

# Improving Habitat for the Yuba River's Salmon and Steelhead

## Hallwood Side Channel and Floodplain Restoration Project

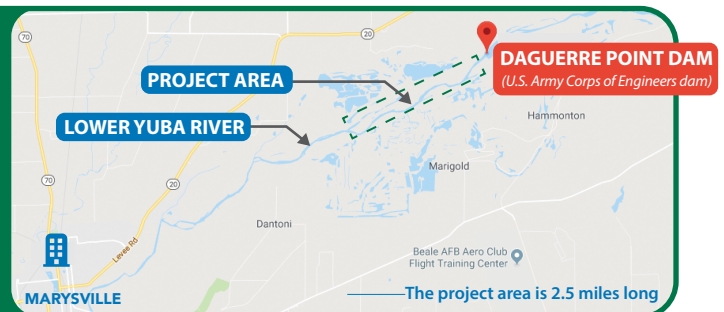
The Hallwood Side Channel and Floodplain Restoration Project is designed to enhance the lower Yuba River ecosystem by increasing available juvenile salmon habitat to improve the natural production of Chinook salmon and Central Valley steelhead. The project will also reduce flood risk through lower water surface elevations and velocities during flood events.

### Project Partners

This project is a collaborative effort among many different organizations. Primary partners include: U.S. Fish and Wildlife Service (USFWS), California Natural Resources Agency, cbec eco engineering, Cramer Fish Sciences, South Yuba River Citizens League, Teichert, Western Aggregates, Wildlife Conservation Board and Yuba Water Agency.

### Project Location

The project area is along the north bank of the lower Yuba River, downstream of the Daguerre Point Dam.



### Background

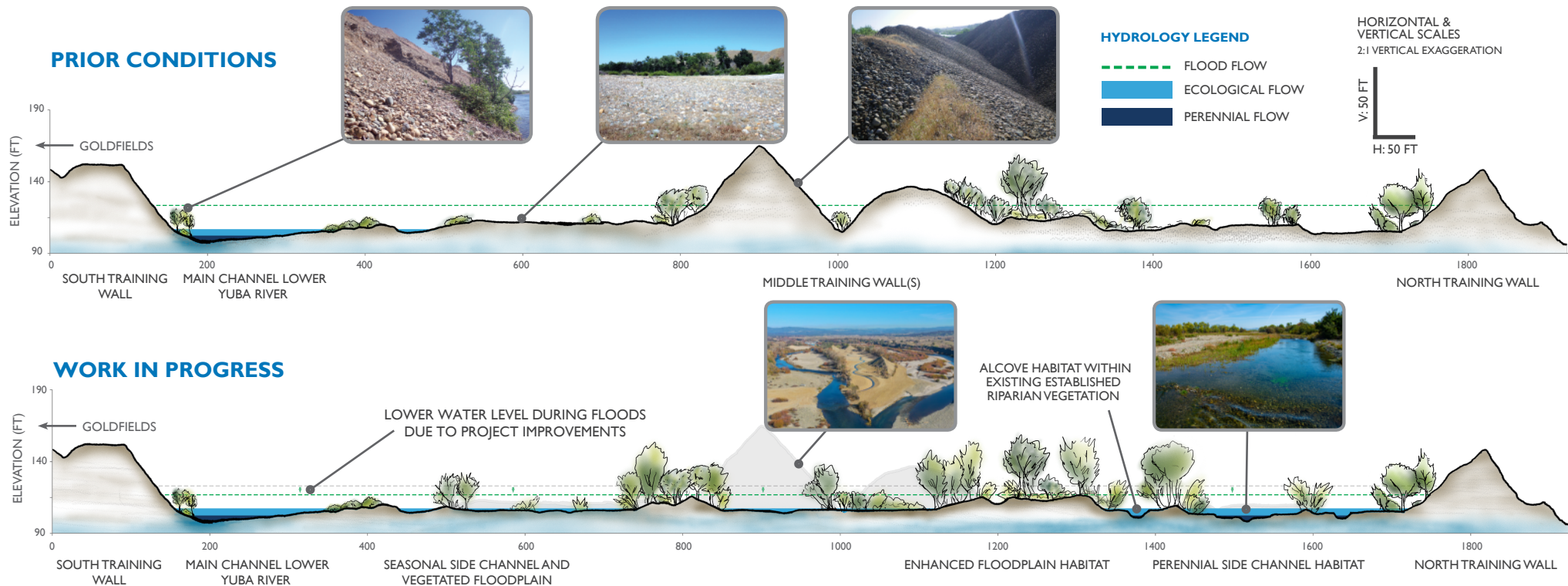
In the project area, the Yuba River is constrained by tall linear cobble embankments called training walls, which were constructed in the early 1900s by hydraulic dredges following the Gold Rush. These training walls are within the highly modified Yuba Goldfields setting where hundreds of millions of cubic yards of hydraulic mining sediment was deposited in the lower Yuba River through the early 1900s. The area was subsequently dredged multiple times, creating significant impacts for the natural flow of the river and the floodplain. A large training wall in the middle of the river, known as the Middle Training Wall, runs more than 2 miles along the length of the project.

### The Project Plan

The project design is based on the premise that restoration of natural river and floodplain processes, including the removal of large portions of the Middle Training Wall, will create a healthier, more natural, and therefore, more productive river. Improvements will enhance up to 157 acres of seasonally inundated riparian floodplain, approximately 1.7 miles of perennial side channels, and approximately 6.1 miles of seasonally inundated side channels, alcoves, and swales. Enhancements will be made through land surface changes, riparian planting, and placement of large woody material embedded to simulate a more natural river at key locations. The total project cost is estimated to be \$12 million, with Teichert's in-kind contribution of rough grading and aggregate removal estimated at \$70 million. Funding has been provided by grants from the California Natural Resources Agency, Wildlife Conservation Board, USFWS and Yuba Water Agency.



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## Project Schedule

### PHASE 1

**Phase 1** included the removal of approximately 1.2 million cubic yards of sediment from the elevated floodplain and a section of the Middle Training Wall, followed by enhancing 89 acres of side channel and floodplain habitat. Phase I was completed in 2020.

### PHASE 2

**Phase 2** involved removal of approximately 800,000 cubic yards of sediment from the Middle Training Wall and surrounding floodplains in the upper reach and enhancing 34 acres of floodplain and seasonally inundated side channel habitat. Phase 2 was completed in 2021.

### PHASES 3 & 4

**Phases 3 and 4** will remove large portions of the Middle Training Wall, yielding approximately 815,000 and 400,000 cubic yards of sediment, respectively, and enhancing an additional 13 and 21 acres of floodplain and seasonally inundated side channel habitat. Construction of the project is expected to be complete in 2023.