

## Schedule

*November 7-9 Santa Cruz  
or  
November 13-15 Santa Rosa*

### Days 1 & 2

Classroom Lectures and Group Exercises:  
8:00 am to 5:00 pm

### Day 3

Half Day Design Calculations Workshop:  
8:30 am to 12:00 noon

Ken Bates and Mike Love will provide in-depth guidance to working with the fish passage design calculations presented in the workshop. *Bring your calculator.* After the calculations workshop, participants can join the field tour for an afternoon visit to local fish passage projects.

All Day Field Tour:  
8:30 am to 4:00 pm

We'll visit several completed, proposed and challenging project sites. The field tour will give us an opportunity to see innovative fish passage designs for stream crossings in Santa Cruz and Sonoma Counties, respectively. *Be prepared—bring wading boots and rain gear!*



Brock Dolman

## Workshop Topics

This “hands on” workshop is intended for engineers, hydrologists, biologists, and environmental planners. The course will cover the design and implementation process, including:

- Biological Considerations
- Site Surveys and Geomorphic Assessment
- State and Federal Fish Passage Design Guidance
- Stream Simulation Design
- Grade Control Techniques
- Retrofitting Existing Crossings
- Monitoring and Adaptation
- Design calculations

Short lectures will be supplemented with group design exercises, case studies, a full-day field trip to see completed projects, and a special half day workshop on design calculations.

### More Information:

#### Please Contact:

Salmonid Restoration Federation  
[srf@calsalmon.org](mailto:srf@calsalmon.org)  
(707)923-7501

FishNet 4C  
[darcya@sonic.net](mailto:darcya@sonic.net)  
(707)762-1336

Brock Dolman



## Salmonid Restoration Federation

&

## FishNet 4C

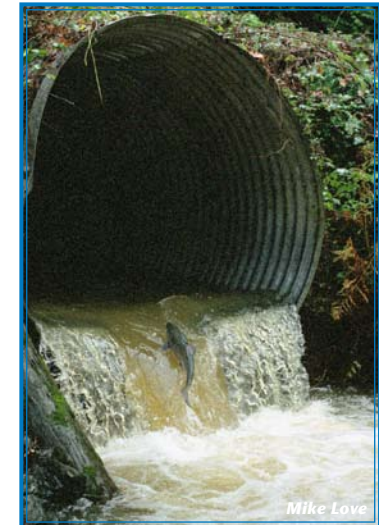
Fisheries network of  
Central California Coastal Counties



present

## Fish Passage Design Workshops

November 7-10 Santa Cruz  
November 13-15 Santa Rosa



Mike Love

### Registration Deadline:

November 1, 2007

Cost: \$150/person

(No Fee for Staff from FishNet Counties)



## Background

Road-stream crossings and other types of in-stream structures are ubiquitous throughout California's coastal streams. Unfortunately, these structures frequently block adult and juvenile salmonids from accessing spawning and rearing habitat.

Reopening these stream reaches to anadromous salmonids is one of the most direct and cost effective means of improving the recovery of wild salmon and steelhead stocks throughout California. Numerous regional efforts are currently underway to treat barriers through design and implementation of fish passage improvement projects.

Improving fish passage is often filled with site constraints and socioeconomic challenges, requiring creative approaches. Techniques for retrofitting existing structures are constantly evolving based on lessons learned from previous projects, such as the evolution of corner baffles.

Innovative design methods, such as stream simulation and nature-like roughened channels, address passage of both fish and other aquatic species but require a more thorough understanding of stream morphology and sediment transport than the traditional stream crossing design.



## Instructors



### Ken Kozmo Bates P.E.

Ken is consulting engineer with 25 years of experience designing and constructing projects for fish passage and habitat restoration at road crossings and dams. He has developed innovative designs and fish passage guidelines used throughout North America.

### Michael Love P.E.

A consulting hydrologist specializing in fish passage and stream restoration design, Mike has worked on a wide variety of fish passage projects in addition to development of the FishXing software, and is co-author of the California and Forest Service fish passage assessment protocol.



**Michael Love & Associates**  
Hydrologic Solutions

PO Box 4477 • Arcata, CA 95518 • (707) 476-8938

### Ross Taylor M.S.

Ross is a consulting fisheries biologist specializing in fish passage assessment and design review. He co-authored the California fish passage assessment protocol and has assessed fish passage at hundreds of stream crossings throughout California.



- Coffee, tea, juice, bagels, and muffins provided each classroom morning.
- Delicious lunches with vegetarian options provided