



Permitting Restoration Case Study

Apanolio Creek

Fish Passage Project

Central Coast, CA

The Apanolio Creek Fish Passage Project aimed to restore steelhead trout passage in Apanolio Creek, one of the most important steelhead trout streams in the Pilarcitos watershed in San Mateo County, by removing three stream barriers while maintaining agricultural water supply and access to both sides of the creek.

Regulatory agencies (California Department of Fish and Game (DFG), the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (FWS), State Water Resources Control Board (SWRCB), and the San Francisco Bay Regional Water Quality Control Board (RWQCB)), landowners, the California Coastal Conservancy (CCC), the San Mateo County Resource Conservation District (SMCRCD), and the Pilarcitos Creek Advisory Council (PCAC) all participated in the design selection process. Although designs were initiated for all three barriers as part of the California Environmental Quality Act (CEQA) process, barrier 3 was the only one to ultimately receive all necessary permits. A Technical Advisory Committee was organized to review the designs and data to achieve a science-based consensus on the most appropriate designs so that a balance might be reached for improved steelhead passage, habitat maintenance for other endangered species, and adequate agricultural water supply. Unfortunately, consensus was never reached on a design for barriers 1 and 2. SMCRCD acted as the project lead, ultimately securing the necessary permits for project work, including CEQA Negative Declaration, Army Corps of Engineers Nationwide Permit 27 (in consultation with NMFS and FWS), RWQCB 401 Certification, DFG Section 1600 Streambed Alteration Agreement, County of San Mateo Coastal Development Permit, and San Mateo County Building Permit.

Hurdles

Several obstacles were encountered during the permitting process. A partial list includes:

- A. *Inter-agency coordination:* In order to develop bypass flows, the project engineer collected streamflow data and created a model. The DFG biologist did not accept the engineer's demonstration of streamflow, and despite engineer efforts to revise the model, the two were unable to come to agreement. This became an insurmountable hurdle, and delayed in the project, ultimately leading to loss of funding (they had secured non-grant funding from the Pilarcitos Fund, but eventually that money was used for other projects). One individual associated with the project had concerns about the staff person's motives, and became frustrated with the absence of channels to have the decision re-evaluated within the Department.

A lesser issue involved disagreement about the impact of certain design elements on endangered species. The second barrier was a pond, which NOAA interpreted as inhibiting fish passage. Meanwhile, wildlife protection staff identified this pond as habitat for the threatened California red-legged frog and the San Francisco garter snake. A side-stream pond would have resolved this issue, maintaining habitat for all three species, but the larger disagreements within the project prevented it from moving forward, and such solutions were never pursued, leaving the barrier intact.

- B. *Water diversion uncertainty:* The DFG Section 1600 Streambed Alteration Agreement includes assessment of how much water can be diverted from a creek while still protecting streamflow. DFG staff told the landowner on whose property existed two of the barriers that all his water diversions would be reassessed for appropriateness if he continued with the voluntary restoration project. The uncertainty of preserving the water diversions for his crops was perceived as too risky, and he chose to withdraw from the project.
- C. *Consistency of interpretation:* Because the permitting process took so long, there was significant turnover among the agency staff contacts assigned to the project, including at the RCD. There was no institutional memory of the project details, which led to lack of continuity, resulting in constant changes to the design and scope of the project, as permits were sought.
- D. *Cost:* Construction and permitting costs increased significantly over the years it took to bring the project to construction. For example, the engineer underestimated the amount of fill required for the one barrier that was ultimately removed, which was only discovered once they had torn out the barrier. It became necessary to seek substantial additional funds for completion before permits and the contract with SWRCB expired. In the end, the total cost of the project was roughly \$500,000 to restore 150 feet of the creek.
- E. *No special consideration for environmental enhancement:* Project proponents perceived negative reactions and a lack of support from several agency staff, whom they felt did not appreciate the conservation value of the project.

As a result of these challenges, the project experienced tremendous delays. Delays with the permitting process meant that the project took roughly

8 years to complete the removal of one of the three barriers. The lower two barriers were removed from the project scope when the landowner on whose property they resided withdrew. In addition to the water diversion issue, the landowner was concerned about the expense of the project, felt mistreated by agency staff, and was burned out by the bureaucracy and lag time. Project delays and the change in scope required that SMCRCDC revise and extend some permits, including the Streambed Alteration Agreement with DFG, the Coastal Development Permit with San Mateo County, and the Army Corps of Engineers Nationwide Permit.

Impacts & Resolution

 The landowner on whose property existed two of the barriers became alienated by the long process, cost, agency relationships, and the risk of losing current water diversions, and ultimately withdrew from the project. As such, the scope of the initial project was dramatically reduced: the lower two of the three barriers were not removed, including one at the base of the creek, meaning that most fish will still not be able to access the creek. The regulatory obstacles faced during the course of the project resulted in the loss of the 4-mile Apanolio Creek as strong viable habitat for steelhead. While there are varying opinions about the conservation value of the removal of the uppermost barrier if the lower two remain, it is clear that at least some fish will be able to pass the lower two barriers during high flow and benefit from the additional habitat in the upper reaches. In addition to the loss of conservation value, the process had substantial costs for the regulatory agencies, each of which dedicated significant staff time to research, meetings, design, and participation, with limited results. SMCRCDC and other stakeholders are still hopeful that the full project will be realized at a future date.

Note: Case study based in part on documentation provided by Kellyx Nelson, San Mateo County Resource Conservation District.

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