

Interagency Ecological Program 2024 ANNUAL WORKSHOP PROGRAM SCHEDULE

April 23-25, 2024



Interagency
Ecological Program

COOPERATIVE ECOLOGICAL
INVESTIGATIONS SINCE 1970

Science, Synthesis, Service

Workshop Day 1: Tuesday, April 23

REGISTRATION CHECK-IN

1st Floor North Lobby (next to Auditorium) 7:30 am – 8:30 am

SESSION 1: WELCOME AND PLENARY 1

Moderator and Speaker: 8:30 am – 9:00 am

Rosemary Hartman, California Department of Water Resources

8:30 – 8:40 Workshop Welcome
Rosemary Hartman, California Department of Water Resources

8:40 – 9:00 10 Things I Have Learned Working with the IEP
Steve Culberson, [Lead Scientist of the Interagency Ecological Program](#)

SESSION 2: PHYSICAL AND BIOLOGICAL EFFECTS OF FLOW

Moderator and Speakers: 9:00 am – 10:00 am

Sam Bashevkin, State Water Resources Control Board

9:00 – 9:15 As the Smelt Swims: Re-examining the Spawning Migration of Delta Smelt

Brian Mahardja, U.S. Bureau of Reclamation

9:15 – 9:30 Evaluation of Spring Outflow to Larval Delta Smelt (*Hypomesus transpacificus*) Health and Condition

Marie Stillway Garcia, U.C Davis

9:30 – 9:45 Improving our Understanding of X2 and Salt Field Dynamics through High Resolution Near-Bed Salinity Monitoring in the San Francisco Estuary

Paul Stumpner, U.S. Geological Survey

9:45 – 10:00 The Interaction of Uncertainty and Objective Weights: Value-of-Information Analysis to Inform River Temperature Management for Green Sturgeon and Winter-run Chinook Salmon Below Shasta Dam

Brian Healy, U.S. Geological Survey

BREAK (20 minutes)

10:00 – 10:20

SESSION 3: POSTERS (2nd Floor, Rooms 2-221 B-C)

Moderators: **10:20 am – 12:25 pm**

Amanda Maguire, California Department of Water Resources

Asha Pluton, California Department of Water Resources

See the Poster Abstract Booklet for list of poster titles and authors.

LUNCH (90 minutes)

12:25 – 1:55 **Early Career Luncheon:** 2nd Floor Room 2-301 (Registered attendees only)

12:25 – 1:55 **Regular Lunch:** Area Restaurants – All attendees on their own

SESSION 4: RECONNECTING DELTA FOOD WEBS

Moderator and Speakers: **1:55 pm – 3:10 pm**

Daniel Ellis, Interagency Ecological Program (Synthesis)

1:55 – 2:10 Food Webs Forward: Understanding the Benefits and Science Needs for Incorporating Food Web Interactions into Management in the Bay-Delta Estuary

Lillian McCormick, California Sea Grant and Delta Independent Science Board (Postdoctoral Researcher) and Robert Naiman, Delta Independent Science Board
Early Career Award candidate

2:10 – 2:25 The Cache Slough Complex: A Deep Dive into a Shallow Wetland
Emily T. Richardson, U.S. Geological Survey
Early Career Award candidate

2:25 – 2:40 Continuous Zooplankton Observation, Detection, and Enumeration
Kai Ross, Cramer Fish Sciences

2:40 – 2:55 Reconnecting Delta Food Webs: Evaluating the Influence of Tidal Marsh Restoration on Prey Availability and Diet of Native Fishes
Susan De La Cruz, U.S. Geological Survey

2:55 – 3:10 Restoring Tidal Marsh Food Web Structure and Energy Pathways for Estuarine Fish Communities
Megan Pagliaro, UC Berkeley
Early Career Award candidate

BREAK (20 minutes)

3:10 – 3:30

SESSION 5: PHYTOPLANKTON AND NUTRIENTS

Moderator and Speakers:

3:30 pm – 5:00 pm

Ellen Preece, California Department of Water Resources

3:30 – 3:45 Identification of Environmental Conditions Driving Cyanobacterial Multi-Species Blooms and Their Toxicity Using Genome Resolved Metagenomics

Andreja Kust, U.C. Berkeley, Innovative Genomics Institute
Early Career Award candidate

3:45 – 4:00 Using Numerical Tracers to Estimate Ecological Rates in a Phytoplankton Model

Edward Gross, Resource Management Associates Inc.

4:00 – 4:15 Benthic Overwintering *Microcystis* sp. Seedstock and its Role in Summertime Blooms

Ellen Preece, California Department of Water Resources

4:15 – 4:30 Comparing Cyanobacteria and Cyanotoxins in the Delta During Droughts and Deluges

Keith Bouma-Gregson, U.S. Geological Survey

4:30 – 4:45 Assessing the Dynamics of Emerging Spring Phytoplankton Blooms at the Confluence

Schuyler Nardelli, USGS California Water Science Center
Early Career Award candidate

4:45 – 5:00 Assessing Sediments as a Nutrient Source/Sink to the Sacramento-San Joaquin River Delta

Nicholas Framsted, USGS California Water Science Center
Early Career Award candidate

Workshop Day 2: Wednesday, April 24

REGISTRATION CHECK-IN

1st Floor North Lobby (next to Auditorium) 7:30 am – 8:30 am

SESSION 6: WELCOME AND PLENARY 2

Moderator and Speaker: 8:30 am – 9:05 am

Rosemary Hartman, California Department of Water Resources

8:30 – 8:40 Workshop Welcome

Rosemary Hartman, California Department of Water Resources

8:40 – 9:05 How Science and Policy Can Work Together: What does it take to get there?

Felicia Marcus, [William C. Landreth Visiting Fellow at Stanford University's Water in the West Program](#)

SESSION 7: SMELT SUPPLEMENTATION

Moderator and Speakers: 9:05 am – 10:05 am

Denise Goodman, U.S. Fish and Wildlife Service

9:05 – 9:20 Delta Smelt Experimental Release – Summary of Year Three Activities and Initial Observations

Katie Osborn, California Department of Water Resources

9:20 – 9:35 Quantifying the Stress Response of an Endangered Fish Species to Support Population Supplementation

Nicholas Hudson, UC Davis, Department of Wildlife and Fisheries Biology

Early Career Award candidate

9:35 – 9:50 Branding, Spraying, and Tagging, Oh My! Investigating New Methods of Marking Cultured Delta Smelt

Trishelle Tempel, California Department of Water Resources

9:50 – 10:05 Enhancing Delta Smelt Conservation: A Naturalistic Approach to Rearing and Supplementation

Florian Mauduit, UC Davis

Early Career Award candidate

POETRY SLAM

Moderator:

10:05 am – 10:25 am

Rosemary Hartman, California Department of Water Resources

BREAK (20-minutes)

10:25 – 10:45

SESSION 8: POSTERS (2nd Floor, Rooms 2-221 B-C)

Moderators:

10:45 am – 12:40 pm

Amanda Maguire, California Department of Water Resources

Asha Pluton, California Department of Water Resources

See the Poster Abstract Booklet for list of poster titles and authors.

LUNCH (90 minutes)

12:40 – 2:10 **Regular Lunch:** Area Restaurants – All attendees on their own

SESSION 9: WETLANDS & FLOODPLAINS: ADVANCEMENTS IN MONITORING AND RESTORATION

Moderator and Speakers:

2:10 pm – 3:25 pm

Nicole Kwan, California Department of Water Resources

2:10 – 2:25 Oh, the Places They'll Go! Results from a Yolo Bypass Adult Salmon and Sturgeon Acoustic Telemetry Study

Dennis Finger, California Department of Water Resources

Early Career Award candidate

2:25 – 2:40 No Net Habitat Loss – Quantifying Fish Response to Levee Setback Projects

Bobbie Flores, Cramer Fish Sciences

Early Career Award candidate

2:40 – 2:55 Integrating Social and Ecological Research to Control Invasive Species in Suisun Marsh

Gabrielle Keeler-May, Chapman University, Environmental Science and Policy

Early Career Award candidate

2:55– 3:10 Investigation of Floating Peat Wetlands, Sacramento-San Joaquin Delta, CA

- Steven Deverel, HydroFocus Inc.
- 3:10 – 3:25 Additive Benefits of Point Counts and Automated Recording Units:
What Do Secretive Marsh Birds Say After the Survey is Over?
Julian Wood, Point Blue Conservation Science

BREAK (20 minutes)

3:25 – 3:45

SESSION 10: LIGHTNING TALKS

Moderator and Speakers:

3:45 pm – 5:00 pm

Brock Huntsman, U.S. Geological Survey

- 3:45 – 3:53 Strategic Communication for Collective Action in Wetland
Management and Restoration: Engaging with the Public,
Landowners, and Agencies
Richelle L. Tanner, Chapman University
Early Career Award candidate
- 3:53 – 4:01 Lessons Learned for Interweaving Traditional Knowledge and
Western Science in the San Francisco Bay-Delta
Xoco Shinbrot, Delta Science Program within the Delta
Stewardship Council
Early Career Award candidate
- 4:01 – 4:09 A Year of Cage Studies in the San Francisco Estuary to Inform
Conservation Efforts of Delta Smelt
Brittany Davis, California Department of Water Resources
- 4:09 – 4:17 Microorganisms as Indicators of Habitat Conditions in Restoring
Wetlands
Erick Ortiz, San Francisco State Univ. | Estuary & Ocean Science
Center
Early Career Award candidate
- 4:17 – 4:25 Larval Fish Diets as Indicators of Food Web Dynamics in Tidal
Wetland Restoration
Anthony Donahue, San Francisco State Univ. | Estuary & Ocean
Science Center
Early Career Award candidate
- 4:25 – 4:33 Are Mosquito Control Pesticides Negatively Affecting Delta Water
Quality?
James Orlando, U.S. Geological Survey
- 4:33 – 4:41 LightDeck Technology: Evaluating a Cyanotoxin Detection Tool

- 4:41 – 4:49 Silvia Angles, California Department of Water Resources
A Comparison Between eDNA Concentrations & Loach Capture
in the San Luis Wildlife Refuge
Matthew E. Murphy, US Fish and Wildlife Service
Early Career Award candidate
- 4:49 – 4:57 How much Vegetation are IEP Fish Surveys Running Into, and Does
It Matter?
Daniel Ellis, Interagency Ecological Program (Synthesis)

Workshop Day 3: Thursday, April 25

REGISTRATION CHECK-IN

1st Floor North Lobby (next to Auditorium) 7:30 am – 8:30 am

SESSION 11: WELCOME AND PLENARY 3

Moderator and Speaker: 8:30 am – 9:05 am

Rosemary Hartman, California Department of Water Resources

- 8:30 – 8:40 Workshop Welcome
Rosemary Hartman, California Department of Water Resources
- 8:40 – 9:05 We are Smarter Than Me
Anke Mueller-Solger, [Center Director, USGS California Water
Science Center](#)

SESSION 12: New and Improved Longfin Smelt Science and Monitoring

Moderator and Speakers: 9:05 am – 10:05 am

Vanessa Tobias, U.S. Fish and Wildlife Service

- 9:05 – 9:20 Improving Our Understanding of Longfin Smelt (*Spirinchus
thaleichthys*) Maturation and Fecundity
Nikolas J. Floros, UC Davis
Early Career Award candidate
- 9:20 – 9:35 Larval Longfin Entrainment Sampling 2022-2024: A Developing
Long-Term Monitoring Program
Morgan Gilbert, California Department of Fish and Wildlife
- 9:35 – 9:50 Expansion into San Pablo Bay: Smelt Larva Survey & 20-mm Survey
Updates

9:50 – 10:05 Vanessa Mora, California Department of Fish and Wildlife
Building a Longfin Smelt Life Cycle Model
Vanessa Tobias, U.S. Fish and Wildlife Service

BREAK (20 minutes)

10:05 – 10:25

SESSION 13: SO MANY FISHES

Moderator and Speakers: **10:25 am – 11:55 am**

Claudia Macfarlane, U.S. Fish and Wildlife Service

10:25 – 10:40 A Mark-Recovery Model for Delta Smelt
Will Smith, US Fish and Wildlife Service

10:40 – 10:55 Automated Fish Tracking and Enumeration in Dynamic
Environments
Andrew Veary, Cramer Fish Sciences
Early Career Award candidate

10:55 – 11:10 Lampreys in California (*Lampetra* and *Entosphenus spp.*):
Mitochondrial Phylogenetic Analysis Reveals Previously
Unrecognized Lamprey Diversity
Grace Auringer, UC Davis, Genomic Variation Laboratory
Early Career Award candidate

11:10 – 11:25 Management Implications of Otolith-Based Insights Regarding the
Growth, Phenology, Life History, Genetics, Fecundity, and Fitness of
Delta Smelt
Levi S. Lewis, UC Davis

11:25 – 11:40 Environmental Drivers of Fish Populations in Central California
Jonathan Walter, UC Davis

11:40 – 11:55 Biofouling Impacts to Field Enclosure Studies on Delta Smelt
Scott Meyer, California Department of Water Resources (DISE)
Early Career Award candidate

LUNCH (105 minutes)

11:55 – 1:40 **Regular Lunch:** Area Restaurants – All attendees on their own

SESSION 14: SALMONID HABITAT – Monitoring and Modeling

Moderator and Speakers: **1:40 pm – 2:55 pm**

Márcia Scavone-Tansey, California Department of Water Resources

- 1:40 – 1:55 Reorienting to Recovery: CA Central Valley Salmonid Recovery Project
Alison Collins, The Metropolitan Water District of Southern California
- 1:55 – 2:10 Estimating Abundance of Endangered Winter Run Chinook Salmon Entering and Exiting the Delta
Bryan Matthias, US Fish and Wildlife Service
- 2:10 – 2:25 Improving Understanding of Survival, Mortality, and Habitat Use of Emigrating Salmonids Through Applications of Multistage Survival Models
Matt Peterson, FISHBIO
- 2:25 – 2:40 Chinook Salmon and Delta Smelt Metabolic Indices: Determining their Viable Habitats Across the San Francisco Estuary through Integrating Laboratory Respirometry and Environmental Monitoring Data
Garfield T. Kwan, UC Davis, Wildlife Fish and Conservation Biology
Early Career Award candidate
- 2:40 – 2:55 Blinded by the Light: Could Reducing Artificial Nighttime Illumination Benefit Native Fish?
Brendan Lehman, NOAA SWFSC and UC Santa Cruz

BREAK (20 minutes)

2:55 – 3:15

SESSION 15: TROUBLED WATERS: STRESSORS AND AQUATIC ORGANISMS

Moderator and Speakers:

3:15 pm – 4:30 pm

Shawn Acuña, The Metropolitan Water District of Southern California
Aaron Angel, Delta Science Program within the Delta Stewardship Council

- 3:15 – 3:30 Identification of Toxic Contaminants in California Sediments Using Nontargeted Analysis and *Hyaella Azteca* Toxicity Tests
Anna Feerick, U.C. Davis
Early Career Award candidate
- 3:30 – 3:45 Navigating Toxic Waters: Sub-lethal Concentrations of Bifenthrin Impact the Behavior of Chinook Salmon but not their Cardiac-Respiratory System
Louise Cominassi, UC Davis, School of Veterinary Medicine
Early Career Award candidate

- 3:45 – 4:00 Development of a Pesticide Response Spectrum Model for Chinook Salmon
Michael J. Lydy, Southern Illinois University, School of Biological Sciences
- 4:00 – 4:15 An Assessment of 6PPD-Quinone Acute and Sublethal Toxicity on San Francisco Bay Delta Species of Conservation Concern
Jackelyn Lang, UC Davis, Department of Anatomy, Physiology and Cell Biology; Department of Medicine and Epidemiology
Early Career Award candidate
- 4:15 – 4:30 Monitoring and Modeling Pathogen Exposure in Salmon Migrating to the Delta
Miles Daniels, UC Santa Cruz and NOAA Affiliate

EARLY CAREER AWARDS & CLOSING REMARKS

Moderators: **4:30 pm – 5:00 pm**

Ted Flynn, California Department of Water Resources

- 4:30 – 4:50 Conferral of Awards for Best Early Career Talk and Poster
Ted Flynn, California Department of Water Resources
- 4:50 – 5:00 Closing Remarks
Rosemary Hartman, California Department of Water Resources