

**Trout Unlimited - Martinelli Ranch Bridge and Fish Passage Project
NFWF Grant #2002-0318-006**

I. Results

Referring to your grant agreement (Section 1), briefly state each proposed outcome of your project, how you attempted to achieve it, and whether or not you were successful.

The objective of the Martinelli Ranch Bridge and Fish Passage Project was to remove a deteriorating concrete crossing and culvert on Green Valley Creek and to replace the crossing with a railcar bridge. The crossing and culvert constituted a partial migration barrier to adult coho salmon and a complete barrier to all life stages of juvenile salmonids.



Photos (L to R): BEFORE -- Collapsed ford and culvert from right bank of Green Valley Creek; Culvert interior; Crossing and culvert from left bank



Photos (L to R): AFTER -- Railcar bridge from right bank of Green Valley Creek; Area under the bridge once occupied by crossing; Bridge as viewed from creek

We completed the project and achieved the objective in the fall of 2008. In 2008, we hired an engineer to complete the bridge deck engineering and secured the necessary county permits. Our contractor, Sonoma Engineering Inc., demolished and removed the crossing and culvert and transported them to a recycling facility. Sonoma Engineering then constructed the concrete bridge abutments, excavated toe trenches at the base of the banks, and installed rock to protect the abutments. Jim Dobbas Inc. supplied the railcar bridge as specified in the engineering plans, and the bridge was craned into place and attached to the abutments. Disturbed areas were re-vegetated with willow plantings. The removal of the barrier and installation of the clear span bridge will ensure successful fish passage at the site.

Describe the successes and challenges of your project and any key lessons learned.

One of the project's successes is that it provides an immediate win-win for salmonids and for the landowners. The deteriorating crossing both blocked access to upstream habitat and failed to provide landowner access to the parcel across the creek; the crossing removal and bridge installation, thus, provides multiple benefits. One of the challenges of the project included navigating the county permitting system. The requirements proved to be more costly and time-consuming than originally anticipated. We learned and are sharing some strategies that may help decrease the cost of and time for county permitting (e.g., by anticipating known county regulatory requirements and increasing coordination between the railcar bridge provider and engineers).

II. Evaluation

How do you define and measure success of your project?

The project was successful: the culvert and crossing were removed and replaced with the railcar bridge. The removal of the fish passage barrier will allow salmonids to access approximately five additional miles of instream habitat immediately. Barrier removal in Green Valley Creek is particularly important because it is one of three streams in the Russian River watershed that still supports coho salmon populations; it is also part of the Russian River Coho Salmon Captive Broodstock Program's effort to re-establish self-sustaining coho populations in the Russian River watershed.

How will you monitor the long-term results of your project?

We will continue to monitor the re-vegetation work at the project site to ensure establishment. In addition, the bridge provides a static structure from which to monitor changes in the channel. Staff and time permitting, we will complete cross-sectional surveys from the upstream and downstream edges of the bridge to monitor changes over time.

How are you using and sharing the results of your project, both internally and externally?

The project provided Trout Unlimited with an opportunity to share its experience permitting railcar bridge projects in Sonoma County. This has led to dialog between the TU and NOAA about ways to navigate the county permitting process more effectively and to decrease the costs associated with such projects in the future. Railcar bridges are a relatively common element of restoration projects county-wide, and the project has led to some cross-pollination of information. Additionally, the high-profile location and immediate outcome should help showcase fish passage projects and aid in

landowner recruitment in habitat restoration throughout the county.

III. Partnerships

What other groups and individuals worked with you on the project?

The project was a collaboration between the Martinelli family and NOAA's Community-Based Habitat Restoration Program. The California Department of Fish and Game provided technical assistance for this project as well as funds and technical assistance for earlier work on the property (a separately-funded re-vegetation and channel restoration effort along the lower reaches of the creek). The barrier removal and bridge installation was the final chapter in the larger, five-year effort. In addition, two aggregate companies provided materials: Bodean Inc./Blue Rock donated rock for the project and Canyon Rock donated both rock and its transportation. Members of the Martinelli family covered some of the costs of the bridge, rock, and signage and assisted with the project.

How did these partnerships affect your success?

Partnerships were key to the project's success. There is no doubt that landowner stewardship is critical for salmon restoration projects, and the involvement and cooperation of the Martinelli family was critical at every stage in the project – from project development to permitting to completion. The financial support provided by NFWF and the Office of Spill Prevention and Response and NOAA was invaluable, and the in-kind contributions of various partners helped reduce the overall cost of the project. Finally, because of the short window for completing the restoration project, good relationships and communication with our contractors -- Green Valley Consulting Engineers, Gregory Cook (civil engineer), and Sonoma Engineering Inc – were important. Although their contributions do not appear as project match, their flexibility and responsiveness were assets.

What were some of the pros and cons of working with the Foundation?

Our experience with the Foundation has been positive. Trout Unlimited experienced some staff turnover during the project. As an interim project manager, I appreciated that both NFWF and the DFG's Office of Spill Prevention and Response were flexible and assisted with extending the end date of the contract once it became clear that the project would a little longer to complete.

IV. The Future

Briefly describe the next phase of this effort (e.g., continuation, expansion, replication, or termination).

The barrier removal and bridge installation was the last phase of a five-year effort to restore habitat in Green Valley Creek through the Martinelli property. A local watershed group continues to care for and monitor riparian vegetation on the lower reaches of the property.