Wild Rivers Land Trust breaking new ground

The Wild Rivers Land Trust is making a bold move in the field of habitat restoration.

Land Trusts specialize in protecting valuable natural resources and pristine wilderness. They don't often interact with areas in need of environmental cleanup.

However, a rare opportunity arose for the Wild Rivers Land Trust to spearhead an environmental cleanup that will not only remove hazardous chemicals from a key stretch of the Elk River Watershed, they will also lead a restoration effort to return Coho Salmon and other native fish populations to an area they have been cut off from for more than half a century.

The Wild Rivers Land Trust received a grant to clean up the site of a long-abandoned plywood mill that has been degrading the environment and continues to threaten natural resources and critical wildlife habitat in the Elk River.

The Land Trust staff and our partners have been working diligently to orchestrate the cleanup of harmful chemicals and remove barriers blocking Coho Salmon and other native fish from spawning upstream.

"This is something different for the Land Trust - to take on a site that needs cleanup with the Environmental Protection Agency. There are a lot of questions that have come up," said Wild Rivers Land Trust Conservation Director Max Beeken.

"Each time we faced a challenge we were able to take a step in the right direction and keep it going. Eventually, the bigger picture started to come together," he said.

The focus of the project is at Bagley Creek, which flows into the Elk River about 3 miles north of Port Orford, Oregon.

Bagley Creek historically provided an abundant habitat for fish, including Coho Salmon. However, fish were blocked from passing up the creek when Western States Plywood, a cooperative mill, was built in 1954 - eliminating access to more than a mile of spawning beds upstream from the site.

“What makes this project unique is the ability to come in here and restore a section of stream corridor to reflect what was here historically – and to bring back the ability for the stream to function naturally,” said Matt Swanson, project manager at the Curry Watershed Partnership.

Swanson is leading the restoration portion of the project, which ties into a larger regional effort to restore habitat under the Coho Salmon Recovery Plan. Coho Salmon are listed as threatened under the federal Endangered Species Act.

A sore spot on the river

The opening of Western States Plywood mill doubled the population of Port Orford at a time when big timber companies dominated the landscape. The mill was a boon for the small coastal town. But after 24-years in business, the cooperative could no longer compete with larger corporations and was forced to shut down. After its closure, the mill burned to the ground.

When the mill was first being built, workers constructed two ponds along Bagley Creek, not far from where the tributary entered the Elk River. One of the ponds was used for floating logs waiting to be processed. The other pond provided an emergency water supply in case of fire.

The ponds were constructed by building up an earthen dam, along with a concrete spillway. These structures prevented fish from passing up the stream.

The removal of these barriers is key to the habitat restoration portion of the overall project. But before stream restoration work can take place to free up the fish barrier, toxins must first be removed from the site.

The former mill site was listed on the Oregon Department of Environmental Quality brownfields list due to reports of a glue spill in 1972. A 2019-funded targeted brownfields assessment also found high concentrations of dioxin and formaldehyde

associated with the former mill.
“Dioxins are some of the most toxic chemicals that we know of, and they have a health impact on humans and on the environment,” said Mike Rosen, who is managing the environmental cleanup for the Land Trust.

The Department of Environmental Quality determined that the sediment and soil in the log pond and the embankment will need to be cleaned up to ensure the site conditions will support wildlife.

“I think this is the biggest project that needs to be taken care of on the Elk River, because it is a sore spot on the river and it impedes an important tributary for salmon,” said Wild Rivers Land Trust Interim Executive Director Ann Schmierer.

“It feels good to know we are going to establish a lot of great habitat for salmon. Getting rid of the contaminants will help with the overall health of the river as well,” she said.

Contamination cleanup

The land trust has hired Mike Rosen to manage the cleanup portion of the project. Rosen has a PhD in Environmental Science and Engineering. He has extensive experience with environmental remediation, including managing the voluntary cleanup program for the Department of Environmental Quality in Oregon, and managing the City of Portland’s watershed program.

Rosen explained that this specific site is designated as a brownfield site - a contaminated property that contains hazardous substances. It can be difficult to find people or agencies that are interested in revitalizing these sites, he said.

“But these vacant properties have the potential for reuse. In this case, we have a rich site that can be used to restore natural habitat in the area and increase opportunities for growth of salmon populations,” Rosen said.

It is important to have regulatory bodies provide oversight in brownfield cleanups. For this project, the Wild Rivers Land Trust is coordinating with the Oregon Department of Environmental Quality and the Environmental Protection Agency to engage a qualified contractor to perform the environmental clean up portion of the project.

“All of the work we do is reviewed and commented on by regulatory agencies. When we finish the work, it gets a final sign off. In this case, the sign off gives us a go ahead to work with other agencies who will invest in further restoration of the site,” Rosen said. The first step that goes into cleaning a brownfield site is to determine the extent of contamination – including how deep into the soil chemicals can be found.

“Once we know that, we can dig up the contamination,” Rosen said.

There are two levels of contamination at the abandoned mill site. The areas with very high levels of contamination, called hotspots, will be disposed of at a designated landfill offsite. The lower levels of contamination will be managed on-site with a technique called capping.

Remediation workers will move contaminated soil out of any sensitive environmental zones, including flood zones, and lay it over a textile barrier so that no water can seep through. Then, clean soil is placed on top and stabilized by planting vegetation.

Restoring the land

Wild Rivers Land Trust staff will be working with Curry Watershed Partnership to coordinate the environmental cleanup with habitat restoration as much as possible, although the bulk of the restoration work will happen after the cleanup.

Between the removal and capping of contaminated soil, and the reconfiguration of Bagley Creek, the land will be transformed back into an ecologically functioning landscape.

The restoration will not only remove the barriers that prevent salmon and other fish from entering the creek, it will also realign the stream to return it to a more natural state. Bagley Creek will provide shade and pools for salmon to reside and to grow before they head into the river and out into the open ocean.

Restoration leader Matt Swanson estimates that on his end, about 60,000 cubic yards of material will be moved to reconfigure the creek and provide additional wildlife habitat.

“That equates to about 6,000 dump trucks of material,” he said.

An attempt to restore habitat on the former mill site in the 1990s was not very successful, according to restoration leader Swanson. The mill property was later subdivided into five different lots, further complicating the restoration process. Wild Rivers Land Trust’s ability to work with partners to secure the mill property along Bagley Creek to where it enters the Elk River was key to moving this project forward. The Land Trust will contract with an environmental remediation firm for the cleanup of the site under a 99-year lease agreement with the owners to manage the property.

Bagley Creek is listed as a priority location for restoration and protection of salmon habitat, along with the entire Elk River Coho salmon population, which is identified as a core population for recovery. Coho are a keystone species. When they thrive, so do multiple other species that share this ecosystem.

The project will not only support healthy populations of native fish and other wildlife, it will also contribute to the area’s outdoor recreation economy. The economic impact of salmon fishing in the Elk River is valuable to the community of Port Orford and the region.

A 2008 study found that spending on travel related to fishing, hunting and wildlife viewing contributed more than $20 million to the Curry County economy. Unfortunately, a decline in native fish has impacted this industry.

Local fish biologists with the Oregon Department of Fish and Wildlife say they follow conditions closely to ensure anglers have the ability to catch hatchery fish, while also providing regulations that give native fish populations a chance to survive. Due to Coho Salmon’s threatened status, if an angler hooks one of these fish they must be released.

Efforts to restore salmon populations also have cultural benefits. The Elk River is in the traditional homelands of the Tututni peoples, who today are a part of the Confederated Tribes of Siletz Indians. Salmon are extremely important to local tribal nations, and they have invested heavily in efforts to recover salmon populations throughout the region.

A courageous endeavor

Wild Rivers Land Trust will be responsible for the working with a qualified environmental remediation firm to complete the clean up portion of the project. The strategy is to clean up the contamination, restore the waterway and surrounding habitat and protect the property for future generations.

“It is definitely unique for Wild Rivers Land Trust to take this on. It’s a big endeavor. There are unknown risks associated with contaminated property, so I think this is a

courageous undertaking," said environmental cleanup manager Rosen.

Wild Rivers Land Trust will plan and conduct a series of community meetings during key milestones of the project and keep our followers up to date throughout the project. The cleanup project is anticipated to start in August 2025, with an expected completion date in Sept. 2027.
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https://www.wildriverslandtrust.org/what-we-do/epa-brownfields-project.html