South Coast Habitat Restoration

Working to protect, conserve and restore our native habitats

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Working to protect, conserve, and restore the various habitats and native biodiversity of the Santa Barbara and Ventura areas, through implementing habitat restoration projects, outreaching to community members and landowners, as well as chairing the Carpinteria Creek Watershed Coalition.
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SCHR is a local non-profit organization based in Carpinteria that is dedicated to environmental stewardship and habitat enhancement. We emphasize steelhead trout (Oncorhynchus mykiss) recovery through a variety of watershed restoration projects throughout Santa Barbara and Ventura counties.

Steelhead trout are an anadromous form of rainbow trout, native to the Pacific coast of North America. Southern Steelhead trout are an evolutionarily distinct population native to southern California and Northern Mexico. Southern Steelhead are adapted to the seasonally dry streams and arid climate that they experience at the southern end of the steelhead range. Their populations once numbered in the hundreds of thousands but today are less than 1% of these historic numbers. The drastic decline is in large part due to the loss of upstream habitat from barriers including concrete low flow crossings, dams, and flood control structures. These and other barriers block migratory fish from reaching their spawning grounds and completing their life cycle. In 1997, the National Marine Fisheries Service listed Southern Steelhead trout, as endangered from the Santa Maria River south.

SCHR is working to restore access for steelhead by removing barriers and improving habitat conditions within our local creeks. SCHR works with private property owners, private consultants, and public agencies to develop and implement voluntary habitat restoration projects.

Project types

- Fish Passage Restoration
- Bank Stabilization and Riparian Restoration
- Community Restoration
Focal Watersheds
SCHR's completed and in progress efforts have focused on the highlighted watersheds in Santa Barbara and Ventura Counties.
The Carpinteria Creek Watershed has been a major focus of steelhead recovery efforts on the South Coast since the Carpinteria Creek Watershed Coalition was founded in 2001. The Coalition and its member organizations spurred the creation of a Watershed Management Plan. The first fish passage project in the watershed was completed by the City of Carpinteria in 2004, followed by four separate restoration projects completed in 2008. In total, nine barriers have been removed or modified to provide fish passage into the headwaters of Carpinteria Creek. Passage is now open within the main tributary to the watershed, Gobernador Creek. One major barrier remains on the mainstem of Carpinteria Creek, and SCHR is currently working with the private property owners to finalize project designs. Grant funding to complete the project was awarded to SCHR by the Department of Fish and Wildlife, and construction is set to begin in late 2015. In addition to fish passage restoration, SCHR has completed a bank stabilization project and a large community volunteer restoration effort at the mouth of Carpinteria Creek within the Carpinteria State Beach.
The Bliss Fish Passage Restoration Project was completed in the Fall of 2008. The low flow crossing (opposite page at top) was the first major barrier that steelhead from the ocean encountered as they tried to make their way upstream. In the Spring of 2008 just a few months before this barrier was removed, three adult female steelhead migrated into Carpinteria Creek and were unable to make it over the barrier and subsequently died in the pool downstream when stream flows rapidly receded (bottom right).

The barrier was a result of the change in channel grade that results from the section of concreted roadway. The restoration project removed all of the concrete from the stream channel (top left), regraded the channel bed to a natural slope, built and installed a new free spanning vehicular bridge (top right and bottom left), and revegetated the site with native riparian vegetation. The stream now flows freely underneath the bridge and steelhead have access through the site and the landowner can safely cross the creek (opposite page at bottom).
Pinkham Fish Passage Restoration

In addition to the new bridge all of the concrete was removed from the stream channel and the streambed was regraded to a natural slope using boulders and materials salvaged from the project site. Large boulders were incorporated into the channel and banks to mimic the natural channel upstream and to help lock in the channel. These roughness elements also slow stream velocities and provide resting areas for migrating fish (opposite page at bottom right). The project involved excavation of the stream channel and for the new bridge abutments (above).

The Pinkham Fish Passage Restoration Project removed one of the last major barriers from a private ranch along the mainstem of Carpinteria Creek. The barrier at the site was a result of an undersized bridge and over 90 feet of concreted stream channel and banks (opposite page at top). This smooth concrete lacked a low flow channel or roughness elements and therefore acted as a velocity barrier to migrating fish. The project removed the undersized bridge and replaced it with a wider free span bridge (below).
The goal of the Cate School Bank Stabilization Project was to improve steelhead habitat, water quality, and streambank conditions in the Carpinteria Creek watershed at a private property owned by the Cate School Corporation in Santa Barbara County. The project addressed a 300 foot area of eroding stream bank within an avocado orchard (top left). The project employed biotechnical bank stabilization for the protection of steep banks using rock toe installation, root wad structures and willow trenching (opposite page at top and bottom right). Construction of the project was completed in the Fall of 2010. The upper and lower sections of near vertical creek banks were laid back to a more gradual slope (left middle and bottom). Large rocks were placed in a trench along the toe of the slope. Willow and sycamore poles were placed within the trench and throughout the project site to help further stabilize the bank. In the middle 100 foot section of the project four large root wads (from felled avocado trees) were installed in order to direct flows away from the creek bank and protect it from further erosion.
The Raya fish passage restoration project involved the removal of two low flow crossings on Gobernador Creek, the major tributary to Carpinteria Creek in 2008. As part of the Raya project, two redundant crossings (opposite page top, and this page middle) on a single property were removed and replaced with a single bridge (opposite page bottom). SCHRI secured permits and construction funding for the project as well as managed the implementation/construction of the project. All of the concrete was removed from the stream channel (bottom left), and the channel was regraded using natural streambed materials to restore fish passage. A new free spanning vehicular bridge was installed at the location of the upstream low flow crossing (below). Re-vegetation occurred shortly thereafter with native riparian trees and shrubs. Native re-vegetation efforts at the site have been successful at reaching the performance criteria of 80% cover of native by the end of five years. Native riparian trees at the site are now over twenty feet tall (opposite page at bottom). In conjunction with other completed and planned projects, the community goal of opening up passage to the upstream natural barrier to steelhead in the head waters of Gobernador Creek is now complete since the removal of the upper Gobernador crossing in 2011. Migrating steelhead now have unimpeded access to the headwaters of Gobernador creek from the Pacific Ocean.
The Upper Gobernador Fish Passage Restoration Project removed the final barrier from the Gobernador Creek Watershed. The barrier was a concrete low flow crossing which resulted in a 14 foot jump height for fish and was deemed a complete barrier to fish passage (opposite page at top and this page at top left). Its removal opened up over a mile of spawning and rearing habitat and opened passage from the Pacific Ocean into the perennial headwaters of the Creek.

The project involved the removal of the existing concrete crossing and regrading of nearly 300 feet of stream channel to make up for the unnatural change in channel elevation that occurred on the downstream end of the crossing (bottom right). A new free span vehicular bridge was installed as well as three large woody debris structures which will help to maintain pool habitat within this reach. Re-vegetation efforts included native container planting as well as seeding and tree stakes. The native plants are thriving and filling in the project site.
The Carpinteria Creek Mouth Project was a community restoration effort that used volunteers to help solarize non-native iceplant with sheets of black plastic (opposite at top) and re-vegetated the site with a diverse palette of local native plants. The project was completed in 2010, in partnership with California State Parks, and Channel Islands Restoration. Before the project, the site was dominated by non-native iceplant (top). After the solarization was complete, native plants were installed within the deed iceplant (middle), below left a recent photo of the finished project site, and above right another after photo of the project site. Opposite page, above photo shows the installation of sheets of black plastic using wooden stakes and sand bags to help secure and hold the plastic in place, and below shows the project site just a few months after planting during a volunteer weeding event.
Tajiguas Watershed Restoration

The Rancho Tajiguas Barrier Removal Projects aim to restore steelhead passage to six miles of historically accessible stream. To date, nine concrete barriers (low flow crossings and a dam) have been removed from the watershed. These eight redundant stream crossings were replaced with one clear span vehicular bridge and two aluminum-arched culverts. The crossings that were removed were constructed decades ago as part of the ranch agricultural operations and over time became barriers to steelhead trout migration as stream flows moved over the smooth concrete, picked up speed, and scoured out stream bed material on the downstream end. Rancho Tajiguas, a private property that encompasses the entire Tajiguas Creek Watershed on the Gaviota Coast near Santa Barbara, California.

The first phase of the project was completed in 2011 and restored approximately three miles of steelhead spawning and rearing habitat. At each of the five project sites, construction involved removing the concrete crossings, regrading of the stream channel, the restoration of the stream banks within the project area using biotechnical methods of bank stabilization, and re-vegetation of the site with native riparian species. Re-vegetation efforts began in December 2011, in total over 600 native container plants were planted at the sites along with tree stakes that were salvaged from the sites prior to construction. Removal of the barriers and replacement of the crossings with a single bridge significantly improved conditions for steelhead within the Tajiguas Watershed along the Gaviota Coast.

The second phase of construction began in the Summer of 2014. This second phase removed the final four barriers from the watershed. Two concrete low flow crossings were replaced with aluminum bottomless arch culverts. Additionally, a concrete grade control structure and a large concrete dam were removed to provide fish passage. They were replaced with a natural stream channel and newly constructed pools to provide sufficient rearing habitat for California Red-legged frogs and steelhead trout.
As part of the barrier removal efforts that took place in the Tajiguas Watershed in 2011, a bank stabilization effort was incorporated into one of the sites. It involved the removal of a large pipe and cobble revetment structure from the left creek bank (opposite at top) and replacement with a bio-engineered method of bank stabilization known as a willow wattle fence (opposite bottom left and right). The fence is made of live willow poles that have been stripped of all their leaves and branches. Support poles are inserted deep into the soil roughly 4-6 feet deep and then willow poles are woven in and out of the support poles to create the fence. These willow poles rooted into the surrounding soil and sprouted new leaves to create a living fence. Four willow fences were built at this site, going up the bank to create a series of terraces and provide a stable grade along the bank. The roots of the willow trees further stabilized the creek bank at this site. Additional bank stabilization methods were used as part of the Tajiguas project including willow stakes, planting of deep rooted native species, and a willow wattle mattress. In addition to the removal of five concrete crossings, one clear span bridge was installed below to provide the property owners fish friendly access across the creek.
The final four barriers from the watershed in 2014 included two concrete low flow crossings (top left), a concrete grade control structure, and a large concrete dam (opposite page bottom left). The crossings were replaced with aluminum bottomless arched culverts (bottom left) and natural stream bed material and newly constructed pools were installed to provide sufficient rearing habitat for California Red-legged frogs and steelhead trout while providing fish passage. The California Conservation Corp helped to install erosion control fabric at the sites and hundreds of native riparian trees and shrubs.
The Goleta Slough Watershed covers 45 square miles of land. Originating in the steep undeveloped slopes of the Santa Ynez Mountains, transitioning into agricultural lands and down into the more heavily developed Goleta valley. The Slough at the mouth is fed by a number of local creeks including San Pedro, San Jose, and Atascadero. The watershed has been ranked by the National Oceanic Atmospheric Administration’s Southern California Steelhead Recovery Plan as a Core 2 watershed for the Conception Coast Region. SCHR has begun efforts to restore steelhead access to the Maria Ygnacio watershed. Working with both private property owners and the County of Santa Barbara Public Works and Flood Control Departments, SCHR hopes to remove or modify all major barriers in the watershed to improve access into the perennial headwaters of the Creek.
Maria Ygnacio Fish Passage Restoration

The Maria Ygnacio Fish Passage Restoration project removed a concrete low flow crossing from a private ranch within the perennial portion of Maria Ygnacio Creek. The barrier was removed, the channel was regraded, two large pools with root-wad structures were installed, and a new clear span vehicular bridge was constructed to provide the property owners safe access across the creek. Stream banks were regraded and native riparian container plants and tree stakes were installed to restore stream side vegetation and riparian shading.

This fish passage restoration project was funded by the Department of Fish and Wildlife’s Fisheries Restoration Grant Program and the US Fish and Wildlife Service. SCHR is excited to be working in this locally important watershed, The Maria Ygnacio Creek Watershed is part of the Goleta Slough Complex which the National Marine Fishes Service has ranked as a Core 2 watershed for the recovery of steelhead.
Ventura River Watershed

The Ventura River watershed covers an area of about 227 square miles. All of this land drains into the Ventura River, either directly or through draws and tributaries. The major tributaries to the Ventura River include Matilija Creek, North Fork Matilija Creek, San Antonio Creek, and Canada Larga. The Ventura River mouth at the Pacific Ocean is located within Emma Wood State Beach.

There are a number of barriers within the Ventura River Watershed. Large dams on Coyote Creek and on Matilija creek have greatly reduced what was historically available. Removing smaller barriers in the watershed especially in North Fork Matilija at Wheeler Gorge, and throughout the larger San Antonio Watershed will be essential to the recovery of steelhead populations in the watershed.

The Ventura River Watershed Council is currently working to develop a watershed management plan which aims to ensure the watershed’s protection into the future. It will identify ways in which the efforts currently underway in the watershed can complement and support one another. It will outline for the community, for decision-makers, and for all stakeholders the many projects that could help advance a sustainable watershed; and it will identify among those the ones of greatest priority.
The Lion Creek project involved the removal of a stream crossing which acted as a barrier to migration for the federally endangered steelhead trout. Lion Creek is a tributary to San Antonio Creek, a major steelhead creek within the Ventura River Watershed. The project opened up access to approximately 9.5 miles of upstream habitat. The project was a collaborative effort between SCHR, the property owner, as well as local, state and federal agencies. SCHR wrote grants and was awarded over $300,000 in grant funding to complete the project.

The project broke ground in the summer of 2010. The barrier to steelhead trout migration was removed and replaced with an 85 foot clear spanning bridge, constructed from a recycled railroad car. The project area was re-vegetated with native riparian trees and shrubs with the help of the California Conservation Corps. The project has improved conditions in the watershed for steelhead trout and other aquatic species.