



Pacific Coast Fish Wildlife and Wetlands Restoration Association

2019 SPRING NEWSLETTER

PCFWWRA is a 501c3 non-profit, founded in 1991, 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, including 14 restoration and planning projects in 2018!

This newsletter provides a few recent highlights.

Morrison Creek Uncovered and Salmon Habitat Structures Installed



This past summer, in collaboration with project partners, we restored roughly 300 feet of Morrison Gulch back into its historic channel. Early logging over 100 years ago and heavy dozer logging after World War II had filled the channel with soil and slash. As part of our project, the original channel was re-excavated, soil was transported away from the creek and large wood placed to restore natural stream function and salmonid habitat. Future erosion levels will be reduced and water quality will be dramatically improved, with over 4,300 cubic yards of sediment prevented from entering the stream system. A total of 13 log structures were installed at 11 sites along a 0.5 mile stretch of the creek, greatly increasing pool habitat and channel complexity. This winter, as usually happens when flows are adequate, coho salmon migrated up into Morrison Gulch from Jacoby Creek and have been observed spawning in the project reach. This project is recovering heavily utilized coho habitat within the Jacoby Creek watershed, which flows to Humboldt Bay.



We would like to thank the following partners for making this project possible: Pacific Watershed Associates (PWA) for conducting technical oversight, California Department of Fish and Wildlife's Fisheries Restoration Grant Program for providing funding, the landowner Green Diamond Resource Company for access and assistance, G.E Stephens' Construction which provided heavy equipment work, and Martin Maskill who single-handedly planted 1,500 redwood seedlings.

The photographs above illustrate pre and post conditions, respectively, at project site s287.2. Credit: PWA.

Watershed Assessment and Erosion Prevention Planning Completed for Cañon Creek

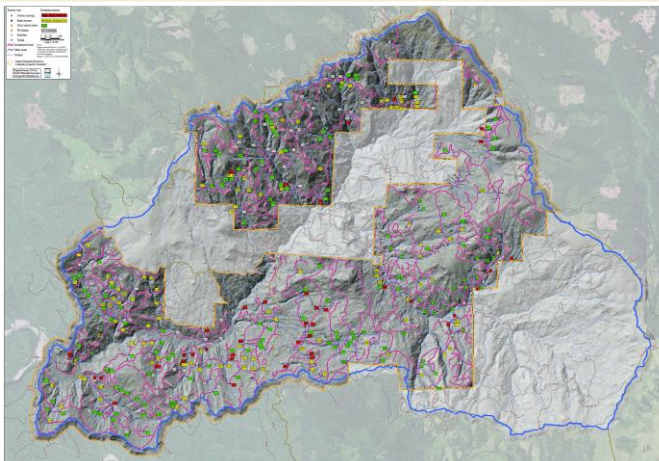
The Cañon Creek watershed drains approximately 16.4 square miles and is a major tributary to the lower Mad River. There are 3.6 miles of anadromous streams in Cañon Creek that provide significant habitat for native salmonid populations of coho salmon, Chinook salmon, and steelhead trout, all of which are listed as threatened under the Federal Endangered Species Act. Cutthroat trout are also endemic to the Mad River and are listed as a “species of special concern” by the state of California. Cañon Creek is an especially important coastal system for coho salmon and Chinook salmon, with excellent spawning and rearing habitat. In Cañon Creek, as in other coastal watersheds, poorly consolidated sedimentary and metamorphic rocks combined with shearing by active faults and high precipitation rates have contributed to form a highly erodible terrain. Steep and naturally unstable inner gorge slope along stream reaches are interspersed with low gradient depositional reaches in the watershed. The natural risk for mass wasting has likely been amplified by historic anthropogenic activities, including logging, road building and ranching.



A washed out culverted stream crossing (Feature #322) within the Cañon Creek Assessment Area. Credit: PWA.

From July 2016 to December 2018, Pacific Coast Fish, Wildlife and Wetlands Restoration Association (PCFWWRA), with technical assistance from PWA, completed a systematic basin-wide road related sediment source inventory entitled *Cañon Creek Watershed Assessment and Erosion Prevention Planning Project*. This effort was funded by the California Department of Fish and Wildlife (CDFW) Fisheries Restoration Grant Program (FRGP), and was all on Green Diamond Resource Company (GDRCo) lands. The goals of the inventory were to identify, quantify, and prioritize sources of current and future erosion and sediment delivery within the watershed, and to develop prescriptions for cost effective treatments to reduce or eliminate future sediment delivery from road networks. Roads assessed on GDRCo lands are used

primarily for timberland management and associated support; some are active and in use while others are legacy roads that have not been maintained for many years. Both road types were focus areas for this assessment and future treatment.



Map of the Assessment Area excerpted from the Final Report of the Creek Watershed Assessment and Erosion Prevention Planning Project. Credit: PWA.

PWA staff inventoried approximately 104 miles of native surfaced and rocked roads within the Cañon Creek watershed. As a result of the assessment, a watershed plan was developed to treat identified road related sediment delivery features on project area roads. We recommend 298 road related sites be treated for erosion and sediment control and erosion prevention and estimate that over 44,500 cubic yards of sediment could erode to stream channels within the project area over the next decade if no efforts are made to implement these prescriptions.

Panther Creek Barrier Removal Funded



We are now much closer to removing a migration barrier to salmon and trout near the mouth of Panther Creek, made possible through a FRGP award for implementation. Panther Creek is a key cold-water tributary to Redwood Creek before it flows downstream through Redwood National Park to the ocean near the town of Orick. The implementation of the project during the summer of 2019 will be the culmination of a multi-year planning and design effort in partnership with Pacific Watershed Associates. The project was identified as a priority in CWCAP's *Redwood Creek Watershed Assessment Report* and is necessary because the abandoned road crossing and gaging station is currently a barrier to juvenile salmonids, especially coho salmon. Removal of this barrier will open passage to 4.5 miles of anadromous salmonid habitat in Panther Creek.

Jacoby Creek Off-Channel Salmon Habitat Restoration Completed

Over 1.94 acres of off-channel non-natal juvenile salmon winter rearing habitat has been restored and reconnected on the floodplain of Jacoby Creek, within two historical meander bends that were previously disconnected from the main channel. Most of the restored area is flat, low velocity, complex habitat sought out by juvenile salmonids for rearing and refuge from high flows. After implementation, several hundred coho have utilized the project site. Although the project has ended, monitoring will continue to provide insights into the restoration of valuable off-channel habitat. Thank you to the landowner, Jacoby Creek Land Trust, the engineering subcontractor Michael Love and Associates, the heavy equipment operator, Wallace Structures, and Martin Maskill and volunteers who planted native riparian vegetation. This project was funded by FRGP.



The background of the above photograph shows the lower pond site of the Jacoby Creek Off-Channel Project. The inlet of the constructed connecting channel, which flows to Jacoby Creek, is shown in the right foreground. Volunteers and laborers from PCFWWRA, Humboldt State University, and the surrounding community planted native Sitka spruce, alder, shrubs, and willow to provide riparian habitat and channel structure. Credit: Laura Bridy.

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