

‘This place wanted to be a wetland’: how a farmer turned his fields into a wildlife sanctuary

Once, Karl Wenner’s Oregon land leaked pollution into a nearby lake. Now, 70 acres are home to waterfowl, turtles and endangered fish

Gabrielle Canon in *Klamath Falls*

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- Karl Wenner installed the wetland on 70 of his 400 acres in southern Oregon. Photograph: Gabrielle Canon/The Guardian

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irdsong hums over the rumble of Karl Wenner's truck as it bounces along the dusty trails that weave through his property. For almost 100 years, this farm in southern **Oregon** grew barley, but now, amid the sprawling fields, there lies a wetland teeming with life.

Wenner installed the wetland on 70 of the farm's 400 acres to help deal with phosphorus pollution that leaked into the adjacent Upper Klamath Lake after his land flooded each winter. With support from a team of scientists and advocates, the project has become a welcome sanctuary for migrating and native birds that are disappearing from the area.

Today, this corner of Lakeside Farms looks far different from a typical American farm. Waterfowl nest among the vegetation, joining pond turtles and even endangered native fish near rows of sprouting barley.

Looking out at the swaying cattails and wocus plants peeking through the water on an afternoon in June, Wenner beams: "This place wanted to be a wetland."



Lakeside Farms features a wetland that has drawn harmful pollutants out of the soil and now serves as a sanctuary for migratory and native birds. Photograph: Gabrielle Canon/The Guardian

It's a remarkable transformation and a promising example of a symbiotic solution to one of the world's most pressing environmental problems.

The stakes are high. Considered **“among the most productive ecosystems in the world”**, wetlands are disappearing rapidly. Roughly 80% around the world have already vanished. In the expansive Klamath basin that straddles the California-Oregon border, once described as the “Everglades of the west”, more than **95% of wetlands have been drained, diverted or dried.**

Wenner, a co-owner of the land, hopes the farm won't be unique for long. With an unprecedented amount of federal funding available through the Biden administration's Inflation Reduction Act and other government programs, Wenner and his partners are encouraging more farmers and ranchers to follow in their footsteps.

“We are demonstrating it is possible,” Wenner said. “We just have to do it on a gigantic scale.”

‘It’s a magical thing to see’

The Lakeside Farms wetland broke ground in 2021, flattening the barley fields and carving dikes and channels for water flows that would leave small artificial nesting islands. The water, produced from a natural spring on the property, quickly germinated seeds for marsh plants that had been dropped by birds and long left dormant. By the summer of 2022, the vegetation began to do its work, feeding fowl and cleaning the farm's runoff, pumped within its banks rather than into the lake.



'Every square inch is covered in life': the ageing oil rigs that became marine oases

The plan, designed with both conservation and capitalization of the land in mind, took 70 acres of the farm out of production. But Wenner says his costs have largely been covered with government funds, and there's a lot more to go around.

Along with state and locally financed initiatives, close to **\$5bn in funding will be available through the Inflation Reduction Act** to fund projects on agricultural land that solve conservation problems.

The benefits, Wenner says, have been almost immediate.

Wetlands serve as a natural sponge, soaking up harmful minerals and pollution before they seep into the watershed. Tucked between Upper Klamath Lake and

an interstate highway, Lakeside Farms' cropland leached high amounts of phosphorus – roughly five times above the amount allowed by regulations last February. It took mere months for the wetland to filter the sediment back to safe levels.

“You set the stage and Mother Nature takes over,” Wenner said. “It’s just a magical thing to see.”

Wenner is convinced the move has been a boon to business. The farm is no longer running afoul of regulations, while a plan to add a rotating wetland on other parts of its land will enable it to go organic, yielding “a much higher price for the crop”.



The Klamath River basin was once called the ‘Everglades of the west’. Today, extreme drought is putting strain on agricultural communities and wildlife alike. Photograph: Nathan Howard/AP

The project comes at a critical time for the region, where one the largest watersheds in the western US coexists with hundreds of farms and ranches. The area is home to rich biodiversity but has struggled as marshes and lakebeds were replaced by cattle ranges and crops.

The climate crisis is making the Klamath basin hotter and drier, creating stress for farmers and wildlife alike. Populations of migrating birds have plummeted,

falling from roughly 5.8 million observed in 1958 to **a peak of just 93,000 counted last year.**

Many are finding hope in plans to demolish four dams along the Klamath River – the largest dam removal project in US history – bringing the ecosystem one step closer to recovery. But more solutions will be needed.

“We have the dams coming out and one of the biggest ecosystems in the county has the potential to be a functioning ecosystem again,” Wenner said. “It is a disrupted, screwed-up system – but this is fixable.”

The work is not without obstacles. “Our biggest challenge is where water is available to manage wetlands,” said Ed Contreras, a coordinator of the Intermountain West Joint Venture, an organization dedicated to building public-private partnerships to support bird habitats. He added that the Lakeside Farms project was an important case study.

“The way I see this program right now is it is a pilot,” he said. There was excitement across the region about the potential to expand, he said, “but it is going to take a lot of people coming together and thinking big picture to scale that up.”

Thousands of miles away, Paul Botts is confronting the same challenges. As the executive director of the Wetlands Initiative, a non-profit conservation organization in Chicago, he is determined to expand the use of what he calls “smart wetlands” across productive farm belts and hopes one day they will be as common as any other farming strategy.

“The ultimate goal here is that one day my children or grandchildren are driving around the midwest and every other farm field has one of these wetlands,” he said. He believes more widespread reliance on wetlands will be essential to meet conservation goals, and will also help stabilize food producers in an uncertain future.

“Our climate is changing and farmers are living it,” he said. “One of the best things we can do to adapt ourselves to that changing climate is to put small scattered wetlands back in our landscape.”

These natural systems help blunt climate catastrophes, holding water for dry times and slowing the speed of floods. “We view smart wetlands as an excellent example of a big-picture climate adaptation solution,” Botts added.



Wenner examines the pollen collected from bees at Lakeside Farms. Photograph: Gabrielle Canon/The Guardian

Back in Klamath, Wenner is checking on his bees. He pulls out a small tray from one of his boxed hives, marveling at the collected pollen as the insects casually come and go. Soon he will send it off to a lab in Belgium that analyzes what the bees have retrieved to give him information about what's taking seed at Lakeside Farms.

“There are a huge number of plants growing out there and the bees are going to tell us what they are,” he said. Already the results have been exciting. After decades, the once monoculture land is bursting with biodiversity, both plants and animals alike.

Wenner gets emotional when he talks about the change. A strategy to fall in line with regulations sprouted an opportunity. “I read the news and it is one environmental disaster after another,” he said. “But I always hoped that maybe we can be smart enough to fix this stuff.

“Now I am learning that you can,” he added. Wenner hopes the natural systems will be given a chance. “We just have to figure out how to do it.”