# TWENTY-FIFTH ANNUAL MEETING OF THE CALIFORNIA AQUATIC BIOASSESSMENT WORKGROUP

DAVIS, CALIFORNIA
October 23 and 24, 2018

MEETING AGENDA

## TUESDAY OCTOBER 23 ARC Ballroom, UC Davis Campus

8:30 – 9:00 **Registration**

### Special Twenty-Fifth Anniversary Session

9:00 - 9:20 Welcome and Objectives of the Meeting – *Jim Harrington, California Department of Fish and Wildlife (CDFW), Office of Spill Prevention and Response (OSPR), Aquatic Bioassessment Laboratory (ABL), Rancho Cordova, CA.*

9:20 – 9:50 Reflecting on 25 years of Bioassessment Research: How Serendipity Led to a Personal and Professional Obsession– *Charles Hawkins, Utah State University, Logan, UT.*

9:50 – 10:10 Reflecting on 25 Years of Bioassessment in Water Quality Regulation – *Terry Fleming, U.S. Environmental Protection Agency (US EPA), San Francisco, CA.*

10:10 – 10:30 The Future of Bioassessment in California – *Pete Ode, CDFW*

10:30 – 11:00 **Break and Poster Session**

11:00 – 11:30 Twenty Years of Monitoring Acid Mine Drainage at the Leviathan Mine Superfund Site – *Dave Herbst, Sierra Nevada Aquatic Research Laboratory, Mammoth Lakes, CA.*

11:30 – 12:00 Hydrology for a Changing World: the Empirical Analysis of Changing Streamflows and Water Quality – *Robert Hirsch, U.S. Geological Survey, Reston, VA*

12:00 – 12:30 What is the National Aquatic Resource Survey and How it Relates to Bioassessment in California – *Sarah Lehmann and Chris Faulkner, US EPA, Washington DC*

12:30 – 2:00 **Lunch (on your own)**

### Session on Monitoring Program Effectiveness

2:00 - 2:30 Erosion and Best Management Practices after Forest Fire: How Water Quality Monitoring and Bioassessment Studies Reveal Impacts of the Ponderosa, Rim, and King Fires – *Cajun James, Sierra Pacific Industries, James Harrington CDFW, Morgan Hannaford, Shasta College, Marco Sigala and Beverly H. van Buuren Moss Landing Marine Laboratories*

2:30 – 2:50 Results of Five Years of Monitoring for the Regional Monitoring Collation – Bonnie de Berry, *EOA, Inc. and Aroon Melwani, Applied Marine Sciences, Oakland, CA.*

## Session on Data Visualization in Bioassessment

2:50 – 3:05 Actionable Bioassessment Data: Using Visualization to Bridge the Research - Management Divide – *Marcus Beck, Southern California Coastal Water Research Project (SCCWRP), Costa Mesa, CA.*

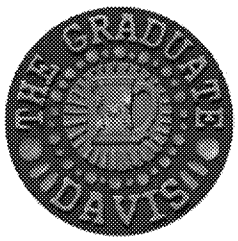
3:05 – 3:20 An Analysis of Using Data Visualization to Drive Organizational Change at the Water Boards - *Michelle Tang and Calvin Yang, SWRCB, Sacramento, CA.*

3:20 – 3:35 Areas of Conservation Emphasis (ACE): a CDFW Analysis and Visualization of Map-Based Biodiversity and Conservation Data – *Melanie Gogul-Prokurat, CDFW, Sacramento, CA.*

3:35 – 3:50 Rapid Assessment at Scale: Remote-Sensing Tools for Timely Detection of Human and Wildlife Health Hazards– *Pete Kauhanen, San Francisco Estuary Institute, Richmond, CA.*

3:50 – 4:05 Open science for better collaborative science – *Casey O'Hara, National Center for Ecological Analysis and Synthesis, Santa Barbara, CA.*

4:05 – 5:00 **Annual Meeting of the California Chapter of the Society for Freshwater Science (CalSFS)**




**Off-Site Mixer and Fundraiser for CalSFS at the Davis Graduate Starting after the Meeting**

Just a short walk from the meeting at 805 Russell Blvd, Davis California 95616 at the University Mall

## WEDNESDAY OCTOBER 24 ARC Ballroom, UC Davis Campus

### The Next 25 Years of Freshwater Science in the UCs and CSUs

9:00 – 9:15 Freshwater Science in the California State University System – *Alison O'Dowd, HSU and Matt Cover, California State University at Stanislaus*

9:15 – 9:30 Freshwater Science in the University of California System: *Ted Grantham, University of California at Berkeley*

9:30 – 10:00 Panel #1: Teaching and Training Future Freshwater Science Professionals in the UCs and CSUs

10:00 – 10:30 Panel #2: Research and Extension in Freshwater Science in the UCs and CSUs

### Session on Flow Ecology – California Chapter of the Society for Freshwater Science

10:30 – 10:45 Drifting Towards the Future: Integrating Next Generation Camera Technology and Open-Source Computer Vision Software to Estimate Invertebrate Drift within Lotic Ecosystems – Nicholas *Macias, University of California at Santa Cruz*

10:45 – 11:00 **Break and Poster Session**

11:00 – 11:15 Developing Ecological Flow Criteria for the South Fork Eel River – *Bill Trush, Humboldt State University (HSU), Arcata, CA.*

11:15 – 11:30 Quantifying Ecological Risk in the S Fork Eel River – *Emily Cooper, HSU*

11:30 – 11:45 Non-lethal Fish Responses to Flow Intermittency – Pablo *Rodríguez-Lozano, University of California at Berkeley*

11:45 – 12:00 Abiotic Drivers of Juvenile Coho Salmon Survival in Intermittent Streams – *Ross Vander Vorste, University of California at Berkeley*

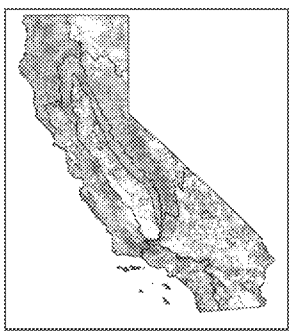
12:00 – 12:15 Who's That on My Rock?: The Ecological and Evolutionary Dynamics of Aquatic Insects Crossing Lotic-Lentic Boundaries in the Lakes Basin, Sierra Nevada, California – *Christine Parisek, University of California at Davis*

12:15 – 12:30 Science to Storytelling; Connecting with Your Community – *Marianne Denton, Nevada Department of Environmental Quality, Reno, NV.*

12:30 – 1:30 **Lunch (on your own)**

1:30 – 5:00 **Special Cal SFS Workshop: Visualizing and Mapping Bioassessment Data in R**

*Instructors: Marcus Beck (Southern California Coastal Water Research Project) and Ryan Peek (University of California at Davis)*



R is a language for statistical computing as well as a general purpose programming language. Increasingly, it has become one of the primary languages used in data science and for data analysis across many of the natural sciences. This workshop will provide attendees with the foundations for continued learning of R and for analysis of a range of data types relevant for bioassessment. By the end of this course you should be able to or have the resources to find out how to 1) use R to import and organize California bioassessment data, 2) create plots using R packages to explore data trends, and 3) create maps in R to explore spatial patterns and generate reports. The course website contains a syllabus and other instructions for preparing for the course: https://sccwrp.github.io/CABW2018_R_training/

There is no fees for this workshop but participants are asked to donate $30 (active chapter members: $20) to support student members and other activities of the California chapter of SFS. Payment will be accepted in person, with receipts distributed after the workshop.

Participants should plan to bring a laptop with R Studio installed. Other set-up instructions may be found here: https://sccwrp.github.io/CABW2018_R_training/setup.html