



Pacific Coast Fish Wildlife and Wetlands Restoration Association

NEWSLETTER

2019-2020 FALL/WINTER

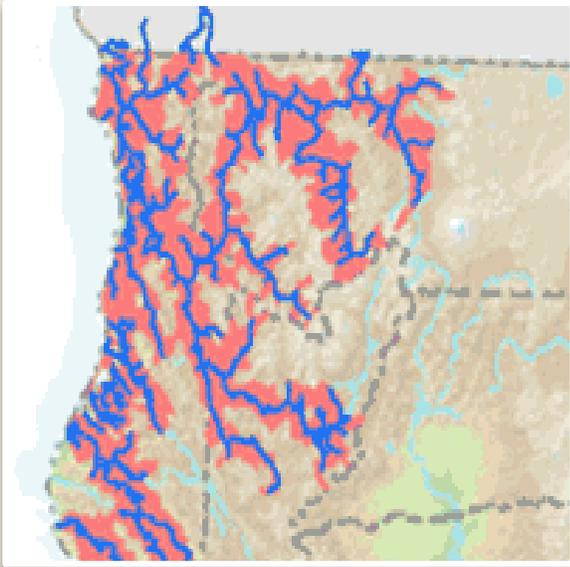
PCFWWRA is a 501(c)(3) non-profit organization with the mission to restore, enhance, and protect the fish, wildlife, and wetland resources of the Pacific coast region. In collaboration with multiple partners, we have restored over 150 miles and prescribed treatments for 500 square miles of salmonid habitat since 1991, including 14 restoration and planning projects in 2019! This newsletter provides a few recent highlights.



Removal of Fish Passage Barriers in Redwood Creek Watershed

This summer, the *Panther Creek Fish Barrier Removal Project* was successfully implemented and restored access by all salmon and trout life stages to 4.5 miles of high quality, cool water habitat in this Redwood Creek tributary in Humboldt County. The project entailed using heavy equipment to remove several artificial barriers at an abandoned stream crossing and gauging station at the mouth of this important cold-water refugia. After removal of the barriers, several whole tree structures were placed in the stream to improve habitat conditions by enhancing cover, pools, and complexity. Thank you to Pacific Watershed Associates (PWA) and the California Department of Fish & Wildlife (CDFW) for your respective technical oversight and funding. Ross Taylor and Associates as well as the landowner's (Green Diamond Resource Company) fisheries and watershed crews assisted in fish relocation and water quality control efforts before and during the equipment operations.

Planning for the Future



PCFWWRA currently has a number of design projects underway across the northern California coastal region. In collaboration with consulting engineers, biologists, and geologists, we are in the process of developing designs for seven off-channel habitat enhancement, instream structure, riparian restoration, and fish passage barrier removal projects to benefit threatened anadromous salmon and trout. Several of these habitat project designs will be completed over the next few months and proposals for implementation funding will be developed by March. Thank you to PWA for providing the technical oversight, science and engineering expertise, as well as to CDFW's Fisheries Restoration Grant Program for providing the

design funding. When implemented, these projects will provide needed and critical habitat for coho and other salmon to overwinter and grow on the floodplains of key coastal streams systems. Three of the design reaches are in Lindsay Creek (near Fieldbrook), four in Ryan Creek (north of Cutten) and another in an important reach of the Little River estuary (south of Trinidad).

Ryan Creek Off-Channel Habitat Improvement Design Project

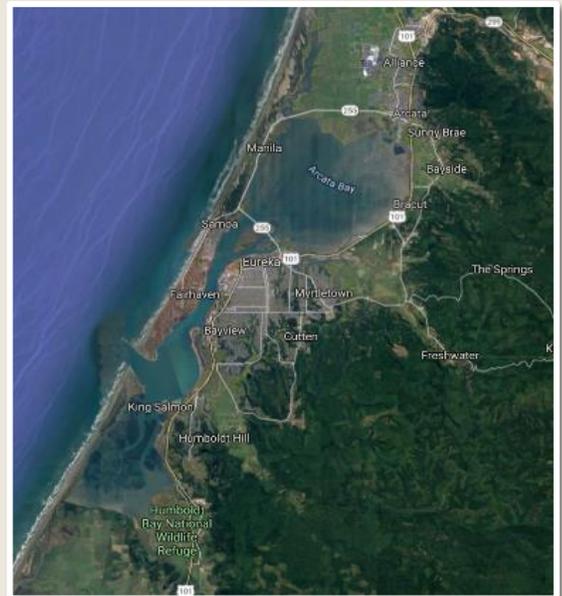
One planning project that PCFWWRA is currently developing is the design for an off-channel pond and alcove along Ryan Creek, near Redwood Acres, in this Humboldt Bay watershed. The project is directly adjacent to Humboldt County's McKay Community Forest on Green Diamond Resource Company land. The project is being developed with the input from a technical advisory committee of stakeholders. Pacific Watershed Associates are providing science and engineering expertise and CDFW's Fisheries Restoration Grant Program is providing the necessary funding.

The Ryan Creek watershed is 15 square miles and contains approximately 14 linear miles of important anadromous salmon and trout habitat. This watershed is typical of the north coast region where historic land management for timber harvest and ranching has resulted in disconnecting the main creek from a significant amount of floodplain and resulted in a loss of fish habitat. This included the blocking of fish access to ponds and wetlands located away from the main creek, often referred to as "off-channel habitat." The low gradient stream channel and wide valley bottom of Ryan Creek provide excellent opportunities to restore some of the connectivity to the floodplain and high quality off-channel habitat that was lost due to historic road, railroad and levee building and agriculture. Many studies throughout the Pacific Northwest document juvenile salmonids, in particular coho salmon, utilizing off-channel ponds and alcoves as refuge from high flows. These studies over the last couple decades have shown a strong connection between utilizing off-channel habitat and high growth rates of young salmon, and therefore increased survival to returning adults.

This design project focuses on determining the best means to create or improve access into an existing off-channel pond and wetlands adjacent to prime coho bearing reaches of mainstem Ryan Creek. Currently, salmonid access into the pond is extremely limited because the pond is perched at a relatively high elevation with respect to water levels in the mainstem even during relatively large storm events. This site was selected for improvement due to the existence of perennial cool flow into the pond by a tributary and the relative high benefit to creating a large area of floodplain habitat for juvenile rearing, as well as potential high flow refugia. The tasks associated with this project are to perform the investigations needed to determine the most suitable alternative to provide access into the pond and expand or enhance the existing habitat. In collaboration with project partners, we are developing a 100% engineered design that would be ready for implementation upon completion of this project.

Humboldt Bay Non-Natal Coho Habitat Enhancement Planning

PCFWWRA and Thomas Gast and Associates are leading a team of fisheries experts in examining the tributary streams entering Humboldt Bay in order to identify, assess, and prioritize potential off-channel habitat restoration projects. The focus is on the stream-estuary ecotone, critical to salmon and other native fish. This endeavor, funded by CDFW through 2020, will benefit rearing juvenile salmonids that are listed under the Endangered Species Act (ESA), and also other ESA-listed native fish species such as tidewater goby and longfin smelt. Over 60 potential projects have been identified thus far, and our technical advisory team is currently rating them in order to develop a prioritized list to aid resource managers and stakeholders with an action plan to guide funding and implementation of restoration priorities. Conceptual designs will be engineered for the top five projects by summer, 2020. Thank you to Thomas Gast and Associates for your project management and technical oversight, Michael Love for developing the designs, and to the California Department of Fish & Wildlife's Water Quality, Supply and Infrastructure Improvement Act of 2014 for funding.



To learn more about our projects or organization, visit pcfwwra.org by clicking below.

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You are receiving this newsletter because you have shown an interest in PCFWWRA and our projects. 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 costs, insurance, or the much needed replacement of a 4WD vehicle to access and supply materials to implementation projects and a replacement computer for our highly valued bookkeeper and office staff. If you wish to securely donate to PCFWWRA, go to www.pcfwwra.org/donate or click below.

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