







40th Annual Salmonid Restoration Conference

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

and Usal Redwood Forest Co., Redwood Timber Company, RES, Restoration Design Group,

Trinity River Restoration Program, Trout Unlimited, The Nature Conservancy, Valley Water,

NOAA Restoration Center, Northern California Water Association, Pacific States Marine

Samara Restoration, Stillwater Sciences, Tenera Environmental Inc., Trees Foundation,

Fisheries Commission, Prunuske Chatham, Inc., Redwood Forest Foundation, Inc.

April 25-28, 2023 Fortuna, CA

Deep Roots

-Celebrating 40 Years of Watershed Restoration

Wildlife Conservation Board

40th Annual Salmonid Wednesday **Restoration Conference** Thursday at a Glance

Tuesday

8 - 9am Registration

at Fortuna River Lodge Lobby

Workshops and Field Tours
9am - 5pm

Lamprey Workshop and Field Tour Coho Room

Justin Garwood and Michael Kauffman

Amy Cordalis

Keith Parker

Plenary Session
9am - noon

Healthy Fire, Healthy Fish Workshop Chinook Room

Workshops and Field Tours 9am - 5pm

Practical Remote Sensing Tools Workshop Chinook Room

ow Enhancement Workshop Coho Room

All field tours depart from the River Lodge

Prairie and Redwood Creeks
Tour

Ocean Ranch and Eel River

Prairie and Redwood Creeks
Tour

Humboldt Bay Estuary Tour

McGarvey Creek, Klamath River

Elk River Tour

5:30pm Annual Meeting
Coho Room

Dinner & Film Screening
Chinook Room

6:30pm Membership

Accelerating Restoration CCC Multi-purpose Room

Riparian Corridors
Steelhead Room

Trinity River Coho Room

Van Duzen Tour

ower Mattole River

All field tours depart from the River Lodge

Book Signing





Lunch 12:15 to 1:15 pm
Outside and Steelhead Room

Afternoon Concurrent Sessions
1:30 - 5pm

Working Landscapes
Chinook Room

Fish Passage Steelhead Room

Modeling Salmonid Habitat

Evolving PoliciesCoho Room

7-10pm Poster Session River Lodge (all rooms)

Friday

Morning Concurrent Sessions
9am - 12:15pm

Reintroduction Extirpated Salmon

Approaches to Build Trust
Coho Room

Eel RiverCCC Multi-purpose Room

Process-based Restoration
Steelhead Room

Lunch 12:30 - 1:30pm
Outside and Steelhead Room

Afternoon Concurrent Sessions 1:30 - 5pm

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







Thursday April 27

Plenary Session

River Lodge, 9am—noon

Master of Ceremonies Michael Belchik, Yurok Tribe

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-editors 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**

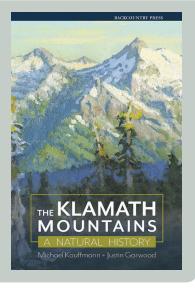
Department Chair Native American Studies, Cal Poly Humboldt

Booksigning 12:30pm

Natural History of the Klamath Mountains

Poster Session 7-10pm





Afternoon

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

Room

Coho Room

1:30pm

Using Satellite Imagery to Assess Watershed Conditions and Anthropogenic Water Use, Redwood Creek, Kelly Souza, California Department of Fish and Wildlife

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, UC Berkeley

Break 3:15-3:30pm

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

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

Session Coordinator: Mike Belchik, Yurok Tribe

Chinook Room

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

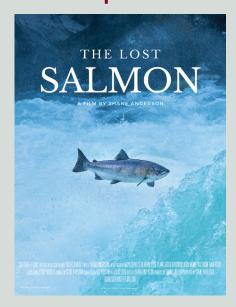
Reintroduction of Spring-run Chinook salmon in the San Joaquin River: Evaluating Efficacy of Decision-making in the Captivebreeding Program, Kasey C. Pregler, UC, Berkeley

Follow the Science: The Role of Scientific Decision-Making in the Big Notch Project, Dennis Finger, Department of Water Resources

Diet, Growth, and Survival of Juvenile Coho Salmon (Oncorbynchus kisutch) in Restored Off-channel Habitats in Tributaries to Humboldt Bay, Joshua Cahill and Kate Stonecypher, Cal Poly Humboldt

Conference Events

Wednesday April 26 5:30pm Annual Meeting Coho Room **6:30pm Membership Dinner Chinook Room**



With Film Screening of The Lost Salmon with filmmaker Shane Anderson

Friday April 28

6:30pm to Midnight SRF Banquet & Awards Ceremony River Lodge Ballroom



Live Music by Canary and the Vamp

April 28 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 Jake Shannon, North Coast Regional Water Quality Control Board

Room

BREAK 3-3:15pm

CCC Room

1:30pm Sol

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

Cutting the Green Tape with the California Department of Fish and Wildlife, Brad Henderson, CDFW

Ouality Control Board

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, Trinity River Restoration Program, U.S. Bureau of Reclamation, and Kyle de Juilio, Yurok Tribal Fisheries Program

Coho Room

Focusing Trinity River Science
—A Plan for Addressing
Key Uncertainties,
Darcy Pickard, Pickard
Environmental

From Rock Piles to Riparian: Recovering Riparian Function and Vegetation on the Trinity River, CA, John Bair, McBain Associates

Evolution of Tributary Junctions and Their Capacity for Rearing Juvenile Chinook Salmon (Oncorhyunchus tshawytscha) on a Regulated River, Todd Buxton, Bureau of Reclamation

Assessing Salmon Rearing Habitat with Physical Capacity and Flow Durations in the Trinity River, Emily Cooper-Hertel, Yurok Tribal Fisheries Department

Quantifying the Morphologic Underpinnings of Salmonid Habitat,

David Gaeuman, Yurok Tribal Fisheries Department

Synthesizing 87 years of Scientific Inquiry into Trinity River Water Temperatures, Seth Naman, 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

Steelhead Room

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, OSU

Is More Light Good for Fish?: Results from a Riparian Buffer Manipulation on Private Timberland in the Oregon Coast Range, Ashley Sanders, OSU

Effects of Experimental Riparian Canopy Gaps on Fish, Salamanders, Biofilms and Ecosystems Processes in Headwater Streams, Dana Warren, OSU

Riparian Canopy Modification Experiment: Lessons Learned and Results from Salmonid and Coastal Giant Salamander Monitoring in an Experimental Watershed in Northwestern CA, Mathew Nannizzi, Green Diamond Resource Company

Effectiveness of Meadow and Wet Area Restoration as an Alternative to Watercourse and Lake Protection Rules, Christopher Surfleet, Cal Poly, SLO

Concurrent Sessions

Large-Scale Fisheries Habitat Restoration in Working Landscapes Session Coordinator: Jay Stallman, Stillwater Sciences

Modeling Salmonid Habitat: Stream State, Forest Conditions, and Future Climates Session Coordinator: Jonathan Halama, MPH, Ph.D., U.S. EPA

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

Implementation Lessons Learned

Fish Passage Design and

Chinook Room

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, California Trout

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

CCC Room

Habitat Mosaics Support Variation in Salmon Foraging and Growth Potential Under Extreme Drought Conditions, Rachael E. Ryan, Ph.D. Candidate, UC 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., Cal Poly Humboldt

Habitat Modeling of Salmonid Movement and Survival in Degraded and Restored Watersheds, Greg Blair, ICF

Individual-Based Modeling of Stage 0 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 Corps

Steelhead Room

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 Step-pool Channel, Robert Mussetter, Tetra Tech, Inc.

Mill Creek Fish Passage Project: Design, Construction & Lessons Learned, Justin Bodell, RLA, PCI

Embrace Change: Combining Engineering and Geomorphic Principles to Design Resilient Fish Passage on San Geronimo Creek, Jason Q. White, 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., Michael Love & Associates, Inc.

Beale Lake Dam Removal and Roughened Ramp, Mark Gard, CDFW

Final Design, Material Sourcing, and Construction Methods of the Nelson Dam Roughened Channel Fishway, Michael C. Garello, PE, HDR Engineering, Inc.



April 28 Friday Morning Concurrent Sessions

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

Session Coordinator: Alicia Hamann, 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

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

Room

9:00am

CCC Room

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

Coho Room

Starting at Home: Co-Creating an Inclusive Restoration Organization Culture, Jen Rice, independent consultant

Diversifying Connections to Support Healthy Habitats, Carla Avila-Martinez and Leslie Parra, Save the Redwoods League

Bridging Cultural Fault Lines in the Middle Klamath to Build a Restoration Movement, Will Harling, Mid Klamath Watershed Council

Steelhead Room

Cal-PBR Network: Process Based

Restoration in a Changing Climate

Carrie Monohan, Ph.D., The Sierra

Fund; Karen Pope, Ph.D., Pacific

Southwest Research Station UŠDA;

Kate Lundquist, Occidental Arts and

Session Coordinators:

Ecology Center

Doing the Impossible Before Breakfast, Kevin Swift, Swiftwater Design

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

A Practical Restoration Model for Restoring the Sprague River Valley, Mike Edwards, USFWS

BREAK 10:30-10:45am

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, UC 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., California Trout

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

The Intergenerational Struggle of Being a River-based Community in Modern Day America, Danielle Frank, Hupa tribal member; Save California Salmon 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

Chinook Room

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-Franco, Winnemem Wintu Tribe and Melanie Chueng, Neurobiologist, NZ

Considerations for Assisted and Non-Assisted Passage at Large Dams, Jon Mann, PE, CFDW

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

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

Erosion and Sediment Control Field School

June 6-8, 2023 in Mendocino



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.

