



The Los Angeles River Fish Passage & Habitat Structures Design Project

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MAIN FUNDER

State of California Wildlife Conservation Board

PROJECT LEADS

Council for Watershed Health
City of Los Angeles
Stillwater Sciences

PARTNERS & COORDINATING AGENCIES

Southern California Coastal Water Research
Project
Arroyo Seco Foundation
Friends of the Los Angeles River
National Marine Fisheries Service
County of Los Angeles
U.S. Army Corps of Engineers
Bureau of Reclamation
California Department of Fish & Wildlife
U.S. Fish & Wildlife Service

PROJECT PROFILE

Channelization and urbanization have decreased wildlife diversity and quality in the Los Angeles (L.A.) River, disconnected the river from its floodplain and important ecological areas, and dramatically changed the river's appearance and function. Consequently, the LA River has experienced reduced ecosystem services and no refugia and passage for many native fish and aquatic species, including steelhead trout (*Oncorhynchus mykiss*), or steelhead.

Significant funding in recent years has been earmarked for improving ecosystem benefits and recreation opportunities in the LA River and supporting the recovery of steelhead, while maintaining existing levels of flood risk management.



It would take an estimated 2.7 days for an adult steelhead trout to travel 20 miles, from the mouth of the L.A. River in Long Beach, to the Fish Passage & Habitat Structure project site near Boyle Heights, Los Angeles.



Consistent with these efforts, the Los Angeles River Fish Passage and Habitat Structures Design (LAR FPHS) project is conducting an integrated design analysis to develop channel modifications for a 4.8 mile reach of the LA River through downtown LA. The results of this pilot project would help to redesign the channel bed and banks to provide increased flow complexity and habitat heterogeneity, which will help to enhance fish passage and migration corridors to the LA River soft-bottom reaches and upper tributaries. Although primarily focused on supporting steelhead habitat needs at all life stages, enhanced fish passage by the project will benefit fish movements of other native fish (e.g., Santa Ana sucker, Arroyo chub, speckled dace, unarmored three-spined stickleback, Pacific lamprey) and aquatic wildlife.

Additionally, the LAR FPHS project will contribute to advancing strategies to connect people, urban communities, and habitat to their natural waterways. The results of this design analysis will help to promote stakeholder collaboration to revitalize water systems by improving their ecosystem benefits, in alignment with existing adopted policies, programs, activities, and plans within the LA River Watershed. The LAR FPHS project will also provide opportunities to address other integrated water management objectives and needs in urban communities across the Watershed.

This multi-agency effort, funded by the State of California Wildlife Conservation Board, is led by the Council for Watershed Health, the City of Los Angeles, and Stillwater Sciences, in coordination with other partners and agencies, including U.S. Bureau of Reclamation, Southern California Coastal Water Research Project, National Marine Fisheries Service, U.S. Army Corps of Engineers (USACE), County of Los Angeles, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Regional Water Quality Control Board, Arroyo Seco Foundation, and Friends of the Los Angeles River.

The project analysis includes engineering design, CEQA/NEPA compliance, and permitting strategy. In addition, the project includes a watershed-wide Steelhead Conceptual Model and Limiting Factors Analysis to improve and synthesize our current understanding of the species habitat use and needs, and to support future restoration prioritization and pilot projects across the LA River Watershed.

The design will utilize existing and new hydraulic modeling to evaluate freeboard and flood risk management as well as fish passage flow needs during migratory periods. Alternatives will be evaluated using criteria that will include flood management and steelhead passage, as well as other criteria proposed by stakeholders. The selected design will be advanced to the 60% level, which includes: design drawings; a Basis of Design report; and a preliminary Engineer's Opinion of Probable Cost.



This pilot project is supported by the City of Los Angeles, and is connected to the USACE Los Angeles District Congressional Authorization Alternative 20 LA River Ecosystem Restoration Project, known as the “Area with Restoration Benefits and Opportunities for Revitalization” (ARBOR) reach. The LAR FPNS project also links to other biodiversity projects within the City of Los Angeles, the LA River Watershed, and its upper tributaries (Arroyo Seco and Tujunga watersheds), and is consistent with the Los Angeles River Revitalization Master Plan (LARRMP), and many other adopted plans. While focused on providing fish passage and habitat structures to address limiting factors to steelhead and other native fish, the project also addresses watershed-wide data gaps and opportunities to promote future projects that address other limiting factors to steelhead recovery from coast to crest.