



The Fish Passage Advisory Committees (FishPACs)

Innovation through Collaboration

www.cafishpac.org

Science and Data

The FishPACs advance science and data associated with fish passage barrier remediation by:

- Developing and implementing criteria to rank priority barriers for remediation, including species diversity, habitat, and professional knowledge. Ranking barriers annually ensures the highest priority barriers are being considered for funding and remediation on a regular basis.
- Advancing the quality of information in and use of the state's Fish Passage Assessment Database. The online database is a map-based inventory of known and potential barriers to anadromous fish in California. The database compiles information from more than 100 agencies, organizations, and landowners in California.
- Hosting theme-based, interactive workshops to advance understanding of science and data.
- Conducting assessments of the status of barriers on the State Highway System to ensure the information in the Passage Assessment Database is up-to-date and accurate to ensure strategic investments are made on the highest priority locations.

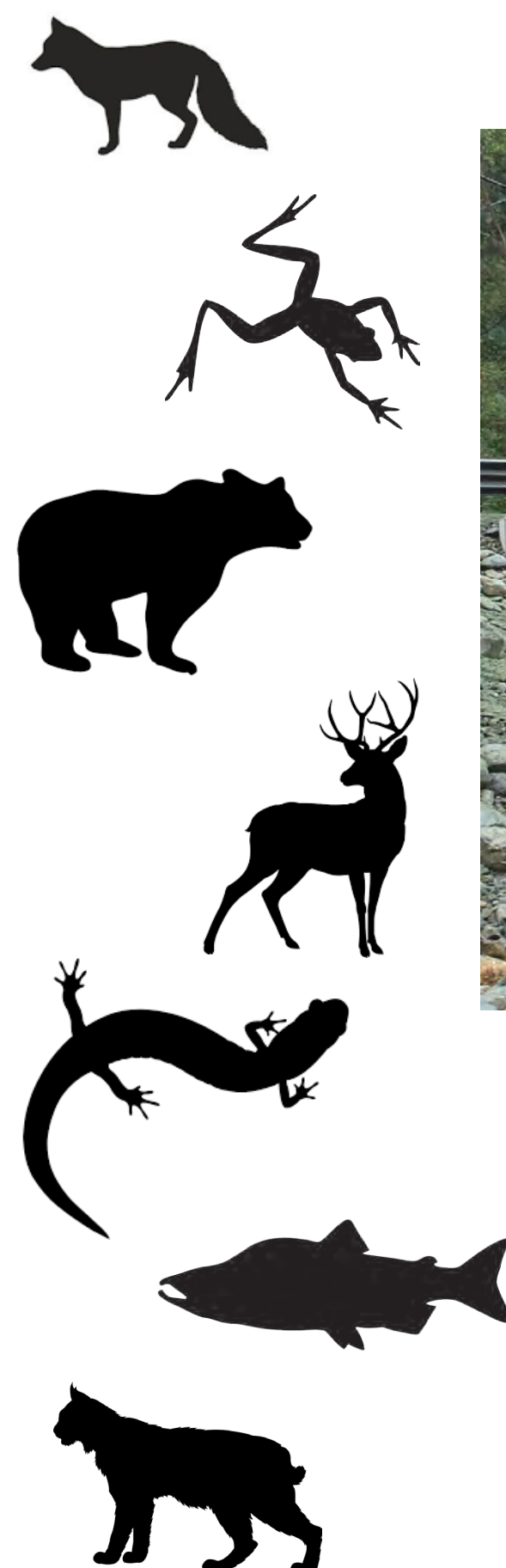
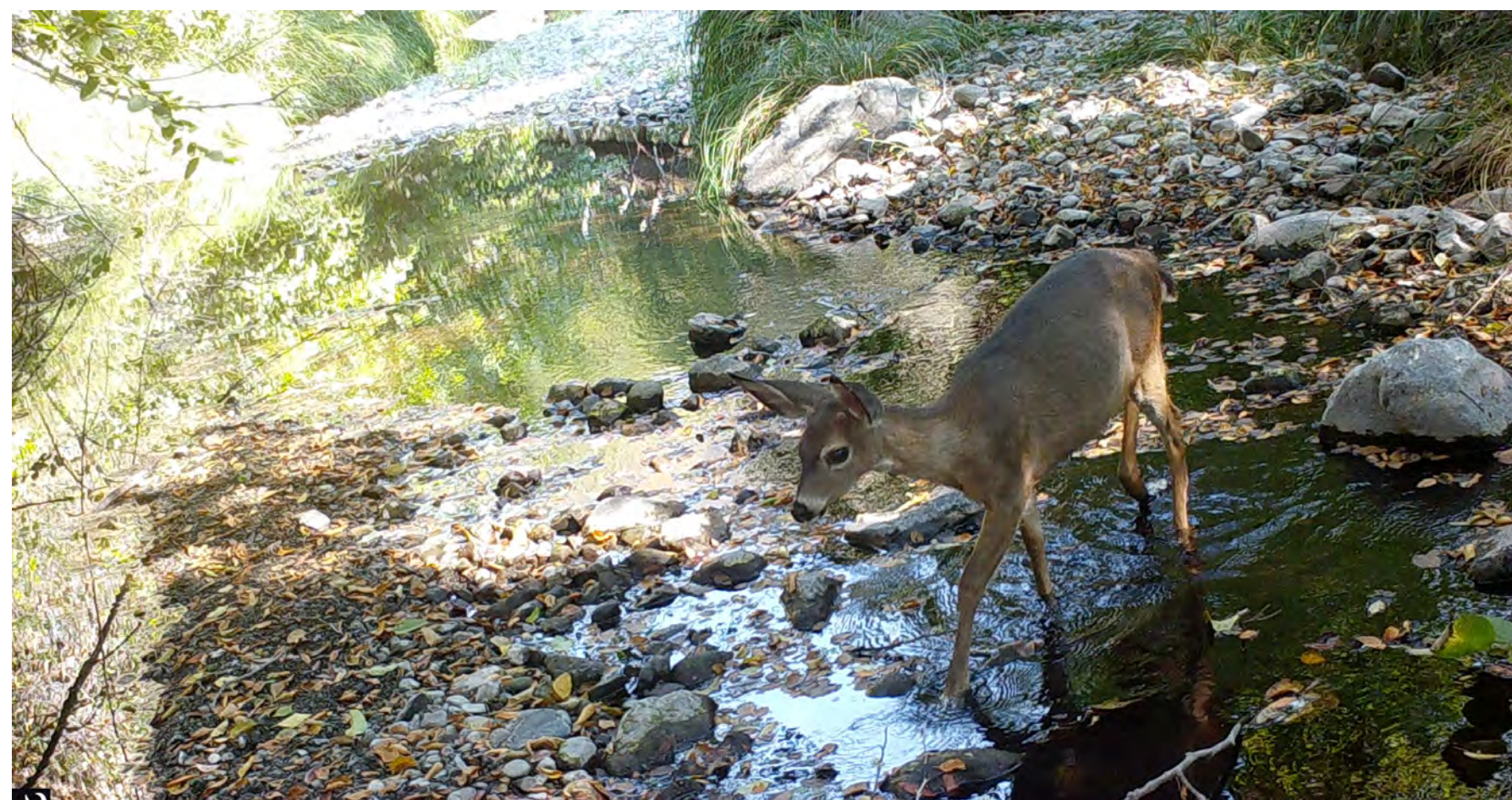


Caltrans initiated a partnership with the California Department of Fish and Wildlife (CDFW) and the National Marine Fisheries Service (NMFS) to form six Fish Passage Advisory Committees (FishPACs) to address the challenges and opportunities associated with fish passage barrier remediation on the State Highway System. The six FishPACs convene quarterly to:

- Advance science and data associated with fish barriers;
- Advance successful long-term solutions that enhance wildlife connectivity for a diversity of aquatic and terrestrial species;
- Restore ecosystem function to barrier locations through promotion of full-span solutions;
- Develop standard design solutions to reduce costs of future projects and achieve permitting efficiencies;
- Collaborate with partner organizations to conduct initial and advanced assessments on highway barriers; and
- Share information on the latest science and technologies to advance new and innovative approaches to barrier remediation.

Fish and Wildlife Connectivity

Caltrans integrates both fish and wildlife considerations into the design of their state highway structures to improve habitat connectivity for native fish and wildlife species. Crossing features, such as animal detection and driver warning systems, undercrossings provided by span bridges, overpasses that create land bridges, and wildlife exclusion and lateral escape measures, greatly enhance wildlife connectivity and survivability along the state highway system. Best practices for multi-purpose design include early coordination with stakeholders, assessing existing water conveyance features, incorporating maintenance measures to keep passageways clear and unobstructed, and making smart use of fencing to ensure additional barriers to movement are not created. The result of sound planning, design and implementation is a suite of aquatic and terrestrial species that benefit from connected ecosystems, and safer drivers that have fewer wildlife-vehicle encounters.



Fort Goff Creek Bridge, Siskiyou County



Engineering

Caltrans is working with numerous partners to advance engineering solutions that are efficient, strategic, and result in maximum transportation and fish and wildlife benefits:

- A contract with Humboldt State University will identify the state of knowledge on the application, design, and performance of full-span road crossing solutions. The outcomes of this project will inform future full-span bridge designs, incorporating aspects of channel evolution and sediment transport rates and trends.
- A series of six FishPAC meetings in July-August 2019 shared information on natural channel morphology, structures (seismicity, foundations, substrates, and pre-design superstructures), and hydraulics, including considerations for a partial barrier improvement, constructing partial solutions per design, and monitoring and maintaining sites after completion.
- Caltrans facilitates a multi-agency engineering work group that defines opportunities and needs associated with fish passage engineering research, and fish passage bridge engineering designs.

For more information on the California Fish Passage Advisory Committee, contact:
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FishPACs (Fish Passage Advisory Committee)	Caltrans District	California Department of Fish and Wildlife Region	National Marine Fisheries Service Office Jurisdiction	Counties with current habitat, historic habitat, or known fish barriers on the State Highway System	Fish Species and Listing Status
North Coast FishPAC (Established 2003)	District 1 - Eureka	Region 1 - Northern	Arcata	Del Norte, Humboldt	Southern OR/Northern CA Coast Coho (T) Central CA Coast Coho (E) CA Coastal Chinook (T) Northern CA Steelhead (T) Central CA Coast Steelhead (T)
			Santa Rosa	Mendocino	
Klamath-Cascades FishPAC (Established 2007)	District 2 - Redding	Region 1 - Northern	Arcata	Lassen, Modoc, Shasta, Siskiyou, Tehama, Trinity	Sacramento River Winter-run Chinook (E) Southern OR/Northern CA Coho (T) CA Coastal Chinook (T) CA Central Valley Steelhead (T) Northern CA Steelhead (T) Central Valley Spring-run Chinook (T) Central Valley Fall and late-Fall run Chinook (C)
		Region 2 - North Central	Sacramento	Plumas	
Bay Area FishPAC (Established September 2016)	District 4 - Oakland	Region 3 - Bay Delta	Santa Rosa	Alameda, Contra Costa, Marin, Napa, Santa Clara, San Mateo, Solano, Sonoma	Central CA Coast Coho (E) CA Coastal Chinook (T) Central Valley Spring Chinook (T) Sacramento River Winter-run Chinook (E) CA Central Valley Steelhead (T) Central CA Coast Steelhead (T)
Southern Steelhead FishPAC (Established February 2017)	District 7 - Los Angeles	Region 5 - South Coast	Long Beach	Los Angeles, Ventura	Southern CA Coast Steelhead (E)
	District 11 - San Diego			San Diego	
	District 12 - Orange			Orange	
Central Coast FishPAC (Established August 2017)	District 5 - San Luis Obispo	Region 3 - Bay Delta	Santa Rosa	Santa Cruz	Central CA Coast Coho (E) Southern Central CA Coastal Steelhead (T) Southern CA Coast Steelhead (E)
		Region 4 - Central		Monterey, San Luis Obispo	
		Region 5 - South Coast		Santa Barbara	
Central Valley FishPAC (Established November/December 2017)	District 3 - Marysville	Region 2 - North Central Region 3 - Bay Delta	Sacramento	Sacramento, Yolo, Sutter, Colusa, Glenn, Butte, Yuba	Central Valley Winter-run Chinook (E) Central Valley Spring-run Chinook (T) Central Valley Steelhead (T) Central Valley Fall and late-Fall run Chinook (C)
	District 6 - Fresno	Region 4 - Central		Madera, Fresno, Kings, Tulare, Kern	
	District 10 - Stockton	Region 2 - North Central Region 3 - Bay Delta Region 4 - Central		San Joaquin, Stanislaus, Merced, Amador, Calaveras, Tuolumne, Mariposa	

E = Endangered | T = Threatened | C = Species of Concern