

# California Fish Passage Forum



Salmon. Dept. of Fish and Wildlife photo by M. Elyash.

September 4, 2013  
Arcata, California



Pacific lamprey. Photo: Freshwaters Illustrated/USFWS.

# Forum History

- November 1999 - California Natural Resources Agency (CNRA) convened state, local, and federal agencies, fisheries conservation groups, researchers, restoration contractors, and other interested parties.
- Discussed ways to restore and recover anadromous fish populations by improving fish passage at man-made barriers.
  - Expediting permitting of fish passage projects
- Outcome of initial convening - creation of the California Fish Passage Forum (Forum).



# Partner Organizations

- Federal agencies
  - US Fish and Wildlife Service (USFWS)
  - NOAA National Marine Fisheries Service (NMFS)
  - US Forest Service (USFS)
  - US Army Corps of Engineers (ACOE)
- State agencies
  - California Natural Resources Agency (CNRA)
  - California Department of Fish and Wildlife (CDFW)
  - California Department of Water Resources (DWR)
  - California Department of Transportation (Cal Trans)
  - State Coastal Conservancy
- Local government organizations
  - Five Counties Salmonid Conservation Program
- Nonprofit organizations
  - California Trout
- An interstate marine fisheries commission
  - Pacific States Marine Fisheries Commission (PSMFC)



# Mission, Goal, Objectives

- **Mission** - To protect and revitalize anadromous fish populations in California by restoring connectivity of freshwater habitats throughout their historic range.
- **Goal** - Restore the connectivity of freshwater/estuarine/brackish habitats throughout the historic range of anadromous fish.
- **Objectives:**
  - Remediate barriers to effective fish migration.
  - Facilitate coordination and communication
  - Identify, assess, and prioritize the removal of fish passage barriers.
  - Disseminate guidelines and design criteria for replacement of barriers.
  - Coordinate funding mechanisms to remove fish passage barriers.
  - Promote State and Federal permit coordination and streamlining.
  - Facilitate plans to monitor and evaluate fish passage restoration effectiveness.
  - Promote state and national policy that supports fish passage improvement in California.
  - Implement education and outreach activities.





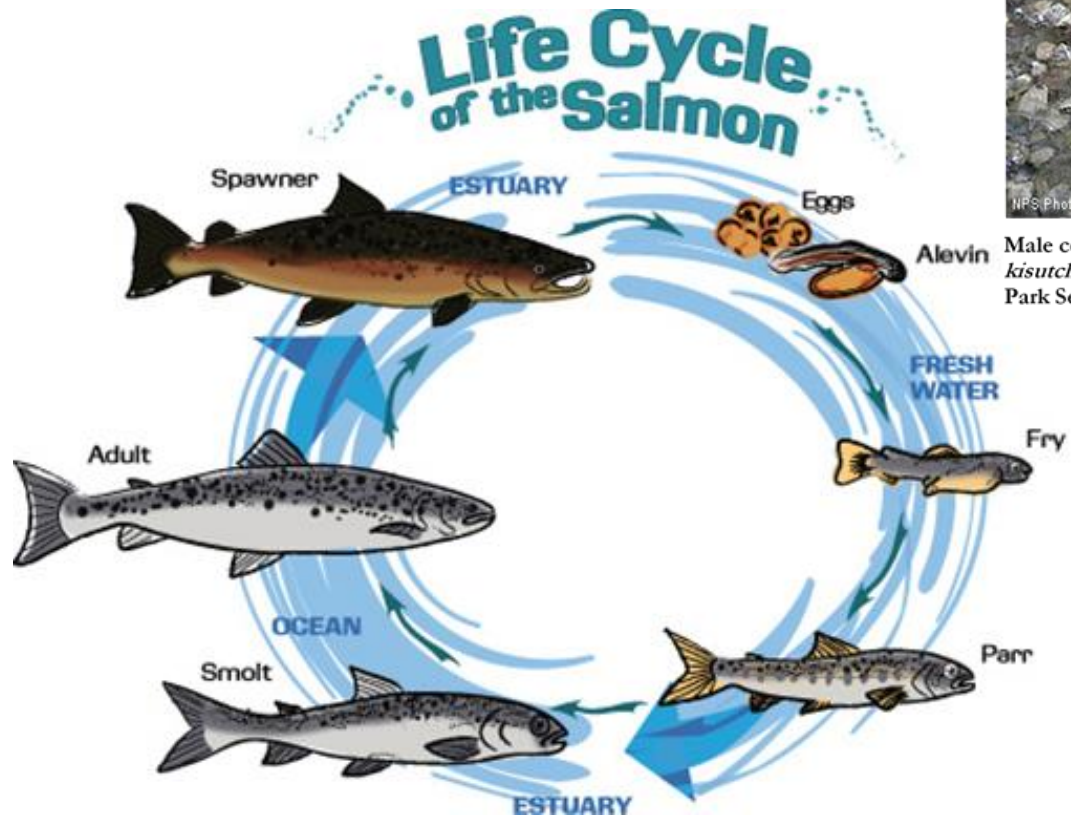
## Fish Passage

The Forum recognizes, through its focus on fish passage issues, that without access to freshwater habitat, other anadromous fish restoration efforts will not be productive

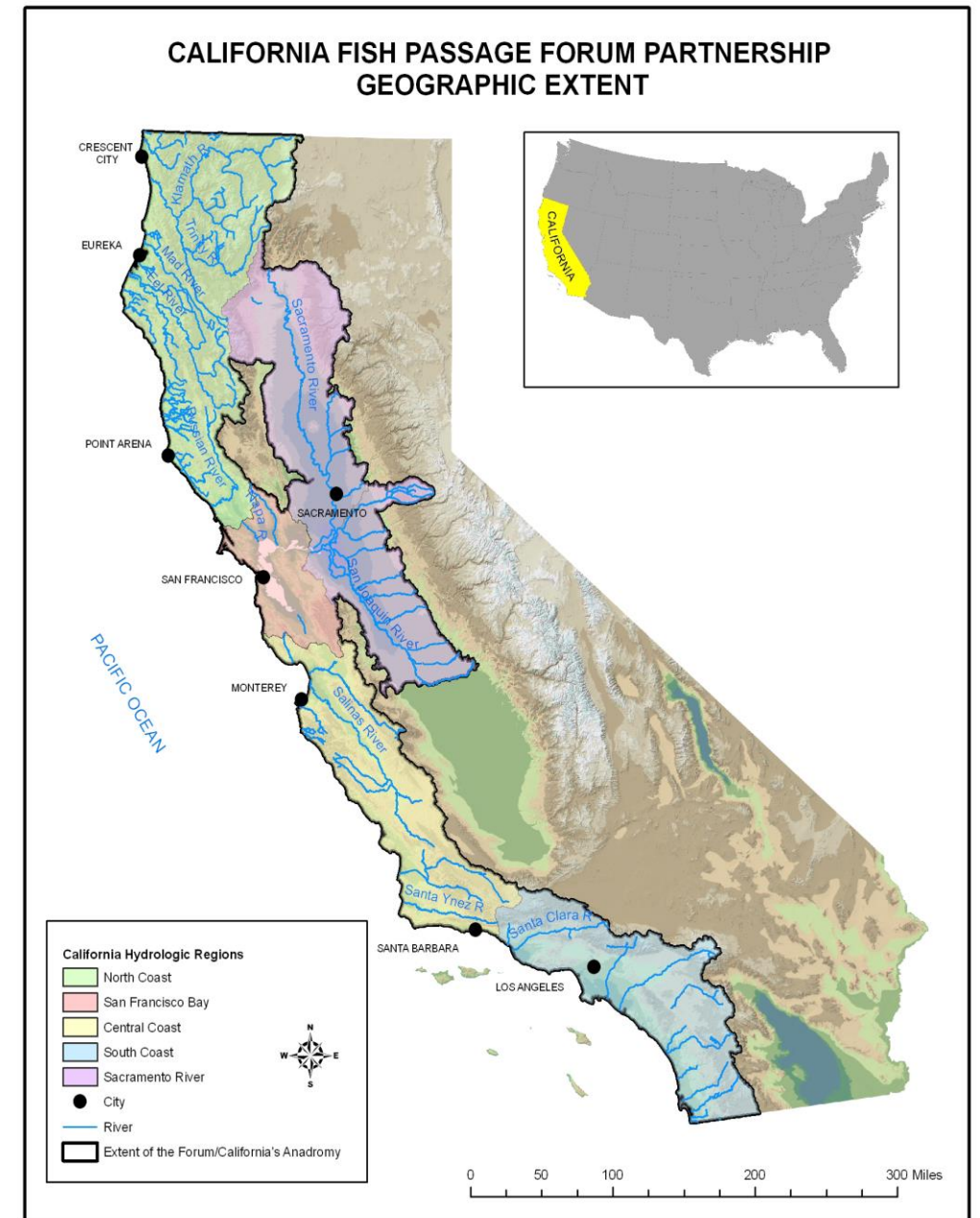


# Where We Work

The anadromous waters of California.



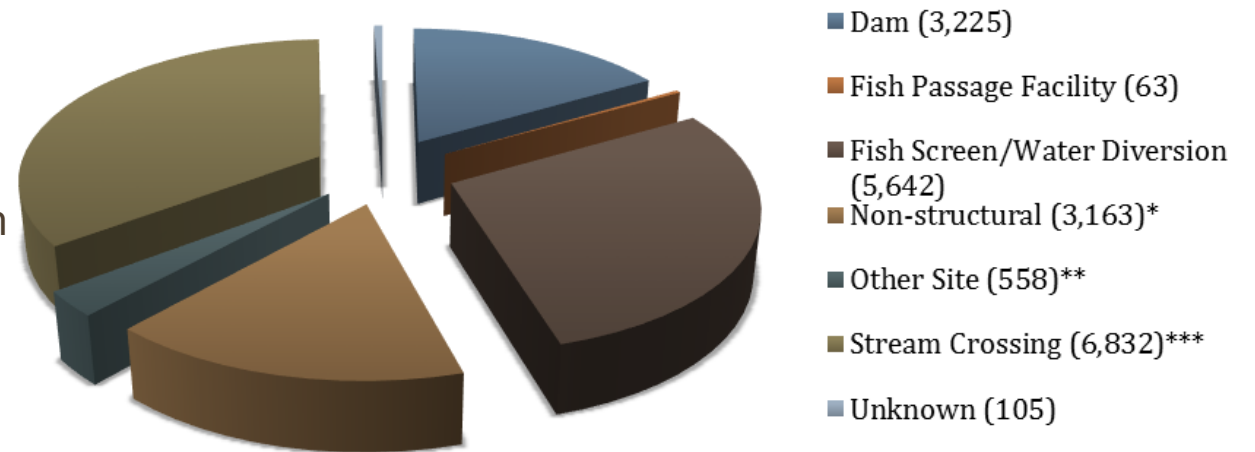
Male coho salmon (*Oncorhynchus kisutch*). Photo credit: National Park Service.



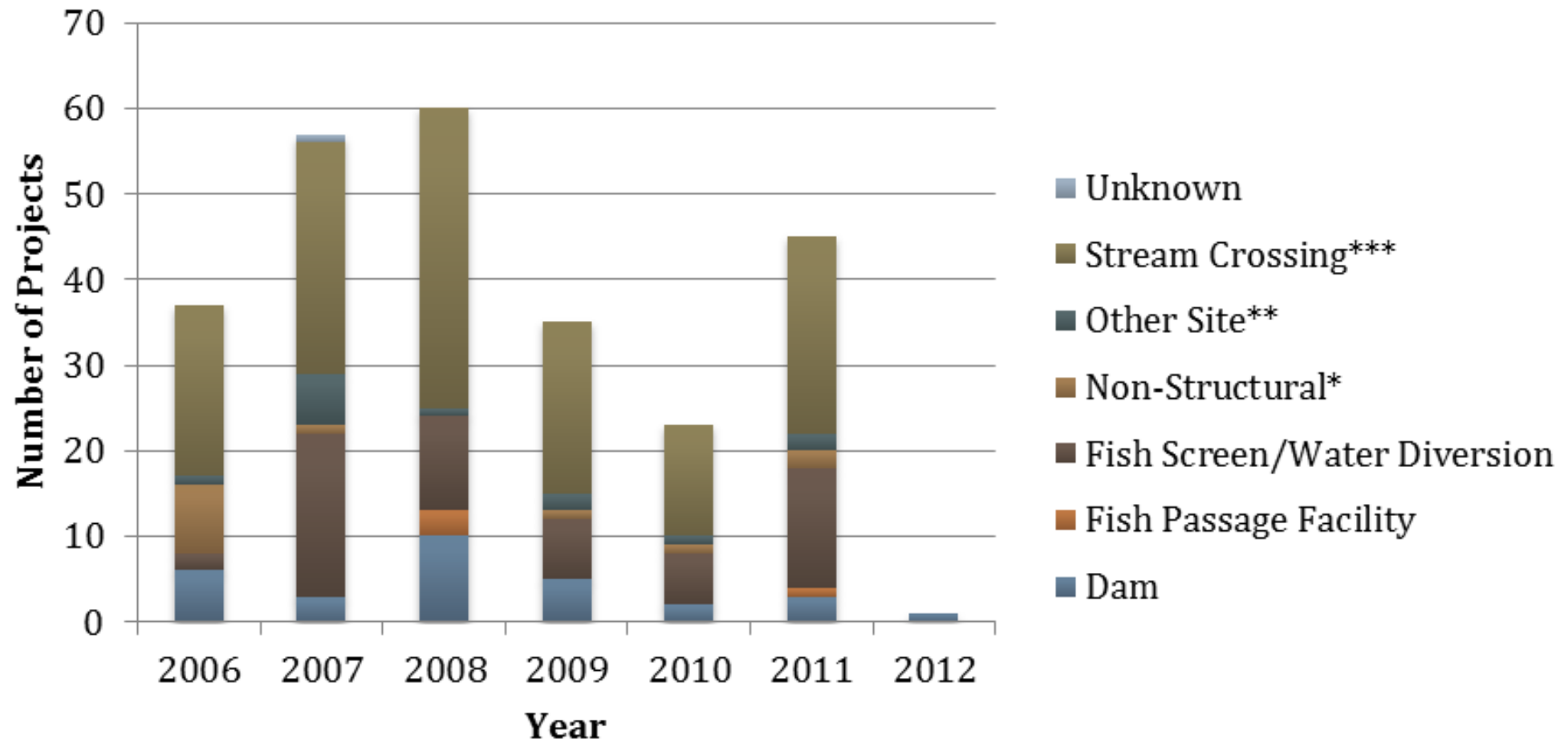
# Initiatives

- The Forum's first step - determine the quantity and severity of existing migration barriers.
- Passage Assessment Database (PAD) - map-based inventory of known and potential barriers to anadromous fish in California
  - allows barrier assessments to be standardized and stored in one place
  - enables analysis of cumulative effects of passage barriers in the context of overall watershed health
  - identifies and compiles information on more than 16,000 potential barriers to fish passage

**Figure 2. Fish Passage Barrier Types Common in Anadromous Watersheds in California.**

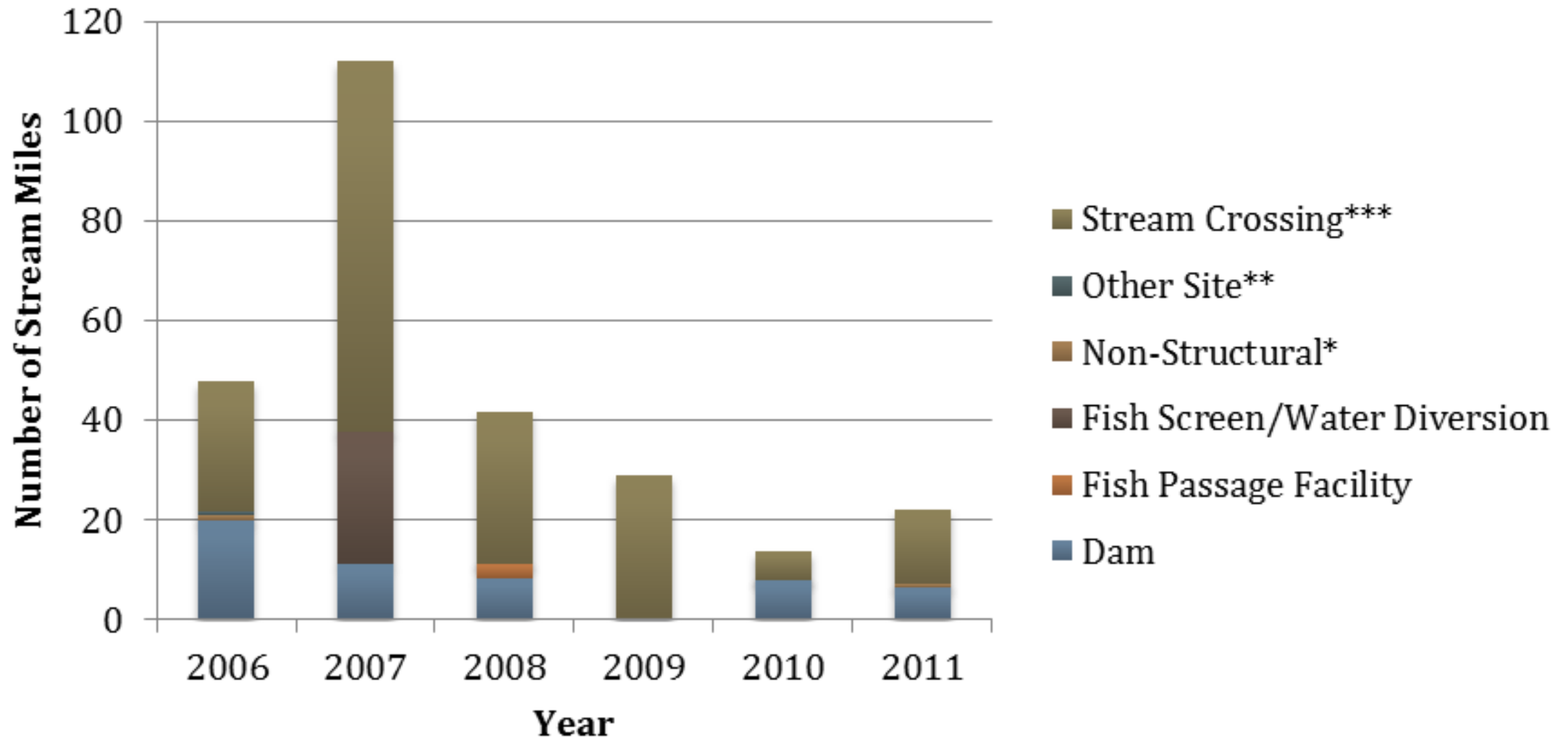


**Figure 3. Fish Passage Improvement Projects Completed  
2006-2012**





**Figure 4. Number of Stream Miles Opened by Fish Passage Projects Completed 2006-2011**



# Anadromous Fish Passage Optimization Tool (APASS)

- A newly developing, user-friendly software that allows optimization of fish barriers based on analysis of potential fish passage barrier removal scenarios.
- Forum is collaborating with Drs. Jesse R. O'Hanley and Paul S. Kemp to develop and refine APASS, which will help strategically prioritize and efficiently implement fish passage barrier remediation throughout the anadromous waters of California.
- By incorporating barrier data (PAD), APASS allows users to develop optimal barrier remediation solutions (versus ranking and scoring) based on a wide variety of desired outcomes and potential constraints.
- Refined tool has potential for use throughout the United States.

# Forum Committees and Working Groups Key Workplan Tasks

- **Governance Committee**
  - Criteria and project list for NFHP funding
  - Seek \$250K to fund high priority fish passage projects
- **Permitting and Policy Committee**
- **Science and Data Committee**
  - Find existing datasets that could be used as a surrogate for habitat quality in APASS.
  - Identify data gaps in the Passage Assessment Database (PAD) and work with partners in local, state, and federal government, non-profits, Tribes, and universities to obtain new barrier data to incorporate into PAD.
- **Outreach and Education Committee**
  - Produce Forum Briefing Paper
  - Outreach associated with NFHP projects
- **Project Optimization Working Group**
  - Complete and test APASS and develop release strategies
  - Develop cost estimates for barrier remediation





Questions?

