Fish Passage Project: Design, Construction & Lessons Learned, Justin Bodell, RLA, Landscape Architect, PCI
- Embrace Change: Combining Engineering and Geomorphic Principles to Design Resilient Fish Passage on San Geronimo Creek, Jason Q. White, Hydrologist, Environmental Science Associates

Implementation When Design Cannot Progress Past a Conceptual Level: North Fork Battle Creek Fish Passage Improvement Project, P. Travis James, P.E., Senior Project Engineer, Michael Love & Associates, Inc.

- Beale Lake Dam Removal and Roughened Ramp, Mark Gard, Senior Hydraulic Engineer, CDFW
- Final Design, Material Sourcing, and Construction Methods of the Nelson Dam Roughened Channel Fishway, Michael C. Garello, PE, HDR Engineering, Inc.



Implemented fish passage projects like the San Geronimo Creek "Roy's Riffles" offer much to learn when they are put to the test by major storms such as the 10 inches of rain that fell overnight immediately following construction. Credit: Jason White, ESA

Modeling Salmonid Habitat: Stream State, Forest Conditions, and Future Climates

Session Coordinator: Jonathan Halama, MPH, Ph.D.

Habitat Mosaics Support Variation in Salmon Foraging and Growth Potential Under Extreme Drought Conditions, Rachael E. Ryan, Ph.D. Candidate, University of California Berkeley

Modeling Benefits of Refuge Habitat for Salmonid Populations with InSTREAM, Steven F. Railsback, Ph.D., PD, Lang Railsback & Associates

Modeling the Influences of Diversions and Forest Practices on Streamflow in Streeter Creek Near Laytonville, CA, Julia Petreshen, Thomas Gast & Associates

- Streams Across Lands (SAL): A New Stream Flow Modeling Method, Jim Graham, Ph.D., Associate Professor, Cal Poly Humboldt
- Habitat Modeling of Salmonid Movement and Survival in Degraded and Restored Watersheds, Greg Blair, ICF
- Individual-Based Modeling of Stage O Treatment on Juvenile Chinook, Aleah Hahn, MS Student, Oregon State University
- Predicting Fish Movement near Infrastructure in Different River and Reservoir Environments, R. Andrew Goodwin, Ph.D., PE, U.S. Army Engineer Research and Development Center



Friday Morning Concurrent Sessions

The Eel River: A River of Opportunity with Implications Beyond its Basin

Session Coordinator: Alicia Hamann, Executive Director, Friends of the Eel River

- Wiyot Natural Resources Department's Past, Present, and Future Work on the Wiya't: Restoring the Wiyot Tribes' Role as Stewards of Their Ancestral Territory, Adam Canter, Wiyot Tribe Natural Resources Department
- Monitoring Populations of Adult Salmonids in the Eel River Basin—Historical Context and Advancing Modern Abundance Estimates to Inform Recovery Targets and Recovery Efforts within the Basin, David Kajtaniak, CDFW
- Life History Characterization of Wild Steelhead in the Eel River, California, Carlos Garza, Ph.D., Southwest Fisheries Science Center, NOAA Fisheries
- Totally RAD Impassable Barriers: How Geologic Features Separate Summer and Winter-run Steelhead in the Eel River and Beyond, Samantha Kannry, TRIB Research
- Physical and Biological Constraints on the Capacity for Life-history Expression of Anadromous Salmonids: an Eel River, California, Case Study, Alyssa M. FitzGerald, University of California, Santa Cruz and Southwest Fisheries Science Center
- Advocacy on the Eel: How an Endangered Species Act Take Claims and Federal Energy Regulatory Commission Litigation Can Remove Barriers to Salmonid Recovery Nationwide, Redgie Collins, *Esq.*, Legal and Policy Director for California Trout



Scott Dam Photo credit: Friends of the Eel River

Approaches to Build Trust and Engage Our Diverse Communities

Session Coordinators: Mary Burke, Cal Trout; Natalie Arroyo, Humboldt County Board of Supervisors; and Leslie Wolff, NOAA Fisheries

- Diversifying Connections to Support Healthy Habitats, Carla Avila-Martinez and Leslie Parra, Save the Redwoods League
- The Intergenerational Struggle of Being a River-based Community in Modern Day America, Danielle Frank, Hupa tribal member; Youth Coordinator, Save California Salmon
- Bridging Cultural Fault Lines in the Middle Klamath to Build a Restoration Movement, Will Harling, Mid Klamath Watershed Council
- Bedrock Principles for Successful Restoration Partnerships, Stephen Greenwood, Portland State University
- Centering Environmental Justice: Examples from the North Coast, Natalie Arroyo, Humboldt County Board of Supervisors
- Starting at Home: Co-Creating an Inclusive Restoration Organization Culture, Jen Rice, independent consultant

Cal-PBR Network: Process Based Restoration in a Changing Climate

Session Coordinators: Carrie Monohan, Ph.D., The Sierra Fund; Karen Pope, Ph.D., Pacific Southwest Research Station USDA; Kate Lundquist, Occidental Arts and Ecology Center

Doing the Impossible Before Breakfast, Kevin Swift, Swiftwater Design

Hydraulic Mines and Process Based Restoration, Carrie Monohan, Ph.D., The Sierra Fund



Participants in the Fall 2022 California Process-Based Restoration (Cal PBR) Training display grit and teamwork while building a beaver dam analog (BDA) in Yellow Creek. Photo credit: Carrie Monohan, The Sierra Fund.

- A Practical Restoration Model for Restoring the Sprague River Valley, Mike Edwards, USFWS
- Beaver Dam Analogues—Summary of Five Years of Monitoring in the Scott River, Erich Yokel, Scott River Watershed Council
- Looking Forward, Not Back to Inform Restoration Design in a Rapidly Changing Climate, Craig Benson, Cal Poly Humboldt
- Beaver Restoration Policy Updates, Kate Lundquist, OAEC

Please May I Get Upstream? Reintroducing Extirpated Salmon Runs Upstream of Dams

Session Coordinators: Eric Ginney, ESA and Randy Beckwith, CA Department of Water Resources

- Yes You May: Fighting Extinction in the Central Valley with Salmon Reintroductions, Brian Ellrott, NOAA Fisheries, West Coast Region, California Central Valley Office
- Winnemem Wintu Tribe Perspectives on Co-Stewardship of the McCloud River Nur, Honorable Chief Sisk, Winnemem Wintu Tribe
- Considerations for Assisted and Non-Assisted Passage at Large Dams, Jon Mann, PE, California Department of Fish and Wildlife
- Pilot Efforts Supporting Reintroduction: The Juvenile Salmonid Collection System, Randy Beckwith, DWR & Matthew Silva, ESA
- Winter-Run Chinook Salmon Swim the McCloud River for First Time Since Construction of Shasta Dam: Drought Action Returns Endangered Salmon to Their Historical Habitat, Matthew R. Johnson, CDFW
- 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
- Klamath Basin Fisheries Collaborative: Data Integration for Monitoring Dam Removal, Project Effectiveness Monitoring, and Species Management, Betsy Stapleton, Scott River Watershed Council

Friday Afternoon Concurrent Sessions

Accelerating Restoration —New Tools to Get the Job Done

Session Coordinators: Ruth Goodfield, NOAA Restoration Center; Erika Lovejoy, Sustainable Conservation; and Jacob Shannon, North Coast Regional Water Quality Control Board

- Solving the Puzzle to Accelerate Restoration— Statewide Progress on Efficient Permitting, Erika Lovejoy, Sustainable Conservation
- Permitting Efficiencies for Restoration Projects Through NOAA Restoration Center, Ruth Goodfield, NOAA Restoration Center

- Aquatic Restoration Projects Made Easier in California Thanks to New Statewide Programmatic Endangered Species Act Section 7 Consultation Available to Federal Agencies, Marissa Reed, U.S. Fish and Wildlife Service
- Applying New Tools to Support Aquatic Habitat Restoration Projects, Jake Shannon and Jonathan Warmerdam, North Coast Regional Water Quality Control Board
- Cutting the Green Tape with the California Department of Fish and Wildlife, Brad Henderson, CDFW
- Constraints and Initial Solutions to Increasing the Pace and Scale of Riverscape Restoration: Summary from the 2023 NOAA Organized Riverscape Restoration Workshop, Brian Cluer, NOAA Fisheries

20+ Years of Restoration on the Trinity River: What Have We Learned, and Where Do We Go From Here?

Session Coordinators: Mike Dixon, Executive Director, Trinity River Restoration Program, U.S. Bureau of Reclamation, and Kyle de Juilio, Yurok Tribal Fisheries Program

Focusing Trinity River Science

—A Plan for Addressing Key Uncertainties, Darcy Pickard, Principal, Pickard Environmental

- From Rock Piles to Riparian: Recovering Riparian Function and Vegetation on the Trinity River, CA, John Bair, Riparian Ecologist, McBain Associates
- Evolution of Tributary Junctions and Their Capacity for Rearing Juvenile Chinook Salmon (*Oncorhyunchus tshawytscha*) on a Regulated River, Todd Buxton, Hydrologist/Geomorphologist, Bureau of Reclamation
- Assessing Salmon Rearing Habitat with Physical Capacity and Flow Durations in the Trinity River, Emily Cooper-Hertel, Restoration Ecologist, Yurok Tribal Fisheries Department
- Quantifying the Morphologic Underpinnings of Salmonid Habitat, David Gaeuman, Geomorphologist, Yurok Tribal Fisheries Department



Chapman Ranch Restoration Project Photo credit: Aaron Martin, Yurok Tribal Fisheries

Synthesizing 87 years of Scientific Inquiry into Trinity River Water Temperatures, Seth Naman, Fish Biologist, National Marine Fisheries Service

Opportunities for Restoring Ecosystem Function and Phenological Synchronicity Through Flow Management on the Trinity River, CA, Ken Lindke, California Department of Fish & Wildlife

Riparian Corridors, the Link Between Upland and Instream Restoration

Session Coordinators: Tom Leroy, Pacific Watershed Associates; Elise Ferrarese, Trout Unlimited; and David Roon, Oregon State University

- Redwoods Rising: Resetting the Standard of Parks Management, Andrew Morin, National Park Service
- Incorporating Invasive Species Management into Riparian Restoration Design and Implementation at the Redwood National and State Parks Visitor Center and Restoration Project, Amy Livingston, McBain Associates
- Evaluating the Effects of Riparian Forest Thinning on Stream Ecosystems in Coastal Northern California Watersheds, David Roon, Post-doc, Oregon State University
- Is More Light Good for Fish?: Results from a Riparian Buffer Manipulation on Private Timberland in the Oregon Coast Range, Ashley Sanders, graduate student, Oregon State University
- Effects of Experimental Riparian Canopy Gaps on Fish, Salamanders, Biofilms and Ecosystems Processes in Headwater Streams, Dana Warren, Associate Professor, Oregon State University

- Riparian Canopy Modification Experiment: Lessons Learned and Results from Salmonid and Coastal Giant Salamander Monitoring in an Experimental Watershed in Northwestern California, Mathew Nannizzi, Aquatic Biologist, Green Diamond Resource Company
- Effectiveness of Meadow and Wet Area Restoration as an Alternative to Watercourse and Lake Protection Rules, Christopher G. Surfleet, Professor, California Polytechnic State University, San Luis Obispo

Planning and Evaluation of Dam Removal, Salmon Recovery, and Habitat Restoration

Session Coordinator: Mike Belchik, Yurok Tribe

- Overview of Regulatory Processes for Klamath River Dam Removals, Matt Robart, MS, Camas LLC
- Lessons Learned from Flood Impacts to Habitat Improvement Efforts after Dam Removal: Process-based vs Form-based Restoration Efficacy, Matt Berry, Sierra Streams Institute
- Los Padres Alternatives Study: Feasible Alternatives for Maintaining or Removing Los Padres Dam and Implications for Steelhead in the Carmel River Watershed, Jonathan Stead, AECOM
- South-Central/Southern California Steelhead 5-Year Reviews, Mark Capelli, NOAA Fisheries
- Reintroduction of Spring-run Chinook salmon in the San Joaquin River: Evaluating Efficacy of Decisionmaking in the Captive-breeding Program, Kasey C. Pregler, Department of Environmental Science, Policy, & Management, UC, Berkeley
- Follow the Science: The Role of Scientific Decisionmaking in the Big Notch Project, Dennis Finger, Department of Water Resources
- Diet, Growth, and Survival of Juvenile Coho Salmon (*Oncorhynchus kisutch*) in Restored Off-channel Habitats in Tributaries to Humboldt Bay, Joshua Cahill and Kate Stonecypher, Cal Poly Humboldt



Riparian zone in Lost Man Creek, Redwood National Park, California. Photo credit: David Roon



Iron Gate Dam Photo credit Eco flight Salmonid Restoration Federation

Booksigning with Co-authors (Garwood and Kauffmann) of *The Klamath Mountains: A Natural History* following the Plenary Session

This new book celebrates the natural history of the Klamath Mountains of northwest California and southwest Oregon through stories of diversity and resilience over deep time. Shaped by geology, these mountains form an ancient jigsaw puzzle and topographic mosaic dissected by big-shouldered river canyons and sharp ridgelines that create localized climatic gradients. Within the geomorphic province, the rocks are much older than in surrounding regions. This dichotomy has allowed many distinct evolutionary lineages of plants and animals to adapt, survive, and sometimes speciate where elsewhere they became extirpated long ago.



Cutcha Risling Baldy, Associate Professor and Department Chair of Native American Studies at Cal Poly Humboldt researches Indigenous feminisms, California Indians, Environmental Justice, Traditional Ecological Knowledge and decolonization. She is the Co-Director of the NAS Food Sovereignty Lab & Traditional Ecological Knowledges Institute and Co-Investigator on a planning grant for inclusive STEM pedagogy for Native American Students at Humboldt. She is also the Interim Program Coordinator for the Environment & Community masters degree at Cal Poly Humboldt. Her book: We Are Dancing For You: Native feminisms and the revitalization of women's coming-of-age ceremonies received "Best First Book in Native American and Indigenous Studies" at the 2019 Native American Indigenous Studies Association Conference. She received her Ph.D. in Native American Studies at UC Davis; her M.F.A. in Creative Writing from San Diego State University; and her B.A. in Psychology with a Specialization in Health and Development from Stanford University. She is also the volunteer Executive Director for 2023 Conference Agenda Packet

the Native Women's Collective, a nonprofit organization that focuses on the continued revitalization of Native American arts and culture. She is Hupa, Karuk, and Yurok and enrolled in the Hoopa Valley Tribe.



Cutcha Rising Baldy, Chair of the Native American Studies Department at Cal Poly Humboldt, we give a keynote presentation titled: Why We Fish: Decolonizing Salmon Rhetorics & Governance for Climate Resilient Futures

Salmonid Restoration Federation 1018 2nd Street Eureka, California 95501



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Save the Dates

24th Annual Coho Confab August 25-27, 2023 Mattole River

Join SRF, Sanctuary Forest, Mattole Restoration Council, Mattole Salmon Group, and other partnering restoration groups for a destination Confab on the Mattole River in Petrolia, CA. This Confab will feature Mattole estuary and headwaters restoration projects, flow enhancement projects including Sanctuary Forest's Baker Creek String of Pearls, large wood projects, grassland restoration, a suite of other techniques that are implemented or are being planned in this critical watershed.

Erosion and Sediment Control Field School

June 6-8, 2023 in Mendocino

Salmonid Restoration Federation is hosting an Erosion and Sediment Control Field School. This technical field course is part of our Northern California Best Management Practices Education Series funded by the CDFW's Fisheries Restoration Grant Program. SRF is partnering with Pacific Watershed Associates and the Redwood Forest Foundation Inc. to produce this technical event.

> For more information or to register, visit www.calsalmon.org