

# AGENDA

## Salmonid Restoration Federation Fish Passage Design and Engineering Field School

San Luis Obispo, CA February 24-26, 2026

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### Tuesday, February 24<sup>th</sup>

- 9:00 a.m. Welcome and Outline of the Day**  
Dana Stolzman, Mike Love, Ross Taylor
- 9:15 a.m. Aquatic Species and Stream Crossings**  
Ross Taylor
- Ecological connectivity of stream channels
  - Aquatic organisms of concern in California's coastal streams
  - Characteristics of instream structures that block fish movement
  - Impacts of fragmenting habitat and populations
- 10:00 a.m. Primer on Fish Passage Design Approaches**  
Mike Love
- Spectrum of fish passage approaches
  - Walk through simple stream simulation design
- 10:30 a.m. BREAK**
- 10:45 a.m. Assessing Fish Passage and Prioritizing Passage Projects**  
Ross Taylor
- Passage Assessments and PAD Database
  - Fish swimming abilities and requirements
  - Ranking and prioritization of barriers for treatments
  - Reasons for implementing fish passage projects
  - Fish passage resources
- 11:15 a.m. Assessing Geomorphic Risks for Stream Crossing Projects**  
Mike Love
- Causes of perched culverts; plunge pool vs. incision
  - Causes and impacts of channel incision
  - Risk assessments for channel incision with stream crossing projects
  - Placing stream crossings in aggraded channels
- 11:45 p.m. Neefus Gulch Channel Profile Analysis - Part 1**  
Exercise
- Identify stable slope segments and knickpoints
  - Estimate degree of incision (vertical offsets) at each knickpoint

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- 12:00 p.m. Lunch**
- 1:00 p.m. Neefus Gulch Channel Profile Analysis - Part 1 continued**  
Group discussion of profile interpretations and findings
- 1:20 p.m. Pre-design & Project Layout**  
Mike Love
- Hydraulic verses Geomorphic design approaches
  - Site assessment overview
  - Project alignment and project profile
  - Determining Vertical Adjustment Profiles (VAP)
  - When to use grade control
  - Selecting a design approach
- 1:45 p.m. Neefus Gulch Channel Profile Analysis – Part 2**  
Exercise
- Set low and high VAP profiles
  - Set a project profile at crossing
  - Show final project designs
- 2:15 p.m. BREAK**
- 2:30 p.m. CDFW Fish Passage Guidance and Project Review Process**  
Mark Gard, Senior Hydraulic Engineer
- 3:15 p.m. Stream Simulation Design**  
Mike Love
- Overarching principals of stream simulation
  - Where it is/is not applicable
  - Stream simulation design process
    - Project profile for stream simulation
    - Suitable reference reach
    - Bed design – bed materials, shape, thickness
    - Banklines, key features
    - Selecting crossing structure type and size
- 4:00 p.m. BREAK**
- 4:10 p.m. Field Tour Logistics**

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- 4:15 p.m. Overview of Steelhead Habitat Conditions in SLO Creek Watershed**  
Aleksandra Wyzdga, Science Director, Creek Lands Conservation
- O. mykiss Population Status and Movement in the SLO Creek Watershed**  
Zach Crum, District Fisheries Biologist, CA Dept. of Fish and Wildlife
- 5:00 p.m. Adjourn**
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### Wednesday, February 25<sup>th</sup>

- 9:00 a.m. Depart from Veterans Hall**
- 12:15 p.m. Lunch at Questa Canyon County Park**
- 4:30 p.m. Return to Veterans Hall**
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### Thursday, February 26<sup>th</sup>

- 9:00 a.m. Field Tour Debrief**  
Led by Ross Taylor and Mike Love
- 9:45 a.m. Stream Simulation Design – Continued**  
Mike Love
- Design process, continued
  - Stability/mobility analysis for stream simulation culverts
  - Construction techniques
- 10:15 a.m. BREAK**
- 10:30 p.m. Nickerson Creek Tributary Stream Simulation Design Exercise**
- Section A – Interpret geomorphic site data
  - Section B – Design profile and alignment
  - Section C - Design streambed shape and material mixture
  - Sections D and E – Optional
- 11:30 a.m. Overview of Hydraulic Designs for Stream Crossings**  
Mike Love
- Spectrum of Hydraulic Options
  - Types, applications, and limitations
  - Fish passage design flow considerations
  - Swimming and leaping abilities, and turbulence

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**12:00 p.m. Lunch**

**1:00 p.m. Geomorphic-Based Profile Control Techniques**

Mike Love

- Applications
- Geomorphic based roughened channels
  - Basis of approach
  - Types and applications
  - Design process and hydraulic modeling
  - Construction techniques
  - NOAA Guidance

**1:45 p.m. Monitoring and Adaptation**

Ross Taylor

- Questions that monitoring should answer
- Monitoring techniques
- Examples of previous fish passage monitoring

**2:30 p.m. BREAK**

**2:45 p.m. Boulder, Log, and Concrete Weirs**

Mike Love

- Drop structure types (boulder, log, concrete weirs)
- Shape, spacing, slope, and stability
- Design Process

**3:30 p.m. Traditional Hydraulic Designs for Stream Crossings**

Mike Love

- Fishways with stream crossings
- Fish baffles in culverts
- Types, applications and limitations

**4:00 p.m. Adjourn**

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