PACIFIC COAST FISH, WILDLIFE & WETLANDS RESTORATION ASSOCIATION

NEWSLETTER

2024

PACIFIC COAST FISH, WILDLIFE AND WETLANDS RESTORATION ASSOCIATION is a 501(c)(3) non-profit organization with the mission to restore, enhance, and protect fish, wildlife and wetland resources of the Pacific Coast region. In collaboration with multiple partners, we have restored over 150 miles of streams and prescribed treatments for over 500 square miles of salmonid habitat since 1991. Additionally, we have been providing botanical and Geographic Information System (GIS) services under the direction of our Plant Ecologist. Our botanical services include vegetation inventory and mapping, sensitive plant surveys, invasive species management, wetland delineation, California Rapid Assessment Method (CRAM) wetland assessment, and habitat restoration monitoring.

In this edition of the newsletter, we feature updates of ongoing projects and descriptions of newly funded projects through California Department of Fish and Wildlife's Fisheries Restoration Grants Program (FRGP).

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Juvenile coho salmon salvaged from the isolated Ryan Creek off-channel pond on 9/3/24 before construction.

List of Ongoing Projects:

We are excited to have fourteen projects underway, ranging from developing the required 100% full designs, to actual implementation of projects developed by previous design efforts. All of these projects lead to greatly improved critical habitat for our native salmon populations and also greatly benefit other native aquatic species.

Fieldbrook Valley

Cider Mill Creek Coho Barrier Removal and Habitat Enhancement Design Project: The purpose of the Project is to develop 100% engineering designs to remediate two road crossing barriers upstream from Lindsay Creek, allowing unimpeded, year-around access to approximately 0.8 miles of anadromous habitat for juvenile and adult salmonids.

Lindsay Creek Off-Channel Coho Habitat Improvement Project: This project will reconfigure a mostly abandoned oxbow channel along the mainstem of Lindsay Creek to allow for more frequent and longer duration of high flow connectivity to the main channel. Implementation in 2025.

Lindsay Creek (Kramer/Daley Property) Instream Salmonid Habitat Improvement Project: The Project includes increasing in-stream habitat complexity by installing large woody material (LWM) structures and enhancing existing off-channel conditions associated with inset floodplains and alcoves. The intent is to improve in-stream habitat conditions for salmonids in this reach of Lindsay Creek. Implementation in 2025.

Tip Top Ridge Creek Coho Habitat Improvement Design Project: The project will design plans that will benefit rearing and spawning habitat through placement of large woody material (LWM) features, improve water quality and quantity by increasing the areal extent of off-channel, high flow, refugia and provide access to relatively clear clean water during high flow events when the mainstem is impaired by sediment. This is on a tributary to Lindsay Creek.

Lindsay Creek Coho Barrier Removal Project: One barrier corrected on Crystal Creek.
See detailed report on Page 5.

Humboldt Bay

Ryan Creek Off-Channel Coho Habitat Implementation Project: Construction completed.
Ryan Creek is a tributary to Humboldt Bay near Redwood Acres. See detailed report on Page 4.

Northern Humboldt County

Lower Little River Off-Channel Coho Habitat Improvement Project: The purpose of the project is to improve habitat in the Lower Little River. Salmonid recovery plans recommend restoring natural tidal channel form and function. Restoring tidal function to Little River near Moonstone Beach will create quality, off-channel rearing habitat for juvenile Coho. Implementation in 2025.

Upper South Fork Little River Instream Habitat Improvement Project: The goal of the project is to accelerate fisheries recovery by installing 136 key logs throughout the anadromous reach of Upper South Fork Little River near Crannell. Implementation in 2025.

Southern Humboldt County

Sproul Creek Road Erosion and Fish Passage Barrier Assessment and Implementation Planning Project: The overall project objectives are to: 1) identify, inventory and quantify existing and future sources of road-related sediment delivery, road-stream hydrologic connection, and road- related fish crossing barriers in the Sproul Creek watershed assessment area; and 2) to develop cost-effective treatment prescriptions, prepare cost estimates, and prioritize proposed treatments to eliminate, minimize or mitigate these pollutant sources and road-related fish barriers within the watershed's stream system. Sproul Creek is a major tributary entering the South Fork Eel River near Benbow.

Del Norte County

South Fork Rowdy/Savoy Creeks Salmonid Habitat Improvement Project: This Project will locate and design instream habitat structures and riparian treatments to improve Coho habitat and restore riparian function in stream reaches currently lacking quality salmonid habitat and large woody material (LWM). Rowdy Creek is a tributary to the Smith River near the town of Smith River.

New Design Projects:

Wilson Creek Instream Habitat Improvement Design Project

This design project will assess instream habitat conditions along approximately 3.5 miles of Wilson Creek on Green Diamond Resource Company (GDRC) lands. A comprehensive field investigation will be conducted to support the designs including a characterization of habitat, biological, geomorphic and riparian conditions, and will identify and prioritize stream reaches for treatment. This project will result in a 100% design plan for significant wood loading throughout much of the anadromous perennial channel reach of Wilson Creek in Del Norte County. The benefits of implementing the completed design and ultimately constructing habitat improvement features in this proposed project reach include improved conditions for all life stages of Steelhead, Chinook and Coho salmon, and Coastal Cutthroat trout in the Wilson Creek watershed.

North Fork Mad River Instream Salmonid Habitat Improvement Design Project

This design project proposes to assess instream habitat conditions and identify opportunities for both engineered and non-engineered instream structure placement within 2.7 miles of North Fork Mad River on Green Diamond Resource Company lands. This project will characterize and document the risks and potential impacts associated with different design options developed in coordination with CDFW and the landowner. A comprehensive field investigation will be conducted to support the designs, which will characterize and prioritize stream reaches for treatment. This project will result in 100% designs for significant wood loading throughout much of the anadromous channel reach of North Fork Mad River. The benefits of implementing the completed design and ultimately constructing habitat improvement features in this proposed project reach include improved conditions for all life stages of Steelhead, and Chinook and Coho salmon.

Upper Savoy Creek Salmonid Habitat Improvement Design Project

This design project proposes to assess instream habitat conditions and identify opportunities and locations for the design of engineered and non-engineered instream structure placement in an additional 1 mile of coho habitat in Savoy Creek on Green Diamond Resource Company (GDRCo) ownership. This project will characterize and document the risks and potential impacts associated with different design options developed in consultation with a Design Review Team. Comprehensive field investigations will be conducted to allow the designs, which will characterize and prioritize stream reaches for treatment. This project will result in 100% designs for significant wood loading throughout Upper Savoy Creek. The benefits of ultimately implementing the improvement design features developed in this project will be a major reset to reestablish conditions for self-sustaining improved habitat conditions for all life stages of Coho salmon and other native fish species. Savoy Creek is a tributary in the Smith River Watershed

Salmon Creek Instream Salmonid Habitat Improvement Design Project (South Humboldt Bay)

This design project proposes to assess instream habitat conditions and identify opportunities for instream structure placement within the lower 2.8 miles of Salmon Creek on Green Diamond Resource Company (GDRC) lands. Since the primary streamside road network has been decommissioned for sediment reduction and hydrologic restoration purposes in prior projects, equipment access is limited within the proposed design reach. Therefore, non-engineered accelerated recruitment designs may be the most viable instream restoration alternative throughout the project reach. This project will characterize and document the risks and potential impacts associated with different design options developed in coordination with CDFW and the landowner. A comprehensive field investigation will be conducted to support the designs, which will characterize and prioritize stream reaches for treatment. This project will result in 100% designs for significant wood loading throughout much of the anadromous channel reach of Salmon Creek. The benefits of implementing the completed design and ultimately constructing habitat improvement features in this proposed project reach include improved conditions for all life stages of Steelhead, Chinook and Coho salmon, and even a population of Coastal Cutthroat trout at the southern extent of their range.

Updates:

Ryan Creek Off-Channel Coho Habitat Implementation Project

Whole trees within the recently rain flooded pond.

The pond is fed by a clear and cold perennial stream.

This fall saw the completion of work on our Ryan Creek Off-Channel Coho Habitat Project. Located approximately four miles upstream from the confluence of Ryan Creek with Freshwater Slough, the project involved excavating an existing, small, rarely connected off channel pond to create a much larger backwater habitat and non-natal winter rearing and high-flow refugia for coho salmon and other species. The newly excavated alcove will have better connectivity to the mainstream of Ryan Creek. The project also included the installation of 18 instream Large Wood Structures (LWS) along the 1,700 feet of the mainstem of Ryan Creek that is within the project area.

In addition to benefiting Coho salmon, the off channel pond and LWS structures will help other native salmonids such as Steelhead and Coastal Cutthroat trout. The project design included considerations for Pacific Lamprey and native amphibious species, such as salamanders, rough-skinned newts, and red-legged frogs should all benefit from the newly restored habitat. Efforts were made to restore native plants through revegetation, including Pacific golden saxifrage, which is on a California Native Plant Society watch list because of its restricted range. Prior to construction, several patches of Pacific golden saxifrage existing at the site were saved and maintained in nursery flats until the project work was completed. Then the plants were transplanted back to the site. This project was funded by the California Dept. of Wildlife Fisheries Restoration Grant Program (FRGP) with the support of the landowner, Green Diamond Resource Company. We look forward to working with CDFW on monitoring performance & fish use and assessing the outcome of this project in the upcoming seasons.

Whole trees being added to the excavated backwater portion of the project.

Pre-construction: Pacific golden saxifrage growing on channel bank.

Post-construction: transplanting Pacific golden saxifrage along channel bank.

Lindsay Creek Coho Barrier Removal Project

We recently completed work removing and replacing a culvert on Crystal Creek that was a complete barrier to migration for Coho and other salmonids. Crystal Creek is a tributary to Lindsay Creek in Fieldbrook Valley, one of the most utilized and important watersheds for Coho salmon production and recovery in the Mad River watershed.

This stream crossing on a private road was identified as a complete barrier for salmonids in a watershed-wide road erosion assessment completed in the Lindsay Creek watershed in 2010. It is one of two sites identified for restoration in The Lindsay Creek Barrier Removal Project, funded by the California Department of Fish and Wildlife's Fisheries Restoration Grant Program.
At this site the existing 4 ft. diameter culvert pipe was severely undersized for the 100-year flood discharge and it was set high in the fill. At the outlet there was a three- foot plunge pool. It was further structurally failing and separated within the fill, causing a fill failure slump that delivered sediment directly into Crystal Creek. The configuration was likely subject to catastrophic failure if left untreated, which would have left dozens of residents stranded and without even emergency access (ingress/egress) if that occurred.

This "Before" photo shows the old culvert and erosion damage from the January 2024 storm.

Crew from Carmesin Construction adding gravel to create a simulated stream channel inside the culvert.

Mitch Farro, Project Manager, is showing the completed restoration project after November rains.

After considering many potential restoration strategies, a much larger corrugated metal culvert alternative was the engineering option selected. Within this 10 ft. diameter culvert is a simulated stream channel bed with immobile bank material that allows for long term channel stability while meeting the fish passage project goals. It was the most cost-effective, site-specific alternative with a short construction window that minimized disturbance to residents who rely on the road crossing for access to their homes.

We will be monitoring this site and the upstream reach on Crystal Creek for evidence of Coho passage in the upcoming rainy season.

To learn more about our projects or organization, or to contact us, visit
www.pcfwwra.org

Though PCFWWRA receives public agency funding for the bulk of the direct costs associated with design and implementation projects, this funding does not cover all of the indirect costs associated with running a nonprofit organization, such as the office expenses and insurance. If you wish to securely donate to PCFWWRA, go to

www.pcfwwra.org/donate