



Roy's Pools Fish Passage and Floodplain Restoration Project

Project Timeline

The construction phase of the restoration will begin in July 2020 and be complete in October 2020. The revegetation and tree planting will begin following construction in late 2020 and will extend for 4-5 years following restoration.

About SPAWN

Founded in 1990, Turtle Island Restoration Network's California-based initiative, the Salmon Protection And Watershed Network (SPAWN), protects California's most important run of endangered coho salmon and the forests and watersheds they need to survive.

SPAWN's work is driven by dedicated staff, volunteers, interns, and students at partner schools who support these grassroots efforts in Marin County, California.

Our campaigns have rescued more than 15,000 coho salmon and steelhead trout from certain death since 1990. We've restored over 100,000 square feet of creekside habitat via bank stabilization, floodplain re-creation, and reforestation.

Project Description & Background

This project will remove the salmon migration barrier known as Roy's Pools to create a natural free-flowing channel without obstruction and expand the riparian corridor upstream. Enhancements to improve salmon habitat will include large woody debris structures, backwaters, and side channels. Riparian habitat restoration will include expanding the riparian corridor, removing invasive plant species, and planting thousands of native plants and trees. This project will replace the failing pedestrian bridge with a new prefabricated bridge that will link trails and provide fish viewing over a wider, more complex and stable creek channel.

In 1999, NOAA Fisheries developed designs for a series of pools composed of metal sheet piles, concrete and large boulders to help get fish over the former Roy's Dam. This effort resulted in the Roy's Pools structure we know today. Although the conversion of Roy's Dam to Roy's Pools helped in getting adult fish over the dam, the Pools became traps for young fish. Stagnant water in the pools created breeding sites for mosquitoes and a home for invasive bullfrogs. In addition, the pools cut off access for young fish moving upstream and downstream of the site.

In a collaborative effort beginning in 2012 with the Lee Family, the previous owners of the former San Geronimo golf course, SPAWN secured grant funds to design a functional restoration of the creek channel through the Roy's Pools reach, where a natural channel would replace the metal and concrete structures. In 2012, SPAWN began the design process and hosted community meetings where neighbors gave input on the project and toured the site with the engineering team.

Although this is a creek channel restoration project at the former golf course property, this project is not a Trust for Public Land project and is not related to the visioning process that the Trust for Public Land and Trout Unlimited are currently conducting. This project was developed several years prior to the Trust for Public Land taking ownership of the property.

Frequently Asked Questions

Why is this project needed? This project will remove the highest priority fish passage obstacle in central California. Known as Roy's Pools, this large obstruction includes a series of sheet metal and concrete check dams and fish ladder. The barrier currently limits upstream and downstream migration and creates poor habitat conditions for endangered coho salmon and threatened steelhead trout. This project is needed to allow unimpeded passage above and below the barrier for adult and juvenile coho salmon and steelhead throughout the year to habitat in headwaters of San Geronimo Creek. The project is also needed to expand the riparian corridor to re-create floodplains, provide critical aquatic habitat for young salmon, make valuable corridors for terrestrial wildlife movement, and greatly increase the amount of trees for nesting birds.

How is this project being funded? Funding to remove the Roy's Pools barrier has come from several sources. In 2014, in partnership with the Lee Family that owned the former golf course, SPAWN secured a grant from the California Department of Fish and Wildlife (CDFW) to develop and design engineering plans for the removal of the barrier and restoration of the channel. In 2018, SPAWN secured another grant from the CDFW and NOAA Restoration Center to implement the construction of the restoration. This funding also was used to complete California Environmental Quality Act (CEQA) compliance as well as state and federal permitting. In addition to CDFW and NOAA, SPAWN members and supporters have contributed at the planning, design, and implementation phases of the project.

Who is doing the work? As Project Sponsor, SPAWN oversees the project management and contracting, hiring an expert team of engineers, hydrologists, and biologists from Environmental Science Associates to develop the design with us and produce the engineering blueprints. In early 2020, SPAWN will host a competitive bidding process with qualified contractors to accept bids for completing the construction work.

Why does the project require removing certain trees? The goal of the project is to improve the habitat for salmon, including expanding the riparian zone without interfering with recreation and use of the surrounding property. Currently, the creek riparian zone is confined to extremely narrow channel banks. A healthy riparian zone supports many times more trees than are currently there. The creation of floodplain habitat and expansion of the riparian zone requires grading and short-term removal of select trees, but will actually result in many times more trees in the long term. In an effort to retain riparian structure and shade, the project has gone to great lengths to design around many riparian and upland trees, including nearly all the large and mature trees.

Like a clogged artery, removing the Roy's Pools obstruction must be done through a surgical approach. In this case Roy's Pools is a large clog in the stream and removing it requires the use of construction machinery and removing select trees next to the structure in order to effectively restore and stabilize the creek channel. We do not like removing trees and approach tree removal carefully, that's why the project design has gone through great lengths to preserve the largest and most valuable trees at the site, and most of what will have to be removed are young willow and aging alders – particularly fast-growing trees that re-establish quickly. Since 2000, SPAWN and volunteers have planted hun-

dreds of trees throughout the golf course, including redwoods, oaks, maples, alders, and willows. Following the earthwork and channel restoration, SPAWN will plant thousands of additional plants and trees at the site to jump start the revegetation of the riparian area, which will ultimately result in more trees at the site than there are now.

Will the ancient heritage oaks remain? Yes, all of the old valley oaks will remain. The old heritage valley oaks that dot the property are a major asset to the ecology of the area, supporting birds, mammals, and insects that are critical to a healthy riparian area. Avoiding impacts to the large heritage valley oaks has been an important goal of the project. Measures are included in the plans and specifications to protect these and other trees.

Why is a new pedestrian bridge included? The current bridge is supported by rotting logs and is unsafe. By removing the Roy's Pools barrier and restoring the creek, the channel and riparian area will be somewhat wider and a longer bridge will be required. In order to provide access to trails and fish viewing, a new pre-fabricated steel bridge will be installed over the newly-restored riparian area and placed in approximately the same location as the existing bridge.

Will the public be able to use the site during construction? The property will be open for the public to use with small areas cordoned off during active construction. While the existing pedestrian bridge over Roy's Pools will be closed during construction, other gates and bridges provide access to all parts of the property on both sides of the creek.

What are the expected benefits for fish and wildlife? By removing the large Roy's Pools barrier on the creek that currently limits fish passage for adult and juvenile salmon, a restored creek channel and expanded riparian zone will provide unimpeded passage of coho, steelhead, lamprey, and other fish through the watershed at all times of the year. This will allow adult fish a channel free of unnecessary hurdles to climb and won't create stranding traps for juvenile fish. Other wildlife including nesting birds, ground mammals, deer, bobcats, and more will benefit from a larger and more intact riparian area—a larger forest of trees and riparian plants will allow more opportunities for wildlife to hunt, forage, nest, rest, and find refuge along a naturally-flowing and healthier creek. This project will also benefit water quality by allowing fine sediments to naturally settle out on the floodplains, benefiting aquatic insects that nest and lay eggs within the rocks of the streambed that are an important part of the diet of juvenile salmon.

How can the community participate in the restoration? Volunteers spend thousands of hours every year helping SPAWN in restoration and this project will be an excellent opportunity to learn about stream restoration and get involved in a local project within our community. Through the construction process, SPAWN will lead tours of the restoration area and host workshops of topics such as streambank stabilization, bioengineering, and native plant restoration. From site preparation, wildlife surveys, and tree planting, SPAWN will host numerous events and workshops for the community to participate in the restoration work. Visit our event calendar at www.seaturtles.org/events for additional information.