



Cultivating Connections for a Dynamically Changing Environment

BayDeltaScienceConference.com
#BDSC2024

Sept. 30–Oct. 2, 2024
SAFE Credit Union Convention Center
Sacramento, California

The Biennial Bay-Delta Science Conference recognizes that, by harnessing the breadth of knowledge that exists across our community, we can meet the many challenges facing the Delta of today and into the future. However, the strongest path forward will require intentional cultivation and increased connection.

Just as cultivation can nurture the development of a sapling to a tree and the growth of many trees into a resilient forest, connection and cultivation will magnify our positive impact as practitioners, inhabitants, and stewards of the Bay-Delta facing the multiple challenges inherent with rapid change. Embracing connections across ways of knowing, disciplines, and geographies will be the key to fruitful adaptation. **We hope that the 2024 Bay-Delta Science Conference, “Cultivating Connections in a Dynamically Changing Environment” will plant the seed.**

Special Event

Town Hall: Jeopardy! Delta Science Plan Edition

October 1 at 12:30-1:30 in Rm B3-5

Organizer: Tricia Lee, Delta Science Program

What does it take to plan for the “doing of science” in the Delta? How can members of the Delta science community have their voices heard in the planning done by the Delta Science Program? What are the “Grand Challenges” in Delta science and what can we do about them? Attend this interactive and fun lunchtime session to hear about how the Delta Science Plan has successfully created change in Delta science over the last decade and how YOU can inform the forthcoming development of the 2025 Delta Science Plan.

Organizing Committee

Conference Co-Chairs:

*Jim Orlando, USGS
Michele Stevens, CSU Sacramento*

Program Chairs:

*Brian Mahardja, USBR
Laura Twardochleb, SWB*

Conference Coordinators:

*Miranda Bell-Tilcock, Delta Stewardship Council
Maggie Christman, Delta Stewardship Council
Events Enterprises Team*

Poster Chairs:

*Scott Navarro, Delta Stewardship Council
Florian Mauduit, UC Davis*

Art Chairs:

*Kim Luke, Delta Stewardship Council,
Jessica Weidenfeld, Delta Stewardship Council*

Student Mentor Chairs:

*Ben Geske, Delta Stewardship Council
Mandi Finger, UC Davis*

Student Judging Chairs:

*Stephen Elser, Delta Stewardship Council
Elizabeth Brusati, Delta Stewardship Council
Xoco Shinbrot, Delta Stewardship Council*

Professional Societies Chair:

Darcy Austin, State Water Contractors

Brown-Nichols Science Award Chair:

Lauren Hastings, Delta Stewardship Council

Committee Members:

*Amanda Cranford, NOAA/NMFS
Shawn Acuna, MWD
Christine Joab, CDFW/IEP
Tim Mussen, Sacramento Area Sewer District
Lisa Thompson, Sacramento Area Sewer District
Lauren Damon, Delta Conservancy
Anji Shakya, Delta Conservancy
Lydia Vaughn, SFEI
Donna Bell, SFEI
Lynn Takata, CDFW*



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9:00 am – 12:00 pm: Plenary Session – Room B3-8

Opening remarks from...



Julie Lee

Chair,
Delta Stewardship Council



Lori Wilson

California State
Assemblymember, District 11



Joaquin Esquivel

Chair,
State Water Resources Control Board



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**Diana
Almendariz**

**Cultural Practitioner of
Maidu/Wintun,
Hupa/Yurok Traditions,
Heritage and
Experiences**

*“Reinvigorating Waters and
Soil: The Unexpected
Benefits of Ash”*



Don Hankins

**Professor, California
State University, Chico**

*“Community Connections:
Weaving Tradition &
Science for Collaborative
Conservation”*



**Karen
Morrison**

**Chief Deputy Director
and Science Advisor,
California Department
of Pesticide Regulation**

*“Downstream Impacts of
Sustainable Pest
Management”*

Plus! Find out the winner of the 2024 Brown-Nichols Science Award!



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9:00 am – 12:00 pm: Plenary Session – Room B3-8

9:00 Opening Remarks: **Henry DeBey**, Deputy Executive Officer for Science, Delta Stewardship Council
Julie Lee, Chair, Delta Stewardship Council
Lori Wilson, California State Assemblymember, District 11
Joaquin Esquivel, Chair, State Water Resources Control Board

9:30 Keynote: **Diana Almendariz**, Cultural Practitioner of Maidu/Wintun, Hupa/Yurok Traditions, Heritage and Experiences, Cache Creek Conservancy

Break: 10:00 am – 10:30 am

10:30 Keynote: **Don Hankins**, Professor, California State University, Chico

11:00 Keynote: **Karen Morrison**, Chief Deputy Director and Science Advisor, California Department of Pesticide Regulation

11:50 Award: **Brown-Nichols Science Award**, presented by the 2018 award recipient Ted Sommer

12:00 pm – 1:30 pm: Lunch – Hall D

Mentor Lunch – Room 9/10/11

Day 1	Session 1 (B2)	Session 2 (B3-5)	Session 3 (B6-8)	Session 4 (B-9)	Session 5 (B10)	Session 6 (9/10)
Session	From monitoring to management: a collaboratory to develop a spring-run Chinook Salmon juvenile production estimate.	Emerging Technologies (General)	Flow & Physical Processes 1	Beyond Fish (Birds)	Phragmites control efforts and expansion in Suisun Marsh over 2 decades: can collective action improve the outcome?	Artificial intelligence (AI) approaches to advance coastal ecosystem science
Moderator	Brett Harvey, DWR	George Isaac, Delta Stewardship Council	Megan Nguyen, Delta Stewardship Council	Kim Luke, Delta Stewardship Council	John Takekawa, Suisun RCD	Ashley Brereton, LBNL
1:30	Building resilient data systems for Sacramento River spring-run Chinook salmon using human-centered data management <i>Ashley Vizek, FlowWest</i>	Machine Learning Protocols for Bay-Delta Water and Environmental Modeling <i>Kevin He, DWR</i>	The potential for discharge-mediated temperature management on the Sacramento River <i>Cyril Michel, NOAA</i>	California Black Rail (<i>Laterallus jamaicensis coturniculus</i>) Response to Marsh Restoration at Bay Point Regional Shoreline <i>Chris Barton, East Bay Regional Park</i>	A North American context: Phragmites invasion ecology, management, and post-management wetland restoration in complex social landscapes <i>Karin Kettenring, Utah State</i>	Toward Near-/Real-time Prediction of Fish Entrainment, Guidance, and Response to Tidal Hydrodynamics with ELAM Theory-informed AI <i>R. Andrew Goodwin, ERDC</i>
1:50	Catch me if you can! – Monitoring spring-run Chinook Salmon in the Sacramento River watershed to develop a juvenile production estimate <i>Anna Allison, CDFW</i>	A Machine Learning Based Tool for Ion Constituent Simulation in the Sacramento-San Joaquin Delta <i>Peyman Namdi, DWR</i>	Sensitivity of river temperature downstream of a dam to mechanisms in a warming climate <i>Erin Bray, SFSU</i>	Utilizing Otolith Geochemistry to Identify Origins of Juvenile Chinook Salmon Preyed Upon by an Endangered Avian Piscivore <i>Sami Araya, UC Davis</i>	<i>Phragmites</i> control efforts and expansion in Suisun Marsh over 2 decades <i>John Takeawa, Suisun RCD</i>	The Regional Carbon and Climate Analytics Tool (RCCAT): A Deep-Learning Model to Predict Carbon Sequestration Potential and Greenhouse Gas Emissions <i>Ashley Brereton, LBNL</i>
2:10	Need for Speed: Rapid, high-throughput genetic identification of Chinook Salmon run-types in the Sacramento River Basin <i>Sean Canfield, DWR</i>	Succession in novel ecosystems: generalities and divergence of post-restoration vegetation dynamics in carbon-capture wetlands informed by multi-temporal satellite observations <i>Iryna Dronova, UC Berkeley</i>	The Impact of Climate Change on River Temperatures in Lowland Rivers downstream of Dams <i>Andres Rojas-Aquirre, SFSU</i>	Higher survival for ducklings hatching closer to wetland brood habitat and in lower-salinity wetlands <i>Sarah Peterson, USGS</i>	Restoring ecosystem services through targeted revegetation: Testing a post-Phragmites management strategy in Suisun Marsh <i>Adrienne Ernst, Berry College</i>	Surrogate Model for Data Assimilation in Seawater Intrusion Problems <i>Su Jiang, LBNL</i>
2:30	What are the odds? Forecasting survival of spring-run Chinook Salmon juveniles migrating from the Sacramento River and its tributaries to the Delta <i>Flora Cordoleani, NOAA</i>	Harnessing AI for Custom Data Dashboards and Maps: Enhancements in Natural Resource Management, Operations, and Reporting on BayDeltaLive.com <i>Amye Osti, 34 North</i>	Evaluating blue carbon in a working wetland <i>Lyndsay Rankin, USGS</i>	Effects of a large-scale watercraft racing event on waterbirds in a highly urbanized estuary <i>Tanya Graham, USGS</i>	Factors that facilitate or hinder collective action for managing invasive plants in managed wetlands <i>Vaishnavi Tripuraneni, Univ. of Delaware</i>	Interaction between coastal wetland restoration and hydrological processes <i>Yi Xu, UC Santa Cruz</i>
2:50	A modeling approach for optimizing Chinook salmon adult monitoring data <i>Liz Stebbins, FlowWest</i>	Estimating Effective Light Exposure of Phytoplankton using Property-Tracking Tracers <i>Edward Gross, RMA</i>	How does beneficial reuse of dredged material influence wetland restoration rates and outcomes? <i>Michelle D'Aguillo, USGS</i>	Identifying high priority areas for tidal marsh bird conservation in the Delta <i>Kristen Dybala, Point Blue Conservation Science</i>	A mixed-methods approach to identifying opportunities for and barriers to collective action for invasive plant management in Suisun Marsh <i>Zhao Ma, Purdue Univ.</i>	A suite of data-model fusion approaches for informing greenhouse gas emissions at restored wetlands <i>Kyle Delwiche, UC Berkeley</i>
3:10-3:30	Break					

Day 1	Session 1 (B2)	Session 2 (B3-5)	Session 3 (B6-8)	Session 4 (B-9)	Session 5 (B10)
Session	Fishes in South Delta	Emerging Technologies (Fish)	Flow & Physical Processes 2	Beyond Fish (Mammals and Herps)	SF Estuary Wetlands Regional Monitoring Program: Regional Science to Inform Estuary Management
Moderator	Henry DeBey, Delta Stewardship Council	Denise Colombano, Delta Stewardship Council	Amanda Bohl, Delta Stewardship Council	Elizabeth Brusati, Delta Stewardship Council	Christina Toms, SF Bay Regional Water Quality Control Board
3:30	Assessing survival and routing for juvenile steelhead migrating through the South Delta <i>Bryan Matthias, USFWS</i>	Reach-scale riverbed grain-size mapping with remote-sensing techniques <i>Scott Wright, CBEC</i>	Hamilton Wetlands Restoration Project: Fish Community Response to changing Tidal Marsh Conditions <i>Garrett Leidy, ESA</i>	The Effect of Salinity on Western Pond Turtle Occupancy in Suisun Marsh <i>Melissa Riley, CDFW</i>	SF Estuary Wetlands Regional Monitoring Program: Regional Science to Inform Estuary Management <i>Aviva Rossi, SFEI</i> <i>Lisa Beers, SFEI</i>
3:50	The effects of hydrodynamic and environmental conditions on juvenile Chinook Salmon movements in the south Sacramento-San Joaquin Delta <i>Sydney Gonsalves, Anchor QEA, Inc</i>	Immersed in Veg: Using High Resolution Drone Imagery to Understand the Effect of Vegetation on Fish Monitoring in The Yolo Bypass <i>JT Casby, DWR</i>	Transport Dynamics in the Low Salinity Zone of the San Francisco Estuary <i>Paul Stumpner, USGS</i>	Distribution of Giant Gartersnakes (<i>Thamnophis gigas</i>) in the Sacramento-San Joaquin Delta <i>Anna Jordan, USGS</i>	SF Estuary Wetlands Regional Monitoring Program: Regional Science to Inform Estuary Management <i>Alex Braud, SFEI</i>
4:10	Development and Calibration of An Individual Based Ecological Particle Tracking Model in the South Delta <i>Xiaochun Wang, DWR</i>	Whose tag is it, anyway: recommendations for diagnosing predator detections in salmon telemetry data <i>Rebecca Buchanan, Univ. of Washington</i>	Suspended particulate matter mixing in the Low Salinity Zone of the San Francisco Estuary, California <i>Dan Haught, USGS</i>	An updated state of the mouse: A dynamic species in a dynamic environment <i>Katie Smith, WRA</i>	SF Estuary Wetlands Regional Monitoring Program: Regional Science to Inform Estuary Management <i>Justin DiGennaro, USGS</i>
4:30	Guidance Structure Evaluation Using a Novel Hydrodynamic, Fish Movement, and Survival Model Ensemble <i>Kevin Clark, DWR</i>	Food-web responses to tidal marsh restoration in the San Francisco Bay-Delta: energy pathways and effects of native and non-native fishes <i>Megan Pagliaro, UC Berkeley</i>	A comparative study of projected water availability in California using physical and statistical climate change projections <i>Sudarshana Mukhopadhyay, Scripps Institute UCSD</i>	Conservation prioritization in the salt marsh harvest mouse <i>Mark Statham, UC Davis</i>	SF Estuary Wetlands Regional Monitoring Program: Regional Science to Inform Estuary Management <i>Daniel Nowacki, USGS</i>
5:00-7:00	Art and Poster Reception – Hall D				

Day 2	Session 1 (B2)	Session 2 (B3-5)	Session 3 (B6-8)	Session 4 (B-9)	Session 5 (B10)	Session 6 (9/10)	
Session	<i>Oncorhynchus mykiss</i> (Steelhead)	Delta Carbon Farming	Applied Science & Adaptive Management	Unbottling the Secrets of the Bay-Delta: How Environmental DNA is Transforming Biological Monitoring	Longfin Smelt	<p>Delta Collaboration 2.0: How Can We Improve Collaborative Engagements to Incorporate More Diverse Perspectives and Support More Robust Decisions?</p> <p>Moderator: Bruce DiGennaro, The Essex Partnership</p> <p>Panel: Jay Ziegler, Delta Watermaster</p> <p>Tanya Heikkila, Delta ISB</p> <p>Sam Luoma</p> <p>Darcy Austin, SWC</p> <p>Lenny Grimaldo, DWR</p>	
Moderator	Kim Luke, Delta Stewardship Council	Lauren Damon, Delta Conservancy	Stephen Elser, Delta Stewardship Council	Daphne Gille, DWR and Sarah Brown, DWR	Shawn Acuna, MWD		
8:30	South Delta STARS for juvenile steelhead: simulating through-Delta travel time, routing, and survival via modeled linkages to freshwater inflows and exports <i>Adam C. Pope, USGS</i>	Long-term monitoring of greenhouse gas budgets in restored wetlands <i>Patty Oikawa, CSU East Bay</i>	Adapting to Changing Climate Extremes: The Application of Physics-Based Coastal Modeling Tools <i>Shannon McCarty, HDR Inc.</i>	An Environmental DNA Strategy for Science-Driven Management of Water Resources in California <i>Daphne Gille, DWR</i>	Identifying the shifts in habitat use of a vulnerable fish species over four decades of paired sampling <i>Andrew Kalmbach, ICF</i>		
8:50	Genetic Assessment of <i>Oncorhynchus mykiss</i> Sampled at the Central Valley Delta Water Projects <i>Devon Pearse, NOAA</i>	Accessing the Carbon Market <i>Mark Mondik, 3Degrees</i>	Adaptive Management of the Delta Plan – Augmenting Science with Performance Measures <i>Martina Koller, Delta Stewardship Council</i>	Developing environmental DNA methods for monitoring rare species of concern in a dynamic estuarine environment <i>Sarah Stinson, DWR</i>	Otolith-based variation in the life-history of Longfin Smelt <i>Christian Denney, UC Davis</i>		
9:10	Quantifying Component Mortality Rates of Juvenile Steelhead Trout (<i>Oncorhynchus mykiss</i>) <i>Elizabeth Greenheck, George Mason Univ.</i>	The Restoration of California Deltaic Methodology, how it came to be and its potential role <i>Steven Deverel, HydroFocus</i>	Suisun Landscapes: Science to understand historical changes and plan a resilient future that reflects community priorities <i>Sean Baumgarten, SFEI</i>	A comparison of eDNA sampling methods in an estuarine environment on presence of longfin smelt (<i>Spirinchus thaleichthys</i>) and fish community composition <i>Lizabeth Bowen, UC Davis</i>	Otolith-based Age, Growth, and Life History of Adult Longfin Smelt <i>Alex Lama, UC Davis</i>		
9:30	Monitoring a wild <i>Oncorhynchus mykiss</i> population with multiple life history strategies in the Lower Stanislaus River <i>Steven Zeug, Cramer Fish Sciences</i>	Experiences from generating carbon credits from DWR's Multi-benefit wetland restoration projects <i>Tyler Anthony, DWR</i>	Expanding the River Corridor: Opportunities in the Sacramento-San Joaquin River system <i>G Matt Kondolf, UC Berkeley</i>	An Environmental DNA Approach to Monitor Fish Communities in Restored Tidal Wetlands* <i>Leigh Sanders, UC Davis</i>	Temporal and Spatial Abundance Patterns of Delta and Longfin Smelts <i>Gonzalo Castillo, USFWS</i>		
9:50	Migratory behavior of wild-origen Central Valley Steelhead from the Stanislaus River <i>Jasmine Williamshen, Cramer Fish Sciences</i>	Staten Island: A Living Laboratory in Support of a Resilient Delta <i>Sydney Chamberlin, TNC</i>	Key Role of Land Acquisition in Restoring Natural Processes <i>John Cain, River Partners</i>	Unveiling the Hidden Diversity: Exploring eDNA Metabarcoding for Enhanced Monitoring of Phytoplankton and Cyanobacteria in the Delta <i>Silvia Angles, DWR</i>	Longfin Smelt population modeling in the San Francisco Estuary <i>Parsa Saffarinia, UC Berkeley</i>		
10:10-10:30	Break						

Day 2	Session 1 (B2)	Session 2 (B3-5)	Session 3 (B6-8)	Session 4 (B-9)	Session 5 (B10)	Session 6 (9/10)	
Session	Anadromous Fishes	Social Sciences & Human Dimensions	Healthy Rivers and Landscapes Program: Framing a Watershed-wide Adaptive Management Program	Retro-ecological Futures for the 22nd Century	HAB and Invasive Species	<p>Interweaving Traditional Knowledge and Mainstream Science in the San Francisco Bay-Delta</p> <p>Moderator: Xoco Shinbrot, Delta Stewardship Council</p> <p>Panel: Zach Gigone, Shingle Springs Rancheria Krystal Moreno, Shingle Springs Rancheria Laverne Bill, Paskenta of Nomiaki Indians Jesus "Jesse" Galvin of Buena Vista Rancheria</p>	
Moderator	Fred Feyrer, USGS	Rachael Klopfenstein, Delta Stewardship Council	Louise Conrad, DWR	John Durand, UC Davis	Elizabeth Brusati, Delta Stewardship Council		
10:30	Spatial Patterns and Drivers of Predatory Fish Hotspots in a Large Regulating Reservoir <i>Parisa Hurley, DWR</i>	Science for Communities 2024: Workshop and Lessons learned <i>Megan Thomson and Hannah Chaney, Delta Stewardship Council</i>	Science-based Processes and Collaboration for Adaptive Management as Part of the Healthy Rivers and Landscapes Program <i>Louise Conrad, DWR</i>	Alternate Restoration Futures: Rethinking Restoration for the 22nd Century <i>John Durand, UC Davis</i>	Ecosystem Engineering Impacts of Water Primrose in the Delta <i>Bailey Morrison, UC Merced</i>		
10:50	Differences Among Chinook Salmon Runs in Routing Probability at the Georgiana Slough-Sacramento River Junction <i>Summer Burdick, USGS</i>	Connecting Researchers, Students, and Communities through Youth-focused Community and Citizen Science: The Spinning Salmon Project <i>Peggy Harte, UC Davis</i>	Maximizing Salmon Fisheries Outcomes in California through Flow and Habitat Enhancements: Perspectives from the Mokelumne River <i>Michelle Workman, East Bay Mud</i>	High plankton productivity in managed wetlands of Suisun Marsh <i>Alice Tung, UC Davis</i>	Merging satellite and field-based chlorophyll and phytoplankton data for improved harmful algal bloom monitoring in the Delta* <i>Chloe Fehndrich, USGS</i>		
11:10	Examining the role of predation and habitat on Chinook Salmon smolt survival in the Sacramento River <i>Jordan Massie, Univ. of Vermont</i>	Delta salinity management: Lessons learned from a workshop series <i>Stephen Elser, Delta Stewardship Council</i>	Restoring Functional Flows in The Sacramento River - Chinook Salmon Outmigration Survival in Relation to Spring Pulse Flows <i>Jeremy Notch, NOAA</i>	Novel plant assemblages favored in waterfowl management boost plankton production in managed wetlands <i>Kyle Phillips, UC Davis</i>	From Drought to Deluge: Use of Multiple Sampling Modalities to Monitor Cyanobacteria and Cyanotoxin dynamics in the Sacramento-San Joaquin Delta <i>Ellen Preece, DWR</i>		
11:30	Facilitated migration could bolster migrant passage through anthropogenically altered ecosystems <i>Benjamin Burford, NOAA</i>	From Siloed Processes to Standardized Solutions: Our Data-Informed Strategy for an Enterprise-Wide SOP in 90 days <i>Katheryn Rein, DWR</i>	Restoration at a Landscape-Scale for Central Valley Floodplains, Supporting the Healthy Rivers and Landscapes Program <i>Charlotte Biggs and Pascale Goertler, DWR</i>	Fish and Fowl: Potential for co-management of fish and fowl in the Suisun Marsh <i>Jake Sousa, UC Davis</i>	Integrated Pest Management to control invasive plant species in a CA vernal pool-grassland complex* <i>Jasmine Rios, CSU Sacramento</i>		
11:50	Adult Green Sturgeon Movements In The Lower Sacramento River Relative To River Construction Projects <i>Amy Hansen, USGS</i>		Panel Discussion	Managed wetlands of Suisun Marsh present distinct fish assemblages and elevated primary production compared to nearshore tidal habitats <i>Elsie Platzer, UC Davis</i>	Ballast Water Regulation in the World's Most Invaded Estuary <i>Andrew Cohen, Bio Invasions</i>		
12:10-1:30	Lunch – Hall D; Town Hall: Planning for science in the dynamic Delta System (Rm B3-5)						

Day 2	Session 1 (B2)	Session 2 (B3-5)	Session 3 (B6-8)	Session 4 (B-9)	Session 5 (B10)	Session 6 (9/10)
Session	Chinook Salmon 1	Democratizing Water Futures 1	Tools for Decision-Making Under Uncertainty 1	Species & Communities	Contaminants	2023 Delta Residents Survey: The first of holistic effort to monitor human well-being in the Delta
Moderator	Amanda Cranford, NOAA	Eric Danner, NOAA	Corey Philis, MWD	Dylan Chapple, Delta Stewardship Council		Jessica Rudnick, US Forest Service
1:30	Revealing Vulnerabilities and Resilience: Insights into the Dynamics of Butte Creek's Spring-run Chinook Salmon Population <i>Ally Li, UC Davis</i>	Just Transitions in the Delta: Exploring Climate Adaptation and Salinity Management Through Participatory Scenario Planning <i>Brett Milligan, UC Davis</i>	Using a Structured Decision Making (SDM) process to evaluate the potential benefits of installing salmonid guidance structures at Sutter and Steamboat sloughs <i>Alejo Kraus-Polk, ESA</i>	Webb Tract Multi-Benefit Wetland Project: Design Considerations, Challenges, and Opportunities <i>Gregg Shellenbarger, CBEC</i>	Pesticide presence related to Sacramento and San Joaquin Valley water year hydrologic classification indices <i>Matthew Uychutin, USGS</i>	Overview of the 2023 Delta Residents Survey and Key Findings <i>Jessica Rudnick, US Forest Service</i>
1:50	Widespread thiamine deficiency in California salmon linked to poor nutritional quality of their simplified marine prey base <i>Nate Mantua, NOAA</i>	Building A Collaboratory for Equity in Water Allocations <i>Ted Grantham, UC Berkeley</i>	Reorienting to Recovery: An Experiment in Values Informed, Landscape Scale, Collaborative Decision Making Towards an Equitable Outcome <i>Rene Henery, Trout Unlimited</i>	Investigation and implementation of floating peat wetlands, Sacramento-San Joaquin Delta, CA <i>Steven Deverel, HydroFocus, Inc</i>	Quantifying 6PPD-quinone in Water Samples from the Sacramento-San Joaquin Delta Samples, 2018-2024 <i>Gabrielle Black, USGS</i>	Reproducibility and Public Accessibility of Complex Data in the Delta Residents Survey <i>Kenji Tomari, UC Davis</i>
2:10	Estimating Juvenile Production and Run Timing of Spring Chinook Salmon Leaving the Delta <i>Russ Perry, USGS</i>	Following drinking water flows: System source water in a changing climate* <i>Jenny Rempel, UC Berkeley</i> <i>Kristin Dobbin, UC Berkeley</i>	Reorienting to Recovery: Adapting Decision Support Models for Comprehensive and Collaborative Chinook Salmon Management <i>Liz Stebbins, FlowWest</i>	Modeling riparian forest structure on geomorphically active floodplains to estimate large wood inputs and other ecosystem services to the Bay-Delta ecosystem <i>John Stella, SUNY ESF</i>	Determining the Starting Point and Operating System of Nature and Emulating It to Restore the Sacramento-San Joaquin Delta Ecosystem <i>Terry Gong, Harmon Systems Int, LLC</i>	How sense of place influences civic engagement/participation and adaptive capacity for climate actions: Insights from the Delta Residents Survey in California <i>Vincent Chireh, UC Berkeley</i>
2:30	Reconstructing life history diversity of spring-run Chinook salmon across the Central Valley <i>Flora Cordoleani, NOAA</i>	An approach to exploring the fate of Sacramento winter-run Chinook salmon under alternative water and climate futures <i>Ann-Marie Osterback, NOAA</i>	Value of Information: sensitivity analysis for decision makers <i>Michael Runge, USGS</i>	Processes Influencing Plant Zonation in a Brackish Tidal Wetland Under a Mediterranean Climate <i>Morgan Stickrod, Sol Ecology</i>	Methylmercury Effects on Birds: Review, Toxicity Reference Values, and a New Tool for Injury Assessment <i>Josh Ackerman, USGS</i>	Discussion
2:50	Advancements in our understanding of Central Valley Chinook salmon life history diversity through genomic study <i>Mariah Meek, MSU</i>	Panel Discussion	The interaction of scientific uncertainty and a decision maker's objectives in river management <i>Brian Healy, USGS</i>	Long-term tidal marsh restoration outcomes in some of the San Francisco Bay's oldest restoration projects and a comparison with broader west coast results <i>Christopher Janousek, Oregon State University</i>	Understanding effects of contaminants on fish behavior can inform conservation efforts <i>Amelie Segarra, UC Davis</i>	Discussion
3:10-3:30	Break					

Day 2	Session 1 (B2)	Session 2 (B3-5)	Session 3 (B6-8)	Session 4 (B-9)	Session 5 (B10)	Session 6 (9/10)
Session	Chinook Salmon 2	Democratizing Water Futures 2	Tools for Decision-Making Under Uncertainty 2	Leveraging Synthesis Science: A collaboration between the Delta Science Program and NCEAS	Predation	<p>Understanding Tribal Data Sovereignty, Research Protocols, and CARE + FAIR Principles</p> <p>Trainer: Shasta Gaughen</p>
Moderator	Carson Jeffres, UC Davis	Eric Danner, NOAA	Corey Phillis, MWD	Miranda Tilcock, Delta Stewardship Council		
3:30	Loss of age diversity among Central Valley Chinook salmon <i>Brad Cavallo, Cramer Fish Sciences</i>	Applications of Data Visualization for Communication and Engagement in Water Management <i>Yuya Kawakami, UC Davis</i>	Value of Information as a tool to assess flow actions and minimize impacts to Chinook Salmon in the Sacramento River <i>Chase Ehlo, USBR</i>	Four 5-minute Lightning Talks <i>(Miranda Tilcock, Pascale Goertler, Catarina Pien, Xoco Shinbrot)</i>	Intraspecific Movement of Striped Bass in a Large Regulating Forebay <i>Taylor Spaulding, ESA</i>	
3:50	Application of parentage-based designs: Preliminary results from winter-run genetic analysis 2020-2023 <i>Scott Blankenship, Cramer Fish Sciences</i>	The meaning of equity in California water allocations <i>Liane Bauer-UCSC</i> <i>Ajay Singh, CSU Sacramento</i>	Show Me the Value: Decision Analysis for Delta Smelt Summer-Fall X2 Action <i>Brian Mahardja, USBR</i>	Evaluating top-down, bottom-up, and environmental drivers of pelagic food web dynamics along an estuarine gradient <i>Tanya Rogers, NOAA</i>	Fish go where water flows - response of nonnative piscivores to flows in the San Joaquin Basin <i>Dana Lee, FISHBIO</i>	
4:10	Evaluating intraspecific diversity and effective population size in Central Valley Chinook salmon over the past 20 years <i>Erin Collins, MSU</i>	Expert Evaluation of the Uncertainties Associated with CalSim3 Assumptions as a Basis for Transparency in Model-Guided Scenario Planning Processes <i>Laurel Larsen, UC Berkeley</i> <i>Cheryl Schwab, UC Berkeley</i>	Evaluating the Value of Information for Winter-run Chinook Salmon Management <i>Catarina Pien, USBR</i>	Floodplain inundation and lateral connectivity promote productivity in the river ecosystem <i>Shruti Khanna, UC Davis</i>	Blinded by the Light: could reducing nighttime artificial illumination benefit native fish? <i>Brendan Lehman, NOAA</i>	
4:30	Impacts of food availability on the thermal tolerance and physiology of juvenile Chinook salmon <i>Cassidy Cooper, UC Davis</i>	Just Transitions in the Delta: Perceptions of Drivers, Strategies, and Equity in Climate Adaptation Management <i>Ashley DePew, UC Davis</i>	Quantifying the Value of Monitoring Survival Response to Fry Habitat Restoration for Endangered Juvenile Sacramento River Winter-Run Chinook Salmon <i>Corey Phillis, Metropolitan Water District</i>	Evaluating the ecological, social, and economic costs and benefits of levee infrastructure within the Delta: a National Center for Ecological Analysis and Synthesis project 2023-2024 <i>Karrin Alstad, CDFW</i>	You Don't Have to Go Home, but You Can't Stay Here: Predator Removal in Clifton Court Forebay <i>Steven Brumbaugh, DWR</i>	
4:50	Advancing Genetic Tools in Juvenile Salmon Salvage Operations: CRISPR/SHERLOCK Assays for Rapid Chinook Salmon Genetic Run Identification <i>Bryan Nguyen, DWR</i>	Panel Discussion	Empowering Decision Makers: Leveraging Value of Information Tools in the Bay Delta <i>Matthew Nobriga, USFWS</i>	Evaluating the Benefits and Equity Dimensions of Restoration Projects across the Bay-Delta <i>Alexandra Thomsen, San Francisco Estuary Partnership</i>	Large-Scale and Long-Term Study of Predatory Fishes and Predation of Juvenile Chinook Salmon in the Stanislaus River <i>Matthew Peterson, FISHBIO</i>	
5:10	End of Day 2					

Day 3	Session 1 (B2)	Session 2 (B3-5)	Session 3 (B6-8)	Session 4 (B-9)	Session 5 (B10)
Session	Delta Smelt 1	Post Normal Decision Making in the Bay-Delta	Human Dimensions of the San Francisco Bay-Delta: A Path Toward Sustainability	Cultivating science-management connections to inform wetland restoration and management using the Dutch Slough Restoration's living laboratory design 1	Water & Sediment Quality
Moderator		Alejo Kraus-Polk, ESA and Brett Milligan, UC Davis	Xoco Shinbrot, Delta Stewardship Council	Molly Ferrell, DWR	Tricia Lee, Delta Stewardship Council
8:30	Evaluation of Delta Smelt Distribution Reveals Association with other Small Pelagic Species: Implications for Competitive Dynamics and Proxy Monitoring <i>Mike Tillotson, ICF</i>	What is Decision-Making under Deep Uncertainty and how it can help with management challenges of the Bay-Delta System? <i>Jayantha Obeysekera, Delta ISB</i>	Mapping the Adaptation Governance Network of the Delta: A Mixed-Methods Approach* <i>Tara Pozzi, UC Davis</i>	The Seed: Dutch Slough Tidal Marsh Restoration – A Living Laboratory John Cain-River Partners <i>Katie Bandy, DWR</i>	Comparing in situ chlorophyll fluorometers; when do they differ and why? <i>Emily Richardson, USGS</i>
8:50	Growth, foraging, and health effects of turbidity on captive Delta Smelt <i>Bruce Hammock, UC Davis</i>	Planning and Implementing a Mosaic of Regenerative Land Uses in the Sacramento San-Joaquin Delta through Transdisciplinary Science and Co-Design Integration <i>Brett Milligan, UC Davis</i>	Data Infrastructure for Land-use Planning <i>Catherine Brinkley and Clancy McConnell, UC Davis</i>	Setting the Stage: Design of the Dutch Slough Project from Concept to Implementation <i>Mark Lindley, ESA</i> <i>Molly Ferrell, DWR</i>	Flow modification, increased water age, and cyanobacterial blooms in Franks Tract <i>Keith Bouma-Gregson, USGS</i>
9:10	Observing Fish During Delta Smelt Experimental Releases Inferred from ARIS Sonar <i>Veronica Violette, USGS</i>	Fishing for Solutions: A Tale of Lessons Learned from Implementing a Collaborative Structured Decision Making Process <i>Kimberly Horndeski, Community Consulting</i>	Collaboration for Wetland Restoration in the California Bay-Delta: A Historical Network Approach* <i>Kyra Gmoser-Daskalakis, UC Davis</i>	Making connections between restoration design, greenhouse gas fluxes and carbon stocks <i>Karen Thorne, USGS</i>	Inferring unknown salinity loads using a response-based inverse modeling method <i>Eli Ateljevich, DWR</i>
9:30	Using otoliths to inform the management of Delta Smelt <i>Levi Lewis, UC Davis</i>	Reorienting to Recovery: Decision analysis to identify broad-sense recovery strategies for Central Valley salmonids <i>Brian Crawford, Compass Resource Management</i>	Delta Adapts: Developing regional adaptation priorities through interdisciplinary science for the Sacramento-San Joaquin Delta and Suisun Marsh <i>Morgan Chow, Delta Stewardship Council</i>	Dutch Slough and Other Wetlands: How We Can Influence GHG Fluxes* <i>Robert Shortt, UC Berkeley</i> <i>Dennis Baldocchi, UC Berkeley</i>	Progress of the evolution of restored tidal wetlands <i>Daniel Cox, CDFW</i>
9:50	Fit for the Wild: Cultivating Release-Ready Delta Smelt in Impoundments <i>Florian Mauduit, UC Davis</i>	Panel Discussion		Investigation of the groundwater hydrologic effects of restoration <i>Marc Olds, HydroFocus</i>	Mapping and Monitoring Mercury in San Francisco Bay <i>Niky Taylor, USGS</i>
10:10-10:30	Break				

Day 3	Session 1 (B2)	Session 2 (B3-5)	Session 3 (B6-8)	Session 4 (B-9)	Session 5 (B10)
Session	Delta Smelt 2	Engineering with Nature and Strategic Placement of Dredged Material in San Francisco Bay	Weaving together Indigenous and Western sciences to restore wild Nur (Chinook salmon) to the Winnemem Waywaket (McCloud River) - Part 1	Cultivating science-management connections to inform wetland restoration and management using the Dutch Slough Restoration's living laboratory design 2	Collaborative Monitoring and Research: Advancing Nutrient and Algal Bloom Understanding in the Bay Delta
Moderator		Jessie Lacy, USGS and Michael MacWilliams, FlowWest	Rachel Johnson, NOAA	Molly Ferrell, DWR	Melissa Turner, MIJ Environmental
10:30	Initial Comparison of Delta Smelt Experimental Release Methods <i>Katie Osborn, DWR</i>	Overview of Engineering with Nature approaches to Marsh Resilience and Strategic Placement of Dredged Material <i>Julie Beagle, US Army Core of Engineers</i>	Weaving together Indigenous and Western sciences to restore wild Nur (Chinook salmon) to the Winnemem Waywaket (McCloud River) <i>Chief Caleen Sisk, Winnemem Wintu</i>	Monitoring Aquatic Communities at Dutch Slough Tidal Restoration: A Case Study of Post-Restoration Colonization in a Highly Invaded Estuary* <i>Lynette Williams, UC Davis</i>	Advancing Nutrient Monitoring: An Overview of the Delta Regional Monitoring Program's Strategic Developments <i>Melissa Turner, MIJ Environmental</i>
10:50	A structured approach to incorporating contaminant metrics in decision-making for Delta Smelt management <i>Shawn Acuna, Metropolitan Water District</i>	Modeling and Analysis of Strategic Sediment Placement in San Francisco Bay <i>Michael MacWilliams, FlowWest</i>	Weaving together Indigenous and Western sciences to restore wild Nur (Chinook salmon) to the Winnemem Waywaket (McCloud River) <i>Cathy Marcinkevage, NOAA Tina Bartlett, CDFW</i>	Tracking aquatic food web response to tidal slough restoration with low impact techniques <i>Joseph Merz, Cramer Fish Sciences</i>	From Daring Dreams to Data Deluge: 7 Years of High-Resolution Water Quality Mapping in the Delta <i>Tamara Kraus, USGS</i>
11:10	The summer of our discontent: A summer-fall habitat action for Delta Smelt, 2023 <i>Rosemary Hartman, DWR</i>	Sediment Transport and Dispersal Following the 2023 Pilot Shallow-Water Placement of Dredged Material in South San Francisco Bay <i>Jessie Lacy, USGS</i>	Three years of joint learning in reuniting winter run Chinook salmon (Nur) to their ancestral waters <i>Rachel Johnson, NOAA Marine Sisk, Winnemem Wintu</i>	Dutch Slough Wetland Restoration Design Results in Rapid Avian Biodiversity Gains <i>Jason Riggio, UC Davis</i>	HAB you seen it? USGS Research and Monitoring for Harmful Algal Blooms in the Bay-Delta <i>Keith Bouma-Gregson, USGS</i>
11:30	Post-surgical survival of Delta smelt after implantation with miniaturized acoustic transmitters; Part 1 <i>Eric Chapman, ICF</i>	Benthic community response to a pilot shallow-water dredged material placement in south San Francisco Bay <i>Susan De La Cruz, USGS</i>	Raising mountain climbers: Nur Nature Base System for rematriation of Chinook salmon <i>Anne Todgham, UC Davis</i>	Insect diversity on restored and unrestored Sacramento-San Joaquin Delta sites <i>Lynn Kimsey, UC Davis</i>	Overwintering Microcystis seed stock plays an important role in estuarine bloom dynamics <i>Ellen Preece, DWR</i>
			Reintroducing Chinook salmon (Nur) into the McCloud River (Winnemem Waywaket) via Volitional Passage <i>John Ferguson, Anchor QEA</i>		
11:50	Sublethal effects in Delta smelt after implantation with miniaturized acoustic transmitters; Part 2 <i>Sebastian Gonzales, UC Davis</i>	Discussion	Preparing to rematriate wild New Zealand Nur (Chinook salmon) taken from Winnemem Waywaket (McCloud River) <i>Melanie Cheung, Winnemem Wintu Hamish Stevenson, Central South Island Fish and Game</i>	Panel discussion	Panel: Charting the Future of Nutrient and Harmful Algae Bloom Monitoring in the Delta
12:10-1:30	Lunch – Hall D				

Day 3	Session 1 (B2)	Session 2 (B3-5)	Session 3 (B6-8)	Session 4 (B-9)	Session 5 (B10)
Session	Advancements in Longfin Smelt Science and Management 1	Advancing modeling tools to support long-range water allocation planning in a changing climate	Weaving together Indigenous and Western sciences to restore wild Nur (Chinook salmon) to the Winnemem Waywaket (McCloud River) - Part 2	Food Webs 1	Assessing the drivers and impacts of the August 2022 Heterosigma akashiwo bloom in San Francisco Bay, California 1
Moderator	Brian Schreier, DWR and Michael Eakin, CDFW	Laurel Larson, UC Berkeley	Rachel Johnson, NOAA	Kim Luke, Delta Stewardship Council	Schuyler Nardelli, USGS and Dan Killam, SFEI
1:30	Connecting ecological knowledge, data, and statistical methods through graphical causal models of the Longfin Smelt life cycle <i>Vanessa Tobias, USFWS</i>	Developing machine learning based surrogate models representing Delta salinity transport subject to large scale geometry changes and sea level rise <i>Eli Ateljevich, DWR</i> <i>John DeGeorge, RMA</i>	See next page for detailed agenda of talks	How Do Food Webs Change Following Tidal Restoration? An Assessment of Restoration Success in Fish Restoration Project (FRP) Wetlands <i>Gabriel Ng, CDFW</i>	Overview and emerging understanding of the 2022 Heterosigma bloom in San Francisco Bay <i>David Senn, SFEI</i>
1:50	Assessing the Maturation, Fecundity, and Captive Culture of Longfin Smelt <i>Nikolas Floros, UC Davis</i>	Central Valley Water System Risk Informed Climate Scenarios for Planning and Adaptation <i>Andrew Schwarz, DWR</i>		Tidal Wetland Food Webs: Understanding the Roles of Restoration and Environmental Drivers <i>Christy Bowles, CDFW</i>	Carbon and nitrogen uptake during a rare Heterosigma akashiwo bloom in San Francisco Bay <i>Alexander Parker, CSU Maritime Academy</i>
2:10	Next Steps in Developing the Longfin Smelt Conservation Hatchery Program: Adding Genetics <i>Shannon Blair, UC Davis</i>	Assessment of environmental flows in the Central Valley under different management scenarios <i>Sooyeon Yi, UC Berkeley</i>		Reconnecting Delta food webs: evaluating the influence of tidal marsh restoration on prey productivity and diet of native fishes <i>Isa Woo, USGS</i>	HABs and nutrient interactions in the dynamically changing San Francisco Bay assessing the drivers and impacts of the August 2022 Heterosigma akashiwo bloom in San Francisco Bay, California) <i>Frances Wilkerson, SFSU</i>
2:30	The Larval Entrainment Study: LES is More <i>Morgan Gilbert, CDFW</i>	Updating the winter-run Chinook salmon life-cycle model (WRLCM) to meet the management needs of a changing climate <i>Noble Hendrix, QEDA</i>		Exploring scientific and management implications of upper trophic level food webs in the Delta <i>Robert Naiman, Delta ISB</i>	Basin-scale nitrogen utilization and ecosystem metabolism measured during a major Harmful Algal Bloom in San Francisco Bay, CA <i>Martin Volaric, SFEI</i>
2:50	Development of environmental DNA (eDNA) monitoring techniques for conservation of an endangered fish species in the San Francisco Bay Delta <i>Shahinur Islam, UC Davis</i>	Exploring Central Valley Drought Scenarios under a Changing Climate <i>James Gilbert, UC Santa Cruz</i>		Missed connections: Identifying key species interactions for management in the Bay-Delta Estuary <i>Lillian McCormick, USBR</i>	Understanding the 2022 Heterosigma akashiwo bloom in San Francisco Bay: Combining Remote Sensing and Lab-Based Experiments <i>Raphael Kudela, UC Santa Cruz</i>
3:10-3:30	Break				

Day 3	Session 3 (B6-8)
Session	Weaving together Indigenous and Western sciences to restore wild Nur (Chinook salmon) to the Winnemem Waywaket (McCloud River) - Part 2
Moderator	Anne Todgham, UC Davis
1:30	Genetic Diversity and Divergence of Recently Introduced Populations of Chinook salmon (<i>Oncorhynchus tshawytscha</i>) in New Zealand <i>Sarah Hugentobler, MSU</i>
1:40	Environmental surveillance of pathogens in relation to the reintroduction of winter-run Chinook Salmon to the McCloud River <i>Miles Daniels, UC Santa Cruz</i>
1:50	Deployment of the Juvenile Salmonid Collection System to Target Winter-run Chinook Salmon in Shasta Reservoir <i>Theo Claire, DWR</i>
2:00	Physical Considerations and Effects of a Head-of-Reservoir Juvenile Salmonid Collection System in Shasta Reservoir (Where do you put it and how does it perform?) <i>Maureen Downing-Kunz, ESA</i>
2:10	Survival and capture efficiency of, and predation on, juvenile Chinook salmon (Nur) in the McCloud River (Winnemem Waywaket) <i>Jesse Frey, NOAA</i>
2:20	Reservoir studies to inform rematriation of Nur (Chinook salmon) into the Winnemem Waywaket, (McCloud River) upstream of Shasta Dam <i>Jill Hardman, USGS</i>
2:30	Indigenous knowledge sparks innovation and improvements to juvenile salmon monitoring <i>Carson Jeffres, UC Davis</i>
2:40	The once and future homeland of the Winter-Run Chinook Salmon: the value of reintroductions for an endangered salmonid <i>Alyssa FitzGerald, NOAA</i>
2:50	Q&A
3:10-3:30	Break

Day 3	Session 1 (B2)	Session 2 (B3-5)	Session 3 (B6-8)	Session 4 (B-9)	Session 5 (B10)	
Session	Advancements in Longfin Smelt Science and Management 2	<p>Perspectives on science supporting decision-making under deep uncertainty</p> <p>Moderators: Lisa Wainger and Tanya Heikkila</p> <p>Panel: Lindsay Correa, DWR</p> <p>Jeff Henderson, Delta Stewardship Council</p> <p>Kathleen Schaefer, UC Davis</p> <p>Felicia Marcus, Stanford University</p>	Weaving together Indigenous and Western sciences to restore wild Nur (Chinook salmon) to the Winnemem Waywaket (McCloud River) - Part 3	Food Webs 2	Assessing the drivers and impacts of the August 2022 Heterosigma akashiwo bloom in San Francisco Bay, California 2	
Moderator	Brian Schreier, DWR and Michael Eakin, CDFW		Melanie Cheung, Winnemem Wintu		Schuyler Nardelli, USGS and Dan Killam, SFEI	
3:30	Finding Longfin Smelt: Improvements to Smelt Larva Survey & 20-mm Monitoring <i>Vanessa Mora, CDFW</i>		Panel Discussion: Historic Co-stewardship Agreement: Meaning, success, challenges, vision for the future <i>Moderator: Carson Jeffres, UC Davis</i>	Productivity responses to pluvial phenomena in the Yolo Bypass <i>Mackenzie Miner, DWR</i>	Investigating phytoplankton community dynamics during the August 2022 Heterosigma akashiwo bloom in San Francisco Bay, California <i>Schuyler Nardelli, USGS</i>	
3:50	Are there always plenty of fish in the sea? What we do and don't know about Longfin Smelt in the California Current <i>Matthew Young, USGS</i>		Panel Discussion: Three years of reintroduction: knowledge gained, lessons learned, data gaps <i>Moderator: Rebekah Olstad, Winnemem Wintu Tribe</i>	Shallow Water Fish Sampling in Tidal Wetlands in the San Francisco Bay-Delta: Patterns of Species Composition Across Seasons and Gear Types <i>Emma Davidson, CDFW</i> <i>Stacy Sherman, CDFW</i>	Assessing the impacts of the August 2022 Heterosigma akashiwo bloom on fish populations in the San Francisco Bay California <i>Jim Hobbs, UC Davis</i>	
4:10	Mechanisms underlying the response of longfin smelt to freshwater flow in the northern San Francisco Estuary <i>Wim Kimmerer, SFSU</i>		Panel Discussion: Vision for the future: volitional passage and return of the mountain climbers from New Zealand <i>Moderator: Anne Todgham, UC Davis</i>	Finding Fish Food: Zooplankton Trends in the Cache Lindsey Slough Complex 2014-2024 <i>Kim Luke, UCD; Delta Stewardship Council</i>	The Role of Community Science in Monitoring the 2022 & 2023 Heterosigma akashiwo Blooms in San Francisco Bay <i>Ian Wren, SF Baykeeper</i>	
4:30	Bay Area Dining Guide: Top Picks for Longfin Smelt <i>Christina Burdi, DWR</i>		Awards	The San Francisco Estuary Microbiome: A Catalogue of High-Quality Genomes of Uncultured Bacteria, Archaea, Viruses, and Picoeukaryotes for Monitoring and Modeling <i>Lauren Lui, Lawrence Berkeley National Laboratory</i>	Evolution of the 2022 South Bay HAB: Physical Drivers and Diagnostic Modeling <i>Rusty Holleman, RMA</i>	
4:50	Relative abundance of northern anchovy <i>Engraulis mordax</i> , a potential predator of larval longfin smelt <i>Spirinchus thaleichthys</i> , across salinity gradients in the northern San Francisco Estuary <i>Jason Hassrick, ICF</i>		Closing Statements - Gifts		The Bloom That Didn't Blossom: Unraveling Why Suisun Bay Avoided the Ecological Disruption of the 2022 Heterosigma akashiwo Harmful Algal Bloom <i>Brian Bermagaschi, USGS</i>	
5:10	End of Day 3					

Poster #	Section	Poster Title	Presenting Author
1	Applied Science & Adaptive Management	Delta Integrated Modeling Framework and Collaboratory	Ben Geske, Delta Stewardship Council
2	Applied Science & Adaptive Management	Delta Science Tracker: Fostering Collaboration and Transparency in the Sacramento-San Joaquin Delta Science Community	George Isaac, Delta Stewardship Council
3	Applied Science & Adaptive Management	The State of Bay-Delta Science: Extreme climatic and weather events affecting the San Francisco Estuary and its watershed	Denise Colombano, Delta Stewardship Council
4	Applied Science & Adaptive Management	Monitoring in the Estuary: Bay-Delta Connections for Wetland Management	Hannah Kempf, SF Estuary Partnership
5	Applied Science & Adaptive Management	Designing Habitat Projects to Benefit Birds and Salmon	Cliff Feldmein, Ducks Unlimited
6	Applied Science & Adaptive Management	Brood Year Assessments of Sacramento River Winter-Run Chinook Salmon (<i>Oncorhynchus tshawytscha</i>) to Inform Water Management in a Changing Environment.	Emma Nordlund, Anchor QEA
7	Applied Science & Adaptive Management	Ecosystem Flux Partitioning in Tidal Wetlands: Analyzing Net Ecosystem Exchange and Evapotranspiration Through Artificial Neural Networks	Eduardo Gamez Jr, CSU East Bay*
8	Applied Science & Adaptive Management	Earth observations to combat invasive aquatic vegetation	Bailey Morrison, UC Merced
9	Applied Science & Adaptive Management	Lamprey Passage Improvements to New and Existing Facilities in the Yolo Bypass	Zoltan Matica, DWR
10	Applied Science & Adaptive Management	Promoting Independent Scientific Peer Review and Advice	Rachael Klopfenstein, Delta Stewardship Council

Poster #	Section	Poster Title	Presenting Author
11	Applied Science & Adaptive Management	Development of Quantitative Tools to Forecast Larval and Post-Larval Longfin Smelt Entrainment Risk at Seasonal and Biweekly Scales	Kim Brewitt, ICF
12	Applied Science & Adaptive Management	Health and mortality effects of using a propeller fish pump to transport Delta Smelt	Yi-Jiun Tsai, UC Davis
13	Applied Science & Adaptive Management	Living Pilings: Evaluating a novel approach to subtidal habitat restoration	Samantha Richman, USGS
14	Applied Science & Adaptive Management	The Delta Monitoring Enterprise: A Comprehensive Review by the Delta Independent Science Board	Margot Mattson, Delta Stewardship Council
15	Applied Science & Adaptive Management	Evaluating the early detection, rapid response framework for aquatic species in the Delta	Christine Whitcraft, CSULB
16	Applied Science & Adaptive Management	Big Plans for Big Notch: Adaptive Management in Action	Brandy Smith, DWR
17	Advancing Ecosystem Restoration Towards a Resilient Delta	Advancing Ecosystem Restoration Towards a Resilient Delta	Elizabeth Brusati, Delta Stewardshio Council
18	Advancing Ecosystem Restoration Towards a Resilient Delta	An Overview of the Delta Conservancy's Ecosystem Restoration and Climate Adaptation Grant Program	Anjali Shakya, Delta Conservancy
19	Advancing Ecosystem Restoration Towards a Resilient Delta	The Landscape Scenario Planning Tool: A single mapping toolbox that brings together ten years of science-based research and peer-reviewed methods for California's Suisun-Delta region.	Helen Casendino, SFEI
20	Advancing Ecosystem Restoration Towards a Resilient Delta	Advancing Climate Resilience in the Department of Water Resources (DWR)'s Multibenefit Habitat Restoration Projects	Michelle Jesperson, DWR

Poster #	Section	Poster Title	Presenting Author
21	Contaminants	Current-use Pesticides in Zooplankton and Water Collected from the Yolo Bypass and Cache Slough Complex, 2022-2023	James Orlando, USGS
22	Contaminants	A Systematic Review of Dissolved Pesticide Concentrations in the Sacramento-San Joaquin Delta from 2015 to 2024	Matthew De Parsia, USGS
23	Contaminants	Sublethal Toxicity Testing of Commonly Used Pesticides at Varying Salinities in <i>Menidia beryllina</i>	Katherine Berreman, OSU*
24	Emerging Technologies	Metabolomic & metagenomics of the IAV in the California Bay-Delta	Skylar Carlson, Univ. of the Pacific
25	Emerging Technologies	Delta Drought Response Pilot Program: A Novel Approach to Building Resiliency to Drought	Rachel Lane, Delta Conservancy
26	Emerging Technologies	Developing a Multiplexed SHERLOCK Genetic Assay for Rapid Detection of Central Valley Chinook Early and Late Migration Phenotypes	Hannah Miller, UC Davis
27	Emerging Technologies	Evaluating Image-Based Deep Learning Methods for Zooplankton Sample Processing	Katie Hostetler, CDFW
28	Emerging Technologies	Using parentage-based tagging to identify origins of Chinook salmon (<i>Oncorhynchus tshawytscha</i>) returning to a restored creek	Alana Luzzio, UC Davis*
29	Emerging Technologies	AquaWatch California-Australia: Updates on International Cooperation to Pilot a "Weather Service" for Water Quality in the Sacramento-San Joaquin Delta	Erin Hestir, UC Merced
30	Emerging Technologies	Introducing a hydraulic injection method for instream egg incubation above a rim dam in California's Central Valley	Jason Hassrick, ICF

Poster #	Section	Poster Title	Presenting Author
31	Emerging Technologies	Utilizing In Situ Monitoring and ESA Earth Observations within the BayDeltaLive Constituent Tracker Decision Support Tool to Monitor Environmental Conditions	Amye Osti, 34 North
32	Emerging Technologies	Assessing A Changing World: Analyzing Sea Level Rise Inundation on Coastal Wetlands in San Pablo Bay, CA	Steve Brewer, John Hopkins Univ.*
33	Fish Biology, Ecology, & Protection	Assessing the Life History of Central Valley Steelhead Using Otoliths	Feng Zhao, UC Davis
34	Fish Biology, Ecology, & Protection	Needle in the Haystack: Quantifying Otolith Banding Patterns to Identify Wild Age-2 Delta Smelt	Claire Chung, UC Davis
35	Fish Biology, Ecology, & Protection	Geochemical and thermal tagging techniques for cultured Delta Smelt	Brian Alper, UC Davis
36	Fish Biology, Ecology, & Protection	Can we use vertebral counts to differentiate Chinook Salmon, <i>Oncorhynchus tshawytscha</i> , populations?	Pete Nelson, DWR
37	Fish Biology, Ecology, & Protection	Salmon Need Safer Routes Through the Delta	Douglas Brown, Douglas Environmental
38	Fish Biology, Ecology, & Protection	Characterizing movement patterns of native and non-native fishes in the Stanislaus River	Emily Jonagan, FISHBIO
39	Fish Biology, Ecology, & Protection	Diel changes in abundance and size of larval Longfin Smelt (<i>Spirinchus thaleichthys</i>) across salinity and depth gradients in the San Francisco Estuary	Teague Corning, ICF
40	Fish Biology, Ecology, & Protection	Estimated Striped Bass Biomass From A Predatory Fish Removal Study	Alexander Tasoff, DWR

Poster #	Section	Poster Title	Presenting Author
41	Fish Biology, Ecology, & Protection	Salmonid conservation through the study of an annelid worm: <i>Manayunkia occidentalis</i> in the Feather River, CA.	Dani Hartwigsen, Pacific Sate Marine Fisheries Commission*
42	Fish Biology, Ecology, & Protection	Combining multiple gears to evaluate impacts of the San Francisco Bay Living Shorelines Project on fish community abundance and diversity	Dana Lee, FISHBIO
43	Fish Biology, Ecology, & Protection	Energy use in the Bay and Delta and Central Valley Chinook salmon spawning migration survival	Alyssa Fitzgerald, NOAA
44	Fish Biology, Ecology, & Protection	Forensic geochemistry identifies the natal origins of record high numbers of steelhead (<i>Oncorhynchus mykiss</i>) salvaged at the state and federal water project pumps	George Whitman, UC Davis
45	Fish Biology, Ecology, & Protection	The Spring Kodiak Trawl: A Survey in Summary	Jennifer Oceguera Zavala, CDFW
46	Fish Biology, Ecology, & Protection	History of and results from a Yolo Bypass adult salmon and sturgeon acoustic telemetry study	Dennis Finger, DWR
47	Fish Biology, Ecology, & Protection	Correlating ambient water velocities to the catch of small pelagic fish species of the San Francisco Bay Estuary and Delta.	Timothy Carrara, ICF
48	Flow & Physical Processes	Is particle size a good predictor of bulk density?	Samantha McGill, USGS
49	Food Webs	Finding the Zooplankton Buffet – Does high chlorophyll mean more Cladocera, Copepods, Rotifers, or Mysids?	Rosemary Hartman, DWR
50	Food Webs	Estimating historical and current primary production and fishery yield from regressions of nitrate uptake, carbon uptake and chlorophyll on ammonium with reference to the origin of the POD	Richard Dugdale, SFSU

Poster #	Section	Poster Title	Presenting Author
51	Food Webs	Modeling phytoplankton productivity: insights from a light utilization approach	Reed Hoshovsky, SFSU*
52	Harmful Algal Blooms	Exploring the potential for managing large scale hydrodynamic conditions to address cyanobacteria harmful algal blooms in the Sacramento-San Joaquin Delta	Ellen Preece, DWR
53	Harmful Algal Blooms	Evaluating the ability of chlorophyll fluorescence sensors to detect cyanobacterial colonies common in the California San Francisco Bay Delta	Tim Baxter, USGS
54	Harmful Algal Blooms	Identifying spatio-temporal patterns in cyanoHABs using flow-through SPATTs in the California Sacramento-San Joaquin Delta	Katerina Cone, USGS
55	Harmful Algal Blooms	Insights from years of boat-based water quality mapping surveys in the San Francisco Bay Delta	Jacob Brinkman, USGS
56	Harmful Algal Blooms	A new approach to detecting subclinical levels of domoic acid exposure in two nearshore sentinel species	Liz Bowen, USGS
57	Harmful Algal Blooms	Machine Learning-Based Harmful Algal Blooms (HABs) Modeling in the Sacramento-San Joaquin Delta	Gourab Saha, DWR
58	Inclusion, Equity, Diversity in Co-Production of Science	Ensuring Post-Disaster Liquidity and Affordability: Strategies for Flood Resilience in the California Bay-Delta	Kathleen Schaefer, CWS-UC Davis*
59	Inclusion, Equity, Diversity in Co-Production of Science	Delta Stewardship Council Outreach Posters	Megan Nguyen & Dane Whicker, Delta Stewardship Council
60	Inclusion, Equity, Diversity in Co-Production of Science	Water Data for the People!	Jill Fantauzza, UC Berkeley

Poster #	Section	Poster Title	Presenting Author
61	More Than Just Fish	Restoration Design Update for a Multi-Benefit Mosaic Wetland Project on Webb Tract	Jennifer Burt, GEI Consultants, Inc.
62	Retro-ecological Futures for the 22nd Century	"Piscivorous birds are utilizing restored tidal habitat aimed towards fish conservation in Suisun Marsh, San Francisco Estuary"	Abigail Deen, CWS, UC Davis
63	Retro-ecological Futures for the 22nd Century	Stocked, but not Forgotten: A Comparison of Isolated Bay-Delta Waters Retaining Sacramento Perch	Mason Rogers, CWS, UC Davis
64	Species & Communities	Comparison of Phytoplankton Community Structure and Nutrient Conditions in the San Francisco Estuary During Flow Augmentation and Non-action Periods	Caitlin Hall, ICF
65	Species & Communities	Long-term Patterns in Splittail Abundance: Is a Trend Hidden in Their Inherent Recruitment Variability?	Savannah Valdez, CDFW
66	Species & Communities	Salinity-Driven Change in the Suisun Bay Benthos: A Case Study for Identifying Causal Drivers	Phoebe Carpenter, DWR
67	Species & Communities	Covariation between zooplankton and phytoplankton communities in the San Francisco Bay-Delta.	Julien Moderan, ICF
68	Species & Communities	Preservation of salt marsh harvest mouse in San Francisco Bay Estuary	Alexander Xu, Mountain View Highschool*
69	Water & Sediment Quality	Modeling the Impact of Friant Dam Releases on San Joaquin River Temperatures: Implications for Chinook Salmon	Owen Cancroft, SFSU*
70	Water & Sediment Quality	Continuous and discrete monitoring of the effects of land use changes on island drainage water quality in the Sacramento-San Joaquin Delta	Christina Richardson, UC Santa Cruz

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71	Water & Sediment Quality	Assessing Sediments as a Nutrient Source/Sink for the Sacramento-San Joaquin Delta	Nick Framsted, USGS
72	Water & Sediment Quality	What Where When: USGS Water Quality, Nutrient, and Phytoplankton Network	Maura Uebner, USGS
73	Water & Sediment Quality	Pesticide types and concentrations entering the Sacramento-San Joaquin Delta via island drainage	Christina Richardson, UC Santa Cruz
74	Weaving together Indigenous and Western sciences to restore wild Nur (Chinook salmon) to the Winnemem Waywaket (McCloud River)	Nur Nature-Based System: Winnemem Wintu indigenous science guides the rematuration of winter-run Chinook salmon to the McCloud River	Leanne Pearle, UC Davis
75	Weaving together Indigenous and Western sciences to restore wild Nur (Chinook salmon) to the Winnemem Waywaket (McCloud River)	Pedigree reconstructions of juvenile winter run Chinook salmon (Nur) reveal insights into stream-side incubation approaches for reintroduction	Jaime Ward, Winnemem Wintu Tribe
76	Late Breaking	Using Metabarcoding and CRISPR-based technology to inventory vernal pools on USFWS refuge lands	Anderson Tate, UC Davis
77	Late Breaking	Wallace Weir's Wild Winter: Unprecedented Fish Occurrence in the Yolo Bypass	Hailey Mico, DWR
78	Late Breaking	Baylands Habitat Map: Mapping Progress Toward Habitat Restoration Goals	Alex Braud, SFEI
79	Late Breaking	Climate-Smart Tools to Protect California's Freshwater Biodiversity	Ted Sommer, Public Policy Institute of CA
80	Late Breaking	Water-carbon measurements for annual drought management in the Delta	Olmo Guerrero Medina*

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81	Late Breaking	Gaps and opportunities for predicting the effects of water and agricultural managements decisions on community economic and food security through hydro-economic modeling: A meta-analysis	Trevor Partridge, USGS
82	Late Breaking	Rapid Detection of Chinook Salmon eDNA Using CRISPR-based SHERLOCK Assay	Diana Munoz, UC Davis*
83	Late Breaking	Pattern, Process, and Precision: understanding data limitations for littoral food webs of the Sacramento-San Joaquin Delta	Matthew Young, USGS
84	Late Breaking	Examining the effects of management practices on plankton productivity in managed wetlands of Suisun Marsh, San Francisco Estuary	Francheska Torres, UC Davis
85	Late Breaking	Future Drought in the Delta Watershed	Dan Cayan, Scripps, UC San Diego
86	Late Breaking	Aquatic plant community restoration following the long-term management of invasive Egeria densa with fluridone treatments	Jeffrey Caudill, CA State Parks
87	Late Breaking	Shaping the Future of Delta Science: Join Us in Collaborative Science Planning!	Tricia Lee, Delta Stewardship Council
88	Late Breaking	Experimental Field Study of Growth and Survival of Invasive Clams in Montezuma Slough	Jessica Weidenfeld, UC Davis and Delta Stewardship Council
89	Late Breaking	Not all floods are created equal: floods and fish in the Yolo Bypass	Matthew Young, USGS
90	Late Breaking	Land Use Dynamics with Water Availability in the Bay-Delta Area and Central Valley, California	Khandaker Iftekharul Islam, UC Santa Cruz

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91	Late Breaking	Physics to Fish: Understanding the Factors that Create and Sustain Native Fish Habitat in the San Francisco Estuary	Frederic Feyrer, USGS
92	Late Breaking	Developing Guidance for Managing Invasive Aquatic Vegetation in Tidal Wetland Sites	Elizabeth Brusati, Delta Stewardship Council
93	Late Breaking	How the SWC Science Program Helps Complete the Salmon Life History Puzzle	Darcy Austin, SWC
94	Late Breaking	Mapping Factors to Consider in Emergency Management Planning within Sacramento Delta Legacy Communities	Hannah Chaney, Delta Stewardship Council
95	Late Breaking	What happened after that management action? Quantifying nutrient reductions in the Sacramento River, CA, following the EchoWater Resource Recovery Facility upgrade	Tamara Kraus, USGS
96	Late Breaking	Evaluating Variability in Future Hydrology for Long-Term Water Resource Planning in California's Central Valley	Abhinav Sharma, UC Santa Cruz
97	Late Breaking	A Different type of Seasick: Screening of Pathogens in Ocean Caught Chinook Salmon prior to Freshwater Entry.	Andrea Chandler, UC Davis
98	Late Breaking	Drivers of Spatial Heterogeneity of Greenhouse Gas Fluxes and the Role of Hot Spot Emissions in Delta Agricultural Peat Soil	Charlotte Frances Kwong, UC Berkeley*
99	Late Breaking	Linking aerobic scope to fitness in the wild reveals key opportunities to recover imperiled salmon populations	Benjamin Burford, NOAA
100	Late Breaking	San Francisco Estuary and Watershed Science Journal	Lauren Muscatine, UC Davis

Asterisks (*) indicate the presenter is competing in the student presentation awards competition.