



Chinook Salmon Return to Alameda Creek *Perfect Timing to Use Newly Constructed Fish Ladder for Upstream Migration*

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Contact: Jeff Miller, Alameda Creek Alliance, (510) 499-9185, jeff@alamedacreek.org

Fremont, CA – Early winter storms have attracted migration of adult Chinook salmon into lower Alameda Creek in Fremont for the second consecutive year. The salmon have the potential to use newly-constructed fish ladders to bypass a concrete weir and two small dams that were formerly barriers to fish migration. These are the first salmon in more than half a century that could swim into the upper watershed to reach suitable spawning habitat, in Niles Canyon, Sunol Valley, and lower Arroyo de la Laguna in Pleasanton.

“These auspicious salmon have impeccable timing, arriving just as the water district finishes testing the new fish ladder and is putting it into operation, and benefitting from two decades of restoration efforts,” said Jeff Miller, director of the Alameda Creek Alliance. “We welcome the return of Chinook to the Alameda Creek watershed, where they were once a native fish, and look forward to steelhead trout also using these fishways to ascend the creek this winter.”

Nearly a dozen salmon were seen on December 5 below the new fish migration ladder where the BART tracks cross Alameda Creek in Fremont. For nearly half a century anadromous fish such as salmon and steelhead trout had been blocked from spawning in the Alameda Creek watershed by a cement weir below the tracks and two inflatable rubber dams used for water supply operations. The Alameda County Water District has been testing the operation of the two fish ladders. Alameda Creek Alliance volunteers photographed and videoed the salmon at the entrance to lower fish ladder today. Fisheries biologists with the East Bay Regional Park District and San Francisco Public Utilities Commission, as well as more than 75 Alameda Creek Streamkeeper volunteers, will be monitoring upstream reaches of Alameda Creek and tributaries, to determine if these salmon made it upstream through the ladder and where they will spawn.

The return of salmon will benefit other native wildlife in the watershed. On December 8, a family of river otters that recently arrived at Quarry Lakes adjacent to lower Alameda Creek, found the migrating salmon and were photographed feasting on one of the large adult Chinook. A resident mating pair of bald eagles that has nested at Ardenwood Historic Farm near lower Alameda Creek in Fremont, is often seen catching fish in Alameda Creek and the eagles are expected to find and feed on spawned-out salmon.

“The return of otters and salmon heralds hope for more healthy ecosystems, not to mention that endearing otters and inspiring salmon are excellent ambassadors for protecting and restoring our local watersheds,” said Miller. “We’re now seeing results from two decades of restoration projects, which could transform the ecology of Alameda Creek. We hope Alameda Creek will have an outsized impact on recovery of steelhead trout in the region. It’s profoundly gratifying to see watershed residents and the local water agencies taking pride in bringing back native fish and wildlife.”

The Chinook salmon are most likely strays from Central Valley fish hatcheries, however, Chinook from the nearby Guadalupe River in San Jose could explore Alameda Creek as well. Chinook of hatchery origin began spawning in the 1990s in South Bay streams, where there are now small numbers of naturally reproducing fish. Chinook historically spawned in Alameda Creek, evidenced by ancient salmon remains found in Native American shell mounds along the creek in Fremont. Recent scientific studies and DNA sequencing have provided proof of historic Chinook salmon runs in Santa Clara County in the Guadalupe River. Downtown San Jose is now the southernmost major metropolitan area hosting salmon runs in the

United States. A genetic analysis done on Chinook salmon sampled from recent returns to the Guadalupe River watershed revealed that the fish are closely related to Feather River Hatchery strains. Chinook will likely repopulate Alameda Creek now that fish passage projects are completed.

River otters were extirpated by fur trappers from the Bay Area by the 1930s, but have recently been reintroducing themselves to the region. After trapping of otters in California was banned in 1961, and pollution was reduced by implementation of the Clean Water Act in the 1970s, efforts began in the 1980s to restore and revitalize Bay Area streams. River otters started returning to the Bay Area in 1989, and to the East Bay in 2013, including at Lake Temescal and Lake Merritt in Oakland, and Coyote Hills Regional Park along lower Alameda Creek. The Quarry Lakes otters showed up in 2022. East Bay otters probably came here from the Sacramento-San Joaquin Delta. River otters can travel long distances along creeks (even through culverts) and on dry land, and young males disperse in search of their own territory. River otters are now breeding successfully around much of San Francisco Bay and along the Marin and Sonoma coasts. Most of what we know about Bay Area river otters is due to the River Otter Ecology Project (www.riverotterecology.org).



Chinook Salmon photos by ACA member Dan Sarka

Background

Since steelhead trout in the Bay Area were listed as a threatened species under the Endangered Species Act in 1997, a consortium of organizations and agencies has cooperated on restoration projects to allow migratory fish to reach spawning habitat in upper Alameda Creek. Partners in the Alameda Creek Fisheries Restoration Workgroup have completed nearly two dozen fish passage projects in the watershed since 2001, including removal of small dams and other fish passage barriers, construction of fish ladders, replacement of road culverts, and installation of fish screens at water diversions. Water agencies are also working on projects to improve stream flows and restore stream and riparian habitat along Alameda Creek and its tributaries. These restoration projects now make up to 20 miles of potential spawning and rearing habitat in Alameda Creek and its tributaries accessible to ocean-run salmonids.

The Alameda County Water District and Alameda County Flood Control District completed a critical fish ladder at a former barrier to fish migration, a 12-foot cement drop structure known as the BART weir. The new fish ladder will allow steelhead and salmon to migrate under the BART tracks and past an adjacent inflatable rubber dam used for water supply operations. In 2019 ACWD completed another fish ladder at a second inflatable rubber dam one mile upstream in the flood control channel. ACWD has spent \$80 million on fish passage projects, with the cooperation of 24 partner agencies and stakeholders, and raised \$33 million in grants so far to help pay for fish-friendly improvements in lower Alameda Creek. Alameda Creek is a local water supply and accounts for roughly 40 percent of ACWD water serving 357,000 people in Fremont, Newark and Union City. These projects will allow ACWD to continue operations of its rubber dams and other facilities along the creek to recharge the Niles Cone Groundwater Basin sustainably.

In 2018 the San Francisco Public Utilities Commission finished rebuilding the seismically-challenged Calaveras Dam in the upper Alameda Creek watershed. The new reservoir now operates with cold water releases in the summer to help trout rear downstream of the dam. The SFPUC also built a new fish ladder and fish screens at the associated Alameda Diversion Dam in upper Alameda Creek. This diversion dam is now operated to bypass much more of the winter and spring high flows in upper Alameda Creek. The enhanced stream flows will help migratory fish get further upstream to better habitat.

There is now only one remaining major fish migration barrier on the mainstem of Alameda Creek, a cement apron across the creek in the Sunol Valley protecting a gas pipeline owned by PG&E. The Fisheries Workgroup is coordinating with PG&E to relocate the pipeline and remove the cement barrier.

Multiple agencies are planning a project to restore former salt ponds near the mouth of Alameda Creek to tidal marsh as part of the South Bay Salt Pond Restoration. This project will create estuary habitat near the outlet of Alameda Creek that could be critical to growth and survival of salmonids.

Alameda Creek is considered an 'anchor watershed' for steelhead trout, since it has regional significance for restoration of the threatened fish to the entire Bay Area. Steelhead, salmon and lamprey are anadromous fish, living out their adult lives in the ocean and migrating up freshwater streams and rivers to spawn. Suitable habitat for cold water fish has been blocked and reduced by construction of dams and other barriers, and habitat has been degraded by water diversions, urban development, stream channelization and other modifications to the Alameda Creek streambed. Steelhead are also impacted by pollution and runoff from roads, and introduced and invasive fish.

The [Alameda Creek Alliance](#) is a 2,000-member strong community watershed group, dedicated to protecting and restoring the natural ecosystems of the Alameda Creek watershed. The Alameda Creek Alliance has been working to restore steelhead trout to the Alameda Creek watershed since 1997.