

# CASE STUDY: INVITING THE WILD BACK IN

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for *Habitat Everywhere*, a project of Greenhorns

Jacob Katz grew up in Winters, California on a small diversified family farm. The regenerative land stewardship modeled by his parents gave him an ecological ethic of looking to nature as a collaborator. With time, he became drawn to questions of scale: How can one enact change at the scale of mainstream commercial agriculture but with the nimble ethos and ecological care of a small-scale regenerative farmer?

Today, Jacob is a Senior Scientist with California Trout, looking for ways to invite the wild back onto working lands. He currently manages the Nigiri Project, which partners with rice farmers in California's Central Valley to flood seasonally dormant fields, making them available again as food-rich habitats for young salmon, especially the endangered winter-run Chinook salmon, as they move from the mountains to the sea. The Nigiri Project is a scaled riparian restoration project that models creativity and collaboration with one of the world's most productive and hard-worked agricultural valleys.

Today, the Central Valley is highly engineered and controlled by rigid systems of irrigation, drains, dams, and levees. The cost of this human-controlled design is the loss of 95% of wetlands, floodplain forests, and the food chain energy they produce. In truth, it is expensive to operate in this way.

Before white settlers came and developed this valley into a place of agricultural systems and controlled riverways, the land was a seasonal floodplain fed by winter storms and spring snowmelt from the Sierra Nevada mountains. The seasonal wetlands acted to collect sunlight and energy: plants and algae processed sunlight into sugars, insect populations swelled with this abundance of food, and in turn, they nourished juvenile salmon. This kind of food-rich habitat only comes to life when the water can spread out and slow down. Intact floodplains ensure the replenishment of complete cycles of food and energy each year; this sustains life for insects, fish, birds, soil, and people.

The Nigiri Project recreates and mimics this natural process by strategically flooding large monocultural rice fields, which decompose leftover debris from the year's rice crop. This decomposition turns to biomass and invites a trophic cascade of feasting bugs, salmon, ducks, geese, sandhill cranes, and shorebirds. With the success of this project comes a return of species in record numbers. Migrating birds benefit from ample food on this Pacific Flyway stopover, and juvenile salmon grow safely in protected nursery grounds before continuing to the Pacific Ocean.

The Nigiri Project's central question is about how to collaborate with rivers by letting their fluid and amorphous designs shape the land. For this collaboration, Jacob suggests a mosaic approach, one where water is released from rigid aqueducts and onto fields according to natural ebbs and flows and in accordance with a farmer's knowledge and economic needs. He calls this a "walking wetland" approach, wherein a rice farmer can agree to take 1/5 of their

fields out of rotation yearly. This enables soft profits in the form of habitat creation and tangible income through leasing water rights to neighboring farms during off-times.

This rethinking also allows for a more holistic approach to sharing scarce water resources in Central Valley. Instead of each farm expecting to have simultaneous access to water all the time, this project normalizes water sharing for public, economic, and ecological gain. There is a purposeful rhythm to the water when it is in the right place at the right time.

Through all these adjustments and fluid collaborations, water again permeates into Central Valley's vulnerable water table instead of being whisked over the land too efficiently. A river is a line but only on a map. In the field, farmers know that rivers are fluid and shapeshifting. Farmer-led riparian restoration projects can move us beyond either/or thinking and towards productive and regenerative design that interweaves habitat and farming.

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To learn more about the Nigiri Project, visit [caltrout.org/projects/nigiri-project#impact](https://caltrout.org/projects/nigiri-project#impact)