



CALIFORNIA FISH PASSAGE ADVISORY COMMITTEE

RECENTLY COMPLETED FISH PASSAGE PROJECTS REMEDiate FISH and WILDLIFE CONNECTIVITY ON THE STATE HIGHWAY SYSTEM

Portuguese and Cade Creek Project

This project on State Route 96 in Siskiyou County replaced two undersized culvert barriers to salmon and steelhead with new bridges. The project opened approximately 5.37 miles of habitat for both threatened and endangered fish. The project further restored wildlife connectivity to an additional 8,465 acres of watershed area.



Before



After

Cade Creek | Caltrans District 2 (PAD ID 720541, Siskiyou County, Route 96, PM 43.51)

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- This newsletter is intended to connect FishPAC members and others interested in fish passage remediation with a focus on sharing information and working together as a fish passage community to enhance California's resilience.*



Before

Portuguese Creek | Caltrans District 2 (PAD ID 707169, Siskiyou County, Route 96, PM 57.02)



After

CALTRANS FISH AND WILDLIFE CONNECTIVITY UPDATE

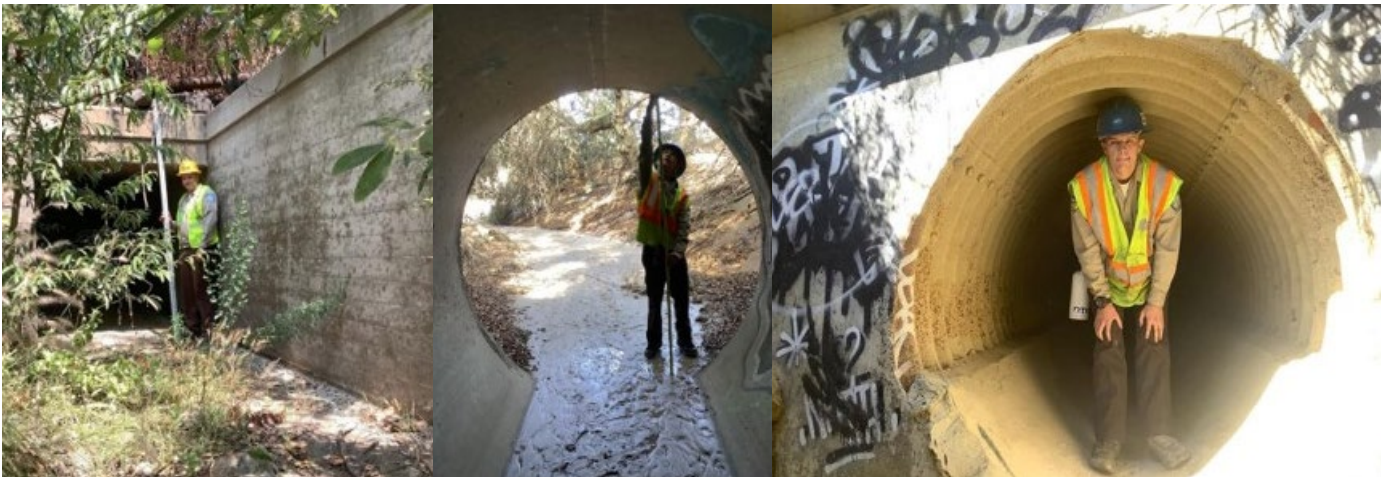
The [Caltrans Fish and Wildlife Connectivity website](#) has been updated and now links to the [FishPAC website](#). The July 2024 Caltrans Wildlife Connectivity Program Report is accessible from the [Caltrans webpage](#).

The report highlights 38 fish passage barrier remediation projects—either active (funded) or planned (pre-project)—all designed as full-span bridges that will also remediate wildlife connectivity barriers within landscape movement corridors.

There are currently 49 active (funded) fish passage remediation projects in development across the California State Highway System (SHS). Once completed, these projects will increase access to an estimated 245 stream miles for salmon, steelhead, and other aquatic species along with restoring wildlife connectivity across 379,274 watershed acres.

FISHPAC SCIENCE AND INNOVATION UPDATE

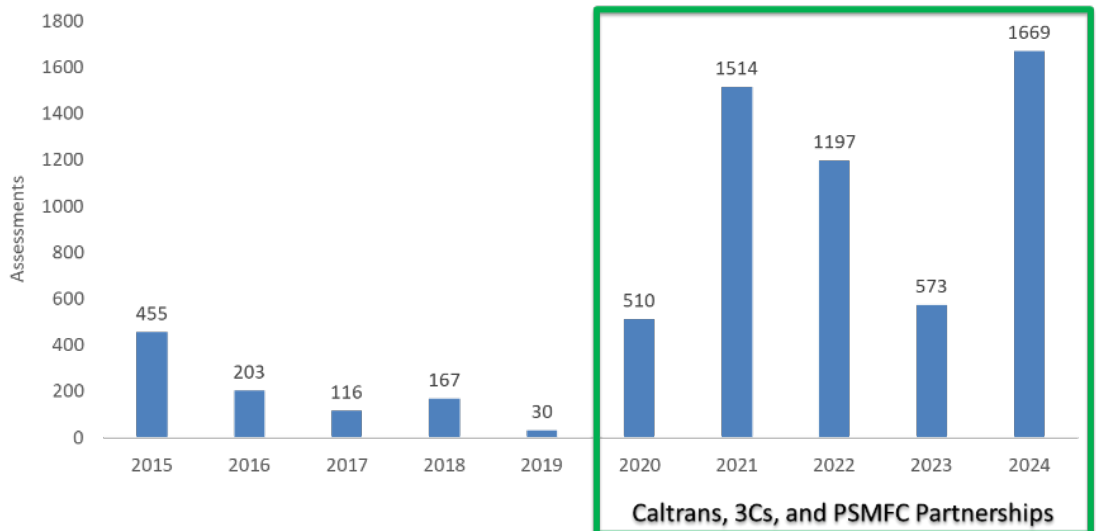
The FishPAC Science and Innovation Team meets regularly to support key science and technology needs for fish passage projects on the SHS. Strong partnerships among Caltrans, the Pacific States Marine Fisheries Commission (PSMFC), and the California Conservation Corps (3Cs) have greatly accelerated fish passage assessments on the SHS (see chart below). Caltrans provides overall leadership for assessment efforts, PSMFC provides data management, mapping support, and professional field biologists, and 3Cs crews conduct first-pass field assessments. Together, these coordinated efforts generate science and data needed by Caltrans and the FishPACs to nominate and prioritize barrier remediation to inform strategic investments in SHS assets. Thanks to these growing and enduring partnerships, **80% of all fish passage assessment needs on the SHS have now been completed, a 15% increase since 2024.**



California Conservation Corps staff conducting first pass assessments on the SHS.

Thanks to strong collaboration among Caltrans, PSMFC, and the 3Cs, the program has grown in both scale and speed over the past five years. These efforts have now resulted in the completion of 80% of all required fish passage assessments on the SHS, marking a major milestone in efforts to invest in restoring connectivity on the SHS.

History of Assessments on the State Highway System 2015-2024



CULVERT AQUATIC ORGANISM PASSAGE PROGRAM

As part of the Infrastructure Investment and Jobs Act (IIJA) or Bipartisan Infrastructure Legislation, the Culvert Aquatic Organism Passage (AOP) program was authorized for \$1 billion over five years (FY 2022–2026); however, the funding for FY 2023–2026 is subject to future appropriations. A Notice of Funding Opportunity (NOFO) was issued for fiscal years 2023 through 2026 (\$784 million); however, the Federal Highway Administration (FHWA) has only awarded \$196 million for the first fiscal year (FY 2022).

Caltrans and other entities submitted proposals by the September 2023 deadline, but no awards or notifications have been issued to date. The Caltrans District 2 proposal for West Weaver Creek, a FishPAC priority, was submitted for construction cost funding.

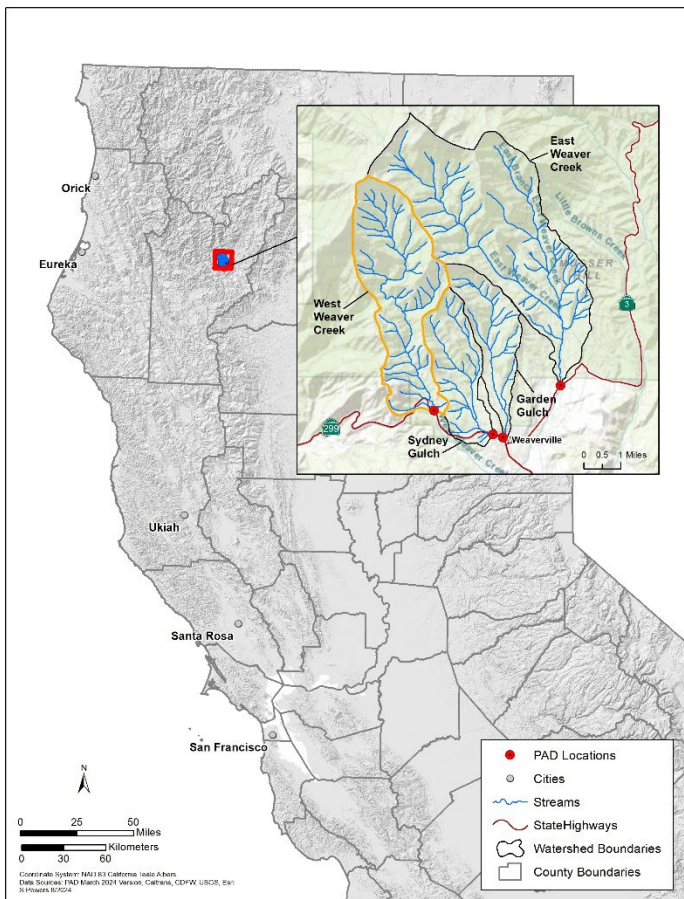


Photo (above): West Weaver Creek (PAD ID 720522), Trinity County, Route 299, PM 49.63. This barrier is a partial barrier to threatened and endangered salmon and a total barrier to wildlife. An estimated 4.64 miles of habitat exists above the partial barrier. The map (left) illustrates four fish passage barriers included in the Weaverville Project: (a) East Weaver Creek (lower left photo), (b) West Weaver Creek, (c) Sydney Gulch (lower middle photo), and (d) Garden Gulch (lower right photo). Remediating all four barriers will provide access to an estimated 22.12 miles of potential habitat for threatened and endangered anadromous fish species and other wildlife.

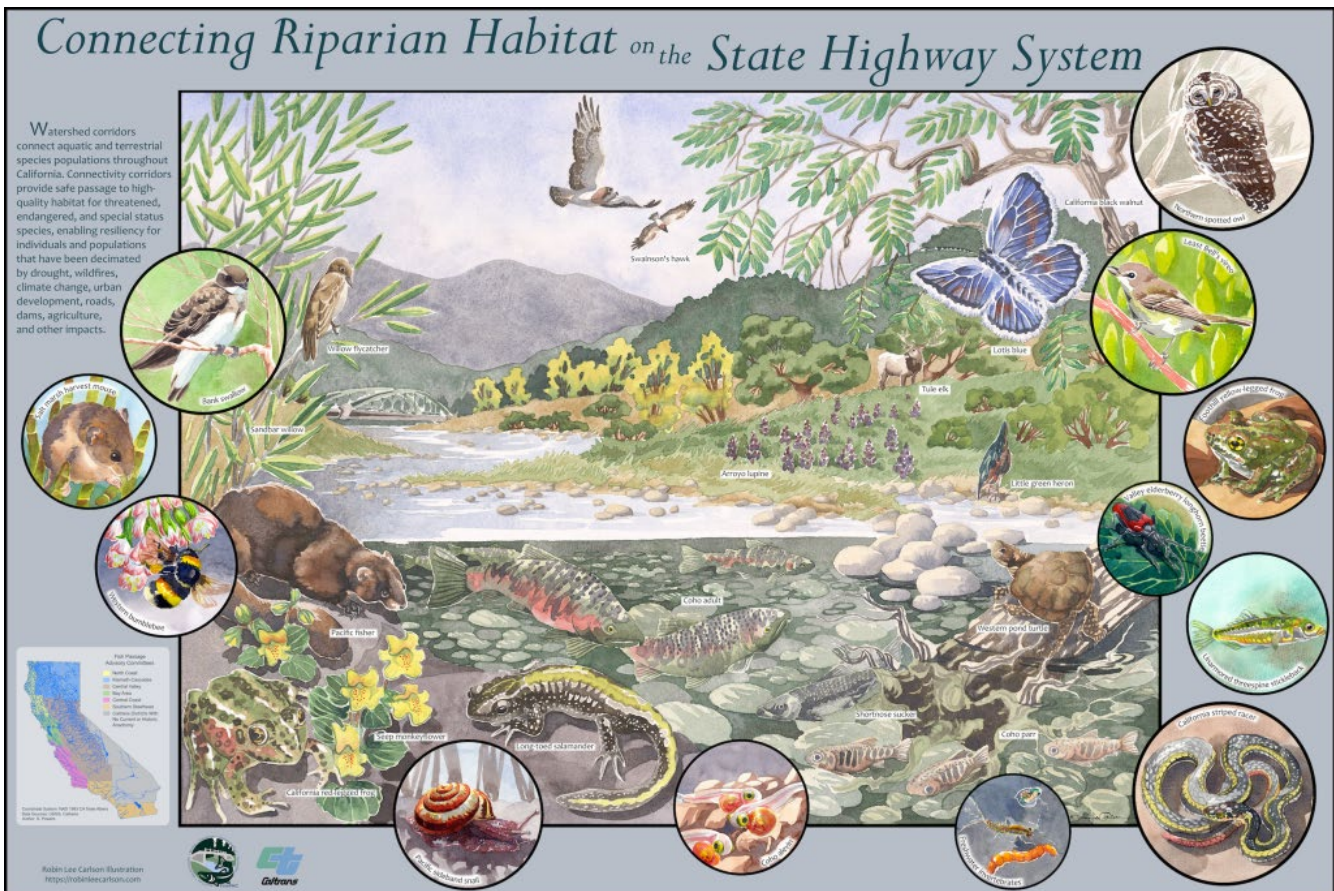


GEOMORPHOLOGY AND LANDSCAPE ARCHITECTURE

Historically, most fish passage barrier remediation projects have been retrofit and partial remediations, which remain partial barriers to fish and often increase barriers to wildlife. These low efficacy solutions depend on hydraulic engineers designing elevation controls that need to be continuously maintained just to provide limited access for some species or life stages. This legacy approach – prioritizing short-term, lowest cost, lower-performance solutions – has produced marginal ecological gains while driving long-term investments of time, labor, and inflated costs, which will be required to eventually achieve full barrier connectivity remediation for fish and wildlife.

Achieving effective landscape-scale connectivity requires a paradigm shift from envisioning rivers and watersheds as linear landforms that transport water and sediment to delivering projects that integrate riparian and terrestrial landscapes to meet the needs of natural processes that provide a restored and connected landscape.

Fluvial geomorphologists and landscape architects must be systematically included and actively engaged in fish and wildlife barrier remediation project designs. Their expertise ensures that project outcomes reflect the dynamic interplay between rivers and their surrounding landscapes and project designs that support effective connectivity restoration while prioritizing and respecting existing natural resources and landforms. Greater integration of these experts during project delivery and design will strengthen and improve ecological connectivity project outcomes, support long-term performance, resilience, and cost-effectiveness for connectivity projects, which enhance safety.



Connecting riparian and other habitat corridors along the SHS (Robin Carlson illustration) enhances ecological connectivity for many fish and wildlife species and supports more strategic investments in SHS assets.

FISH PASSAGE AND RESTORATION LEADER UPDATES

Fish passage and restoration leaders make a difference navigating the complexities of project delivery on the State Highway System while considering the needs of California's listed and native fish and wildlife species. The following are updates on three of these leaders:



Jeff Jahn

Branch Chief, California Coastal Office, NMFS

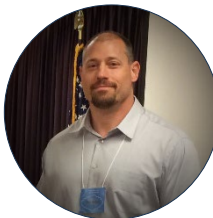
Jeff retired in the summer of 2025 due to federal government reductions and cuts to federal employees nationally. Jeff was a FishPAC leader for several years and has been a champion of collaborative approaches, and a long-time supporter of fish passage remediation projects.



Anna Sojourner

Senior Engineering Geologist, Caltrans

Leads training to bring increased awareness of fish and wildlife projects to Caltrans geoprofessionals. Advocates for improved collaboration and focus on higher efficacy, long-term remediation, and restoration projects for fish and wildlife connectivity.



Kenneth (Ken) Murray

Deputy Division Chief, Principal Landscape Architect, Caltrans

New Deputy Division Chief (Principal Landscape Architect) at Caltrans. Ken has been a long-time (more than 26 years) supporter of restoration, conservation, and environmental enhancement projects.

MONARCH BUTTERFLY SPECIES CARD - VEGETATION MANAGEMENT CONSIDERATIONS

The Monarch butterfly species card conveys the importance of pollinator conservation and vegetation management considerations for projects where monarch butterflies are known to occur and migrate. California depends on pollinators for a healthy ecosystem and to support the state's \$61.2 billion agricultural economy.

The Nationwide Candidate Conservation Agreement with Assurances is the first nationwide agreement to promote voluntary conservation for the monarch butterfly. Caltrans enrolled in the Monarch CCAA and is committed to monarch butterfly habitat conservation. As part of the agreement, Caltrans receives regulatory assurances that no additional conservation measures will be required by the U.S. Fish and Wildlife Service if the monarch butterfly is listed under the Endangered Species Act. The Monarch CCAA avoids and minimizes the potential effects for select maintenance and modernization activities on the SHS. This ensures that Caltrans maintenance can perform covered activities and conservation measures within identified enrolled lands and that additional conservation measures, restrictions, and limitations will not be imposed beyond those in the Monarch CCAA.

