



Photos by Caltrans Office of Biological Studies

At Cedar Creek in Mendocino County, where U.S. Highway 101 crosses over, a stepped concrete passageway was completed last year that allows salmon and steelhead trout to more easily make their way upstream and down. Caltrans is required to remediate highway barriers to fish passage.

Caltrans Helping Another Kind of Traveler

Recent Projects Clear Obstacles to Salmon, Steelhead Migration at Six Locations

Some of the State Highway System's waterway crossings present a variety of impediments to threatened and endangered chinook salmon, coho salmon and steelhead trout as the fish migrate from the ocean to freshwater streams for spawning and rearing. Caltrans is required by State legislation to remove those human-made obstacles and improve access to high-quality habitat.

The Department completed fish-passage remediations at six locations in 2017, improving access to more than 21 miles of habitat for salmon and steelhead.

Remediations were completed on four creek crossings that transect U.S. Highway 101 in Mendocino County (all in Caltrans regional District 1), as mitigation for the Willits Bypass project. Caltrans fish-passage projects also were completed at a State Route 1 crossing over Millerton Gulch in Marin County and the State Route 121 Sarco Creek crossing in Napa County (both in District 4).

Road/stream crossings, including undersized culverts and bridges, can be barriers to fish passage. In recent years Caltrans has replaced and retrofit crossings, from the Oregon-California border to Southern California, as well as inland into the Klamath Mountains of far Northern California and the Sacramento-San

Joaquin Delta.

Caltrans is required by law to report to the Legislature on progress with fish passage remediation. The information in this article relates to information provided in the 2017 Fish Passage Annual Report to lawmakers.

Caltrans has either fully or partially remediated 42 barriers, which include the six remediated in 2017. An additional 36 locations are in the project delivery pipeline. Four of those projects — one each in Districts 1 (in Mendocino County, described below), 2 (Siskiyou County), 4 (Marin County) and 5 (Santa Barbara County) — are expected to be completed next. Plans call for all 32 other ongoing remediation projects to be finished by 2028.

One of the larger, more complicated remediation projects of late was undertaken in 2018 under U.S. Highway 101 just south of Leggett, in District 1. Cedar Creek, a tributary of the South Fork of the Eel River, passes through a 763-foot-long arch culvert under the highway, and a few years ago, exposed reinforcement steel required maintenance work and provided an opportunity to improve access for salmon and steelhead.

To aid the movement of both salmon and Pacific lamprey, a curving cascade of 13 concrete steps were constructed

downstream of the culvert. Like salmon, the 15- to 25-inch-long lamprey spend much of their lives in the Pacific Ocean but also migrate into fresh water to spawn.

In 2017, 116 fish-passage assessments were completed at State highway locations to identify where drainage systems may affect access to fish habitat. Of the 116 assessments, 91 sites were determined to not be barriers to migration. Four of the assessed locations were found to be barriers, and 21 sites were identified that need additional surveys to judge their accessibility.

Throughout the State, about 600 road/stream crossings have been identified as barriers. Seventy of those locations have been determined to be significant to the recovery of salmon and steelhead populations in California. Caltrans and its partners expect to find additional barriers as they assess more than 5,200 identified crossings in the coming years.

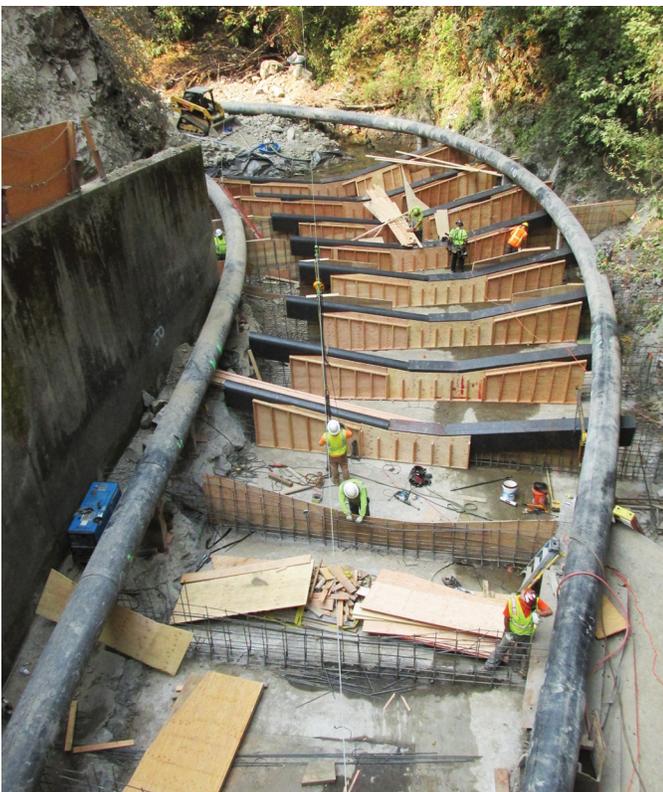
In its latest report to the Legislature, Caltrans identified 70 locations as priorities for funding future remediations due to the presence of salmon and steelhead, as well as high-quality habitat. Fourteen of those sites were new listings on the priority list, which Caltrans compiles in coordination with the California Department of Fish and Wildlife and six statewide Fish Passage Advisory Committees.

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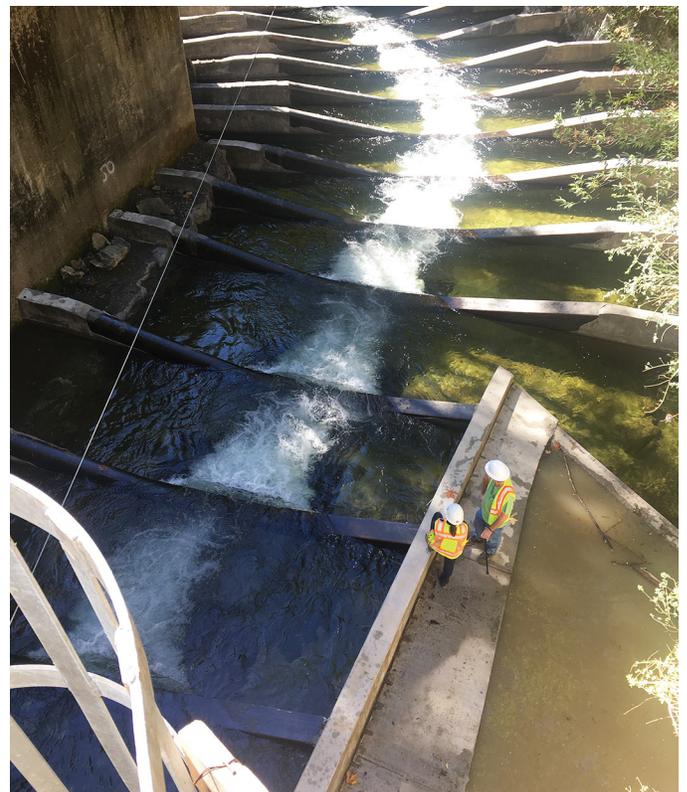
Those committees bring together 180 representatives from various local, state, federal and nonprofit agencies. They meet quarterly; the gatherings are funded by Caltrans, which also pays for data management, detailed mapping and watershed analysis.

Working to minimize the impact of highway crossings on fish and other wildlife is part of Caltrans' mission to make "long-lasting, smart mobility decisions that improve the environment (and) support a vibrant economy," as stated in the Caltrans 2015-2020 Strategic Management Plan. **MM**

Source: Melinda Molnar, Senior Fish Biologist, Caltrans Office of Biological Studies



Construction crews complete framing on the fish passage structure built on Cedar Creek, outside the town of Leggett on the North Coast.



The finished passageway consists of a series of 13 gradually descending steps, replacing a previous weir structure that had deteriorated.