Pacific Coast Fish, Wildlife and Wetlands Restoration Association

NEWSLETTER

FALL/WINTER 2020-2021

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, under the direction of our organization's founder, Mitch Farro. Additionally, since 2016, we have been providing botanical and Geographic Information System (GIS) services under the direction of our Plant Ecologist, Annie Eicher. 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 our newsletter, we feature several recent or current coastal wetland and dune habitat restoration projects in Humboldt Bay and the Eel River estuary (p 2-4). Additionally, we provide an update on one of our current salmonid habitat restoration projects in the Redwood Creek watershed (p 5).

Coastal wetland

Restored coastal habitats are more resilient and contribute to higher biodiversity by providing a home for native plants and animals, including rare species. Healthy coastal wetlands are valuable for water filtration, flood abatement, and carbon sequestration. Healthy coastal dunes disperse wave energy, buffering us from rising seas.

Coastal habitats have dwindled to a small fraction of their historical extent, and much of our remaining coastal wetlands and dunes are infested by invasive plant species. Additionally, these coastal habitats and the plants and animals that they support are highly vulnerable to the advancing threat of sea level rise.

Coastal dunes

Ocean Ranch Restoration Project

We are providing assistance to the California Department of Fish and Wildlife (CDFW) with their Ocean Ranch Restoration Project. Ocean Ranch is located just north of the mouth of the Eel River and is part of the Eel River Wildlife Area. CDFW plans to restore 754 acres of tidal marsh and coastal dune habitats. In 2018, we conducted a comprehensive floristic survey and a jurisdictional wetland delineation at Ocean Ranch. We mapped and inventoried eight special status plant species and 524 acres of aquatic resources potentially subject to federal and/or state regulation. The information we provided is being used for environmental review and permitting of the restoration project, under the direction of Ducks Unlimited, Inc. Additionally, our findings will be useful as baseline data to compare with habitat conditions following restoration work.

Muted tidal marsh at the Ocean Ranch Restoration Project (07/2018)

The restoration project will restore tidal connectivity to 475 acres of land that was historically tidal marsh, diked for agricultural use in the early 1900s. The land was acquired by CDFW in 1986 and initially managed as a freshwater wetland complex. In 1994, stormwater damage caused a levee breach, allowing muted tidewater inundation and gradual conversion of the wetlands from freshwater to brackish or saline. Management goals have since shifted to restoring native tidal marsh. Tidal connectivity will be restored through levee modifications and excavation of a tidal channel network.

Native brackish and salt marsh plant communities at Ocean Ranch support the sensitive plants Humboldt Bay owl's clover, Point Reyes bird's-beak, Lyngbye's sedge, and seacoast angelica; however, these habitats are limited and threatened by the invasive dense-flowered cordgrass (*Spartina densiflora*). CDFW plans to remove invasive *Spartina* as part of their restoration project, thereby allowing the expansion of native plant communities and providing habitat for resident and migratory birds, fish, mammals, amphibians, reptiles and invertebrate species.

Sensitive plants Humboldt Bay owl's clover (left) and seacoast angelica (center); invasive Spartina (right) at the Ocean Ranch Restoration Project

Ocean Ranch Restoration Project (*continued*)

Restoration of 279 acres of coastal dunes will include removal of the invasive European beachgrass. Remnant native dune mat plant communities at Ocean Ranch support the federally and state listed beach layia and the sensitive plants dark-eyed gilia, American glehnia, and short-leaved evax. Restoration work will enhance and allow the expansion of native dune mat and sensitive plants and provide habitat for wildlife associated with coastal dunes.

Native dune mat at the Ocean Ranch Restoration Project (07/2018)

Sensitive plants beach layia (left) and dark-eyed gilia (center); invasive European beachgrass (right) at the Ocean Ranch Restoration Project

A Draft Environmental Impact Report for the Ocean Ranch Restoration Project, prepared by GHD with CDFW as the lead agency, is available for review and comment until November 2 at: https://www.wildlife.ca.gov/Notices (posted on September 17).

South Jacoby Habitat Restoration and Enhancement Project

Restored freshwater marsh at South Jacoby Habitat Restoration and Enhancement Project (07/2020)

We are assisting the City of Arcata with the South Jacoby Habitat Restoration and Enhancement Project, a 30-acre wetland complex located on the south side of Jacoby Creek in Arcata. In 2018, the City restored floodplain and stream connectivity for anadromous and freshwater aquatic species and enhanced wetland habitat for migratory birds, reptiles, and amphibians. We conducted a wetland delineation to assist with the permitting process, and we are conducting vegetation monitoring and CRAM assessments to compare site conditions before and after restoration.

McDaniel Slough Estuarine Restoration Project

We provided assistance to the City of Arcata at the McDaniel Slough Estuarine Restoration Project, located just north of the Arcata Marsh and Wildlife Sanctuary. In collaboration with CDFW, the City restored tidal wetlands and riparian habitat, enhancing connectivity for aquatic and wetland wildlife and providing fish migration passage and estuarine fish habitat, while enhancing the overall ecological function of the wetlands.

Salt marsh establishment at the McDaniel Slough Estuarine Restoration Project following re-introduction of tidal inundation (06/2016)

Working with City staff, we monitored vegetation to compare site conditions before and after restoration. The site was historically tidal marsh, diked in the 1800s for use as pasture land. The City's re-introduction of tidal inundation in fall 2013 resulted in a die-off of non-native grasses, followed by the establishment and gradual expansion of salt marsh vegetation. The restoration project has also created brackish and freshwater habitats, providing ecological diversity.

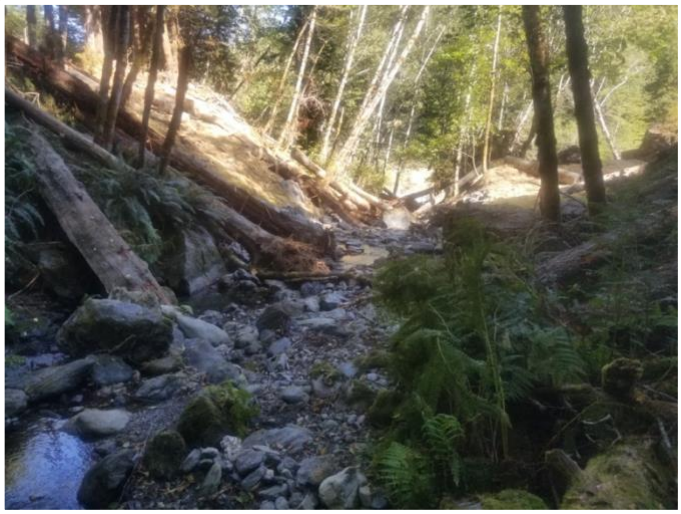
Elk River Estuary and Tidal Wetlands Enhancement and Coastal Access Project

Pre-enhancement salt marsh at the Elk River Estuary Enhancement Project (07/2019)

We are working with Greenway Partners to assist the City of Eureka with the Elk River Estuary and Tidal Wetlands Enhancement and Coastal Access Project, a 114-acre site located near the mouth of Elk River in Eureka. The City is planning to increase tidal prism, remove invasive *Spartina,* and construct a one-mile extension of the California Coastal Trail. We conducted a sensitive plant survey to help with the permitting process, and we will be performing vegetation monitoring and CRAM assessments to compare pre- and post-restoration site conditions.

Panther Creek Barrier Removal Project

We are continuing our work on the Panther Creek Barrier Removal Project. The project is located near the mouth of Panther Creek, a key cold-water tributary to Redwood Creek, which flows into the ocean near the town of Orick. In summer 2019, heavy equipment was used to remove an abandoned road crossing and gaging station that had formed a migration barrier for salmon and trout. Removal of the blockage will now allow fish access to 4.5 miles of habitat upstream.



Panther Creek, following removal of salmonid migration barrier (09/2019)

Project implementation, funded by the CDFW Fisheries Restoration Grant Program, was the culmination of a multi-year planning and design effort in partnership with Pacific Watershed Associates. In summer 2020, water surface and thalweg profile surveys were conducted to document low water passage conditions. An additional "winter flow" set of surveys will be conducted to document fish passage under high water conditions before preparing a Final Report.

New Truck!

We're sending a big THANK YOU to our local Coast Central Credit Union!! Through their Community Investment Program, we were awarded a $10,000 grant in Spring 2020 towards the purchase of a 4WD vehicle, which we need to access project sites and to deliver materials for project implementation. In August, we purchased a low mileage 2011 Toyota Tacoma 4x4 in great condition. We appreciate Coast Central's commitment to their motto "people helping people," so needed in these trying times.

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

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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 a much needed 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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