

AGENDA

5 Counties Salmonid Conservation Program and
California Department of Fish & Wildlife

Fish Passage Design Workshop

Ukiah Valley Conference Center

February 6-8, 2013

Wednesday, February 6th

- 8:00 a.m. Registration Opens**
- 8:30 a.m. Welcome and Outline of the Day**
Mark Lancaster, 5 Counties Salmonid Conservation Program
- Introductions
 - Pre-course survey
- 8:45 a.m. Aquatic Species and Stream Crossings**
Ross Taylor
- Ecological continuity of stream channels
 - Impacts of fragmenting populations
 - Overview of aquatic species of concern in California's coastal streams
 - Characteristics of instream structures that create fish migration barriers
 - Fish swimming abilities and requirements
 - Ranking and prioritization of barriers for treatments
- 10:00 a.m. "What makes a successful project?"**
Group Exercise - Ross Taylor Facilitates
- 10:15 a.m. BREAK**
- 10:30 a.m. Overview of Channel Morphology - Stream Crossing Interactions**
Michael Love
- Causes and impacts of channel incision and aggradation
 - Channel in-stability and channel evolution
 - Interaction of stream crossings with channels
 - Causes of perched culverts; plunge pool vs. incision

AGENDA

Wednesday, February 6th (Continued)

11:15 a.m. Pre-design & Project Layout

Kozmo Bates

- Spectrum of fish passage approaches
 - Hydraulic verses Geomorphic design approaches
 - Range of ecological benefits
- Project alignment and project profile
- Determining Vertical Adjustment Profiles (VAP)
- Headcut considerations
- Selecting a design approach

12:15 p.m. Lunch Provided

1:15 p.m. NOAA Fisheries and CDFG Fish Passage Design Guidance and Project Review Requirements

Steve Thomas, National Marine Fisheries Service, Hydraulic Engineer

- Overview of fish passage design guidelines
- FEMA and funding replacements for fish passage
- Project Specific Requirements Submittal Checklist
- Design Plan Criteria requirements in the Fisheries Restoration Grants Program (FRGP)

2:15 p.m. Geomorphic Based Designs

Kozmo Bates

- Overarching principals of stream simulation
- Stream simulation design process
 - Reference reach
 - Bed design – bed materials and shape
 - Structure sizing
 - Stability/mobility analysis: Models, design flows, bed mobility, bed stability, flood capacity
- Low-slope design process
- Construction techniques

3:00 p.m. BREAK

AGENDA

- 3:15 p.m. Geomorphic Based Designs (Continued)**
- 4:00 p.m. BREAK**
- 4:15 p.m. Unique Biology and Passage Considerations for the Other Anadromous Fish, Pacific Lamprey**
Invited Speakers: Stewart B. Reid, Western Fishes and Damon H. Goodman, USFWS
- 4:55 p.m. Outline of the next day's activities**
Claire Lindstrand, 5 Counties Salmonid Conservation Program
-

Thursday, February 7th

- 8:30 a.m. Profile Control Techniques**
Michael Love
- Geomorphic based approaches to profile control
 - Basis of approach
 - Types and applications
 - Design process
 - Drop structures
 - Types (boulder, log, concrete, sheetpile weirs)
 - Shape, spacing, slope, and stability
 - Design Process
 - Construction techniques
- 10:00 a.m. BREAK**
- 10:15 a.m. Hydraulic Designs using Baffles and Fishways**
Kozmo Bates
- Design criteria and fish behavior
 - Use of baffles
 - Design and analysis procedures
 - Fishway types, applications, layouts
 - The Do's and Don'ts
- 11:45 a.m. Introduce Group Exercises**
- 12:00 p.m. Working Lunch (Provided)**

AGENDA

Thursday, February 7th (continued)

- 1:45 p.m. **Small Group Reports**
Ross Taylor and Michael Love Facilitate
- 2:30 p.m. **Monitoring and Adaptation**
Ross Taylor
- What questions should monitoring answer?
 - Monitoring techniques
 - Examples from previous fish passage monitoring
 - Monitoring and Success Stories
 -
- 3:45 p.m. **BREAK**
- 4:00 p.m. **Post-Course Survey and Evaluations**
- 4:15 p.m. **Integrating Terrestrial and Aquatic Organism Passage Considerations: Why they Don't Always Work Together**
Invited Speaker: Sandra Jacobson, Wildlife Biologist,
US Forest Service Pacific Southwest Research Station
- 4:55 p.m. **Field Trip Logistics**
Claire Lindstrand, 5 Counties Salmonid Conservation Program
-

Friday, February 8th

OPTION A Full Day Field Tour of Fish Passage Projects

8:30 a.m. to 4:00 p.m. Tour fish passage project sites in Mendocino County.
Depart from Ukiah Valley Conference Center

OPTION B Engineering Practicum followed by Half-Day Field Tour

Michael Love and Kozmo Bates

8:30 a.m. Guided exercises applying design procedures and equations for the following fish passage project types:

- Stream simulation bed design and specifications
- Roughened rock chute bed material sizing and fish passage analysis

12:00 p.m. Join field tour and visit afternoon field sites

4:00 p.m. Return to Ukiah Valley Conference Center