

Project Completion Summary

Project Title: Cottonwood Creek Process-Based Restoration (PBR) Project

Project Location: Lake County Oregon

Project Objective: This project will construct of post-assisted log structures (PALS) and beaver dam analogues (BDAs) at various sites within Cottonwood Creek to mitigate the high velocity stream flows, retain sediment, trap gravel above the structures, create pools, and increase the connection with floodplain vegetation while maintaining the riparian plant community.

Scope and Description of Work: The project will follow a process-based restoration approach to restore channel floodplain connectivity intended to benefit riparian corridor conditions, aquatic habitat, and wet meadow quality. The project will include design and permitting section (including preparing and submitting permit applications to the Oregon Department of State Lands and U.S. Army Corps of Engineers) and initial construction.

The number and placement of BDAs and PALs will be determined based on permitting and design processes. BDAs and Pals will be constructed along a 2.3-mile-long stream reach located where Cottonwood Creek exits mountain terrain and flow through a meadow system. BDA placement will reduce erosional force on streambanks, retain sediment in the system, and support riparian plant communities. PAL placement is intended to enhance sediment routing and pool habitat creation. Additionally, the wood structures will add complexity to the stream system and enhance aquatic habitat with a goal of recruiting beaver activity throughout the reach. The project will capitalize on the availability of forest slash originating from post-fire salvage and forest thinning projects.

Project Partners:

Lake County Umbrella Watershed Council (Project Coordinator)
Marc and Uma O'Brien (Landowners)
Oregon Conservation Recreation Fund (Funder)
Oregon Watershed Enhancement Board (Funder)
Oregon Department of Fish and Wildlife (Technical Assistance)
US Fish and Wildlife (Compliance Support)
River Design Group (Consultant)
Ethos Global Holding Limited (Contractor)

Completion of Work: The OCRF supported the initial start to the Cottonwood Creek PBR Project in the fall of 2022. With a design plan in place, project partners secured in-water work compliance in late October of 2022. Through the support of ODFW, the Department of State Lands issued an in-water work period extension which allowed a contractor and crew to implement 11 structures in early November.

In June of 2023 we were able to assess the results of the structures and utilize an adaptive management approach to plan for a fall build. The structures provided means to capture sediment and elevate water onto the flood plain for longer periods of time this season. Through an OWEB grant the work continues along Cottonwood Creek where the initial structures have been re-built and an additional 70 structures are currently being implemented.

Engagement: An outreach and education workshop was held at the project site in July of 2023. Approximately 40 local and regional natural resource managers along with several contractors and landowners were trained on the benefits of Low-Tech Process Based Restoration strategies. The workshop provided hands beaver dam analog construction training.

November 2022



June/July 2023

