

Virtual Salmonid Restoration Conference

April 21-23, 2021



Conference Co-sponsors

Balance Hydrologics, Cachuma Operation and Maintenance Board, California Conservation Corps, Cal Trout, Cardno, cbec, inc., East Bay Municipal Utility District, ESA, Eureka Water Probes, GHD, Green Diamond Resource Company—CA Timberlands Division, Guadalupe-Coyote Resource Conservation District (GCRCD), Hanford ARC of Community Foundation of Sonoma County, HDR, Inc., Humboldt and Mendocino Redwood Companies, ICF International, Lyme Redwood Forest Company, LLC, Marin Municipal Water District, McBain Associates, Mendocino County Resource Conservation District, Michael Love and Associates, MidPeninsula Regional Open Space District, Mother Earth Engineering, Northern California Water Association, Northwest Hydraulic Consultants, Onset, Pacific States Marine Fisheries Commission, Prunuske Chatham, Inc., RES, Redwood Forest Foundation, Inc. and Usal Redwood Forest Company, Rincon Consultants, Inc., SHN Engineers and Geologists, Inc., South Yuba River Citizens League, The Nature Conservancy, Trinity River Restoration Program, Valley Water, Wildlife Conservation Board, William Rich and Associates, WRA, Inc.



Wednesday, April 21 Workshops

9am

Accelerating Coho and Steelhead Recovery (9am-12:30pm)

Workshop Coordinators:

Matt Clifford, Trout Unlimited, and **Monty Schmitt**, The Nature Conservancy

State of the Salmon

Curtis Knight, California Trout

Implementing Priority Recovery Actions for Coho Salmon in the Central California Coast

Stephen Swales, Ph.D., California Department of Fish and Wildlife and **Erin Seghesio**, NOAA Fisheries

How to use the Salmon Habitat Restoration Priorities (SHaRP)

Process to Enhance Inclusion and Support in On-the-ground Restoration Planning

Julie Weeder, NOAA Fisheries, **Allan Renger**, California Department of Fish and Wildlife

The North Coast Salmon Project: a Synergistic Approach to Coho Salmon Recovery

Jonathan Nelson, California Department of Fish and Wildlife

Accelerating Steelhead and Coho Recovery Using the Habitat Restoration and Enhancement Act and other Programmatic Permits

Katie Haldeman, Sustainable Conservation; and **Lucy Haworth**, California Department of Fish and Wildlife

Building Local Capacity: An Overlooked Element in the Implementation of Habitat Restoration

Kellyx Nelson, San Mateo RCD

Exploring the Riffle Crest Thalweg (RCT) as a Tool for Assessing the Ecological Performance of Streamflow Diversion (9am-5pm)

Workshop Coordinators:

Bill Trush, Ph.D., River Institute and Department of Environmental Science and Management, Humboldt State University; **Valerie Zimmer**, State Water Resources Control Board; **Katrina Nystrom**, Salmonid Restoration Federation.

By restricting streamflow (Q) diversions to a relatively small percentage change in ambient riffle crest thalweg depth (RCT) in unregulated streams, key ecological processes will be protected. This workshop (1) introduces basic RCT concepts, (2) reviews recent RCT research/monitoring, (3) connects stream hydraulics to stream ecosystem processes for evaluating ecological performance, and (4) prioritizes ample opportunity for discussion, hands-on data analysis, and practical applications.



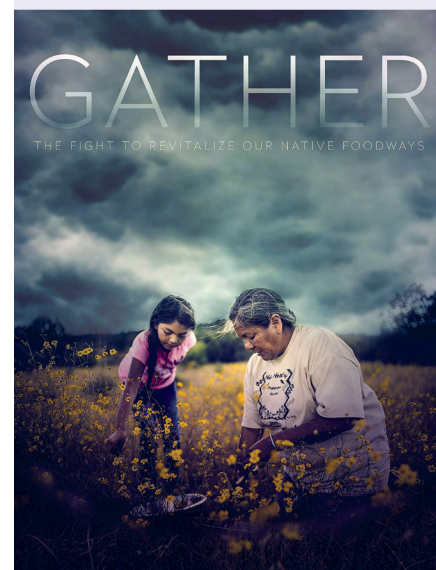
Speaking of Science (9am-12:30pm)

Workshop Coordinator:

Janine Castro, USFWS Vancouver, WA

This workshop is focused on improving oral presentation skills for planners, scientists, engineers, and others who participate in restoration and conservation projects. Participants will leave the workshop with an improved skill set, including a checklist to develop and deliver impactful presentations. The workshop is highly interactive and builds on the collective experience of the audience and the instructor.

Register for *Gather* film screening which will be available during the week of the conference.



Gather Film Screening

Join the film screening panel with Director **Sanjay Sanjay Rawal** and Ancestral Guard representative, **Sammy Gensaw**, for a discussion.

2pm

Professional Development Panel (2-4pm)

Making Restoration a Career in Five Words—Curiosity, Interdisciplinary, Collaborating, Sharing, and Amplifiers
Mike Love, Engineer and Founder, Michael Love and Associates

Goldi-Lorax's Pursuit of Here, There, and Everywhere

Sarah Phillips, Urban Streams Program Manager, Marin Resource Conservation District

Fisheries Biology: Endangered Species, Introversion, and the Deep Love of a Creek

Eric Ettlinger, Aquatic Ecologist, Marin Municipal Water District

Civil Servant: Cultivating a Career in Public Service with a Vision of Being Replaced

Raquel Ortega, District Director, California Conservation Corps

5:30pm



SRF Annual Meeting

Thursday, April 22

Plenary Session (9am-12:30pm)

9am

Master of Ceremonies: Thomas Williams, NOAA Fisheries

Deep Restoration (Without and Within):

Tending Old Wounds, Healing Systems, and Recovering Belonging

Rene Henery, Ph.D., *California Science Director*, Trout Unlimited

The Difference A Year Makes

Chuck Bonham, *Director of the California Department of Fish and Wildlife*

Break

Lifetime Achievement Awards

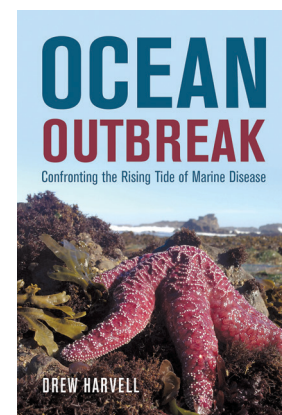
Ocean Conditions and the Emergence of Thiamine Deficiency
in Central Valley Chinook Salmon

Nate Mantua, Ph.D., *NOAA/NMFS Southwest Fisheries Science Center*

Ocean Outbreaks Heating Up with Climate Change

Drew Harvell, Ph.D., *Professor, Ecology and Evolutionary Biology, Cornell University*

12:30pm



1-1:15pm

Virtual Book Signing with Drew Harvell, *Ocean Outbreak*

1:30pm

Afternoon Concurrent Sessions (1:30pm-5pm)

Understanding Historical Context to Inform Current Salmonid Recovery Planning

Session Coordinator: Jay Stallman, Stillwater Sciences

Forgotten Legacies: Understanding and Mitigating
Historical Human Alterations of River Corridors
Ellen Wohl, Ph.D., *Colorado State University*,
Fluvial Geomorphology Department

Years in their Ears: What do Fish Earbones Tell us
about Spring-run Chinook Salmon Success?

Flora Cordoleani, Ph.D., *UC Santa Cruz* and National
Oceanic and Atmospheric Administration

What Ancient Salmon Bones Can Teach us about
Recovering California's Salmon Populations
Malte Willmes, *UC Santa Cruz* and *NOAA Fisheries*

3pm

Break

Yuba River Salmon Impacted since the Gold Rush:
An Analysis to Modify Aging Infrastructure,
Restore Volitional Passage and Remove Mercury
from the Aquatic Environment

Carrie Monohan, Ph.D.,

The Sierra Fund and *California State University Chico*

Novel Physical Evidence of the Historical Nativity
of Chinook Salmon "*Oncorhynchus tshawytscha*"
in the Guadalupe River Watershed
of Santa Clara County, California

Richard B. Lanman, MD, *Guadalupe-Coyote Resource
Conservation District* and *Institute for Historical Ecology*

Legacy Effects of Timber Harvesting on Salmonid Habitat
at Caspar Creek and Avenues for Improving Habitat During
Future Timber Harvests

Paul Richardson, *USDA Forest Service
Pacific Southwest Research Station*

The Influence of Food Webs on Salmonid Growth and Performance: A Forgotten Link to Species Resilience

Session Coordinator: Robert Lusardi, Ph.D., *UC Davis*
and *California Trout*

Food Webs and Juvenile Steelhead Behavior in Coastal
California—Towards a Foodscape Perspective
Gabriel Rossi, Ph.D., *UC Berkeley*

Abundant Prey Availability Improves Juvenile Coho
Growth Under Warming Stream Temperatures
Robert Lusardi, Ph.D., *UC Davis* and *California Trout*

Eye Lenses as an Archival Tool to Determine Off-Channel
Habitat Use During Juvenile Out-migration
in Adult Winter-run Chinook
Carson Jeffres, Ph.D., *UC Davis*

Break

Water Residence Time Drives Aquatic Ecosystem
Productivity on a Managed Floodplain
Jacob Montgomery, *Central Valley Science Program
Director, California Trout*

Summer Foraging Behaviour in Juvenile Coho Salmon and
Steelhead Trout Across a Heterogeneous Landscape
Rachael Ryan, *UC Berkeley*

Making Sense of Making Salmon: Recipes for Routing
Landscape Carbon into Fisheries Biomass
Jacob Katz, Ph.D., *Lead Scientist, California Trout*

5:30pm

Poster Session

Friday, April 23

Morning Concurrent Sessions (9am-12:30pm)

9am

(Un)Dam it! Dam Removal and Fish Passage Projects in California

Session Coordinators:

Darren Mierau, Cal Trout

If It's Broke, Why Fix It? Crumbling Concrete Coming to a Small Hydro Project Near You
Chris Shutes, California Sportfishing Protection Alliance

The Eel River Potter Valley Project—Modernizing Hydro-Power Infrastructure in one of California's Wildest Rivers
Darren Mierau and Redgie Collins, Cal Trout

Battle Creek Salmon and Steelhead Restoration Project
Mary Marshall and Trang Nguyen, USDOI, Bureau of Reclamation

10:30am

Break

Progress Towards Removal of Rindge Dam in Malibu Creek
Sandra Jacobson, Ph.D., Cal Trout, Director South Coast Region and Danielle LeFer, Ph.D., California Department of Parks and Recreation, Angeles District

Klamath Dam Removal; (Re) Moving Forward
Mike Belchik, Senior Fisheries Scientist, Yurok Tribe

The Impacts of Dam Construction and Removal on the Genetics of Recovering Steelhead "Oncorhynchus mykiss" Populations across the Elwha River Watershed
Alexandra Fraik, Washington State University

Anadromous Salmonid Habitat Suitability Criteria

Session Coordinator: **Mark Gard, Ph.D., California Department of Fish and Wildlife**

Review of Central Valley Anadromous Salmonid Habitat Suitability Criteria

Mark Gard, Ph.D., California Department of Fish and Wildlife

Large Scale Floodplain Rearing Habitat Rehabilitation: Southport Levee Setback
Chris Bowles, cbec eco engineering

Increasing Lateral Connectivity to Benefit Juvenile Salmonids on the Lower Yuba River: The Hallwood Side Channel and Floodplain Restoration Project
April Sawyer, cbec eco engineering

Break

Wanted: Project Site—A Framework for Evaluating Possible Restoration Sites
J.D. Wikert, U.S. Fish and Wildlife Service

Quantifying Dynamic Floodplain Habitat for Juvenile Salmon using a Hydrosatial Approach
Alison Whipple, San Francisco Estuary Institute

Using Aerial Redd Survey Data and a Two-dimensional Hydraulic Models to Construct a Temperature Dependent Spawning Resource Selection Function for Winter-run Chinook Salmon, **Peter N. Dudley, NOAA Fisheries**

Afternoon Concurrent Sessions (1:30-5pm)

1:30pm

The Science Informing Salmonid Reintroductions

Session Coordinator: **Carlos Garza, Ph.D., NOAA Fisheries, Southwest Fisheries Science Center and UC Santa Cruz**

The Science Informing Salmonid Reintroductions
Carlos Garza, Ph.D., NOAA Fisheries, Southwest Fisheries Science Center and UC Santa Cruz

Head of Reservoir to Ocean; Innovations Connecting Restoration and Reintroductions for ESA Listed Salmonids
Stacie Smith, D.Env., NOAA Fisheries

Capacity of Two High Sierra Rivers in California for Reintroduction of Anadromous Salmonids
David A. Boughton, Ph.D., NOAA/UC Santa Cruz

Recolonization Potential for Coho Salmon to Tributaries to the Klamath River Above Iron Gate Dam
Max Ramos, Humboldt State University

3:15pm

Break

Supplementing Mendocino Coho Salmon Populations via Captive Rearing
Bob Coey, and Libby Gilbert-Horvath, NOAA Fisheries

Dam, That Was a Wild Ride. Steelhead Passage Up, Down, and Around the Los Padres Dam in California
Haley Ohms, Ph.D., UC Santa Cruz/NOAA

The Return of the King: Reintroduction of Chinook Salmon to the San Joaquin River
Anthony Clemento, Ph.D., UC Santa Cruz/NOAA

Hydrologic Management Insights from Instrumented Watersheds

Session Coordinators: **Tim Bailey, Watershed Research and Training Center, and David Dralle, Ph.D., Pacific Southwest Research Station, U.S. Forest Service**

Quantification of Water Storage and Non-perennial Runoff Dynamics in a Semi-arid Catchment
Amanda Donaldson, Ph.D. student, UC Santa Cruz

Hyporheic Restoration: Lessons from Meacham Creek, OR
Byron Amerson, Environmental Science Associates

Variability of Headwater Stream Network Extent is Highly Sensitive to Projected Impacts of Climate Change
Christine Leclerc, Simon Fraser University

Developing California's Stream Gaging Plan (SB 19)
Valerie Zimmer, State Water Board

Break

Advancing Voluntary Flow Enhancement Projects in California's Small Streams and Rivers
Amy Campbell, The Nature Conservancy, Instream Flows Project Director

Effects of Flow Augmentation on Coho Salmon Smolt Passage in Porter Creek, a Tributary to the Russian River, California
Sarah Nossaman Pierce, California Sea Grant

The Recession of Freedom—Investigating the Drivers of within-reach Movement for Overwintering Juvenile Steelhead and Coho Salmon in a Drying Stream
Gabriel Rossi, Ph.D., UC Berkeley

5:30pm

Gather Panel

SRF Virtual Conference Schedule-at-a-Glance

Wednesday, April 21

Workshops

9am-noon	Speaking of Science Workshop
9am-12:30pm	Coho and Steelhead Recovery Workshop
9am-5pm	Instream Flow Workshop

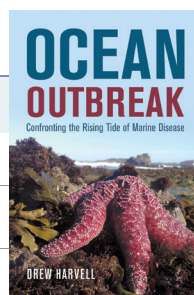
Other Events

2-4pm	Professional Development Panel
5:30-6:30pm	 SRF Annual Meeting

Thursday, April 22

Plenary and Afternoon Sessions

9am-12:30pm	Plenary Session
1pm	Virtual Book Event with Drew Harvell
1:30pm	Afternoon Concurrent Sessions



Understanding Historical Context to Inform Current Salmonid Recovery Planning

The Influence of Food Webs on Salmonid Growth and Performance: A Forgotten Link to Species Resilience

Other Events

5:30pm	Interactive Poster Session
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Friday, April 23

Concurrent Sessions

9am-12:30pm	Morning Concurrent Sessions
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*(Un)Dam it!
Dam Removal and Fish Passage Projects in California*

Anadromous Salmonid Habitat Suitability Criteria

1:30-5:30pm	Afternoon Concurrent Sessions
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The Science Informing Salmonid Reintroductions

Hydrologic Management Insights from Instrumented Watersheds

Other Events

5:30pm	Gather Film Screening Panel
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Join the film screening panel with Director Sanjay Rawal and Ancestral Guard representative, Sammy Gensaw, for a discussion of the film.