



California town wonders if restored floodplain prevented disaster

BY DANIEL TROTTA

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GRAYSON, Calif., Feb 4 (Reuters) - When devastating floods swept California last month, the community of Grayson - a town of 1,300 people tucked between almond orchards and dairy farms where the San Joaquin and Tuolumne rivers converge - survived without major damage.

In the minds of some townspeople and experts, that was thanks partly to the 2,100 acres (850 hectares) of former farmland just across the San Joaquin that have been largely restored to a natural floodplain.

Advocates for floodplain restoration say it can help solve California's dual dangers of flooding and drought, replenishing groundwater for future drought relief while protecting towns from the catastrophic flooding that scientists predict will come with climate change. Restoration also improves wildlife habitat.

"It performed exactly as planned," said Julie Rentner, president of the non-profit organization River Partners, which bought the land off private owners and has revived much of the natural landscape, enabling floodwaters that had once been confined by levees to meander across the plain, recharging the aquifer below.

The \$50 million project was funded mostly by federal, state and local grants, Rentner said. Last month came the first major test since the landscape was reshaped by degrading levees, creating swales and, with the help of about 40 volunteers from town, exchanging invasive plant species for native ones.



(Above) An aerial view shows homes in the town of Grayson near flood waters from the San Joaquin River in Grayson, California REUTERS/Nathan Frandino

One of the volunteers was David Guzman, who works in an almond processing plant and lives right up against a slough of the San Joaquin River.

"It was really scary, man, the river coming up all that time. But all that work we've done, planting out back here, I think it did help with the water," Guzman said.

Just last year, Guzman and his neighbors had to evacuate as wildfire tore through the dried-out slough, a reminder of the extremes created by climate change.

"We're afraid of water and we're afraid of fire," said Emerita Brambila, 80, a neighbor who also lives on the river's edge.



It is impossible to determine for certain that the floodplain saved Grayson. Years of drought had also drained the river of its fury. But some experts say floodplain restoration can help spare adjacent towns, and they envision a day when a proliferation of projects will prevent wider flooding throughout the state.

“That is our future and I think we will get there eventually. We just might see a lot of pain before that happens,” said Carson Jeffres, senior researcher for the Center for Watershed Sciences at UC Davis.

River Partners has restored 20,000 acres (8,100 hectares) on 200 sites over 25 years at a cost of \$185 million, and has identified another 100,000 acres for floodplain restoration across the San Joaquin Valley. Other NGOs and the state also restore floodplains.

Future drought relief or flood protection may take years to measure, but the fish have benefited from the January storms already.

At the Willow Bend floodplain along the Sacramento River, amid the sparsely populated farmland of Colusa County, another recent restoration was just tested for the first time. Jeffres’ team found the floodplain teeming with native fish that had exited the fast-moving river, enabling them to fatten up and rest before returning. Among them were threatened spring-run salmon.

“It’s a little bit like a Field of Dreams. If you build it, they will come,” Jeffres said.

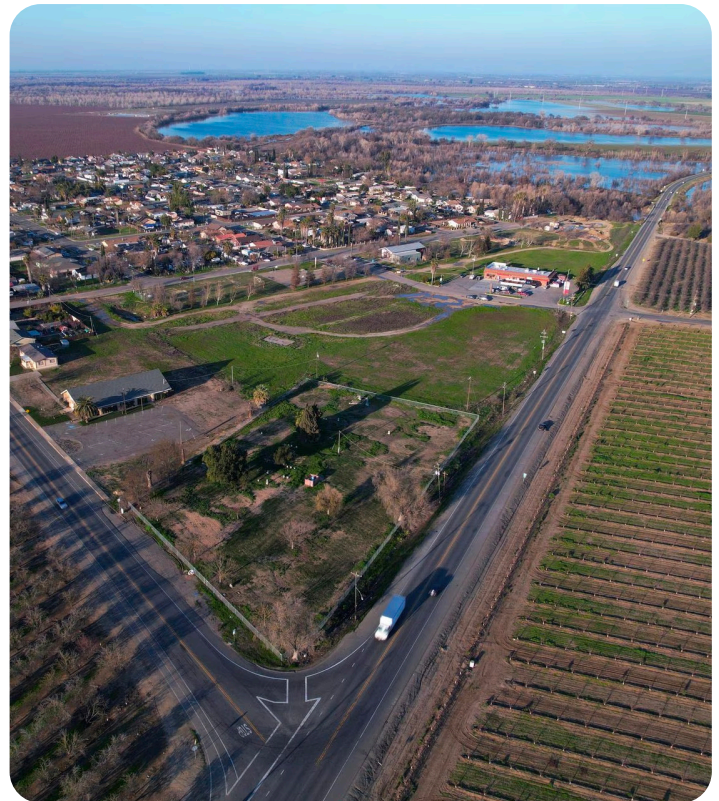
But there are limits. Many potential projects are blocked by development. The city of Stockton, population 322,000, is built on an expansive inland delta. More sites lie on land occupied by California’s \$50 billion agricultural industry, which consumes 80% of the state’s water.

For example, levees failed in the town of Wilton, on the Cosumnes River near Sacramento, cutting off Highway 99. While there is restoration downstream of Wilton, Jeffres said there are several good candidate sites upstream that could have prevented flooding, but on private land.

DOOMSDAY SCENARIO

Severe as the recent storms were, bombarding California with half a year’s precipitation in three weeks, the rain amounted to less than half what could fall with a potential ARkStorm, said Daniel Swain, a UCLA climate scientist and co-author of the ARkStorm 2.0 report published last year.

The biblical-sounding name stands for Atmospheric River 1000. Such a megastorm would likely exceed that of the Great Flood of 1862, which inundated an area 300 miles (480 km) long and 20 miles (32 km) wide in California’s Central Valley. The valley lies west of the north-south Sierra Nevada mountain range and includes the smaller San Joaquin Valley.



(Above) An aerial view shows the town of Grayson near floodwaters from the San Joaquin River.

REUTERS/Nathan Frandino

An 1862-like event could cause \$1 trillion in damage, Swain said. The worst-case scenario has about a 1% likelihood of happening next year and the chances grow incrementally in subsequent years “because our climate is making it more likely over time,” Swain said.

There is also a lesser ARkStorm scenario that would still be one-fourth to one-third greater than the recent downpour.

“I don’t know when the decade is going to come for extreme flooding. It could be this decade. It might not happen until 2050, although I’d put my money on it being closer to this decade than 2050,” Swain said.

Swain, who is unconnected to River Partners, said he was “baffled” to see flood protection cuts in Governor Gavin Newsom’s 2023-24 budget proposal published in January, coincidentally amid peak flooding.

At least for now, \$40 million in floodplain restoration spending was cut that would have funded nine River Partners-led projects throughout the San Joaquin Valley, an area especially vulnerable to the drought/flood dynamic.



“The funding specific to the San Joaquin Valley could be restored if general fund conditions improve,” Lisa Lien-Mager, a senior advisor for the California Natural Resources Agency, told Reuters by email, citing the recent storms as “a prime example of why we need to invest in these solutions.”

The Central Valley Flood Protection Plan drawn up by a state agency in December calls for investing \$360 million to \$560 million per year on flood management while saying the state is spending about \$250 million annually.

Along with the cuts to the San Joaquin Valley projects announced in January, the governor increased flood spending elsewhere by \$202 million for the current three-year budget window to reach the bottom end of that range. The sums compare with \$5 billion to \$7 billion in losses that Moody's RMS estimated from the recent storms.

Much of the Central Valley was once a vast wetlands until 20th Century engineering bent nature to its will, rerouting the diluvial menace through dams, concrete irrigation channels and flood-control projects.

While enabling economic boom, the colossal reconfiguration also presaged today's predicament of endangered fish and salinated soil.

Restored floodplains stand to improve water quality in towns like Grayson, where the groundwater is so polluted by nitrates that water authorities must treat it by ion exchange.

The mostly Latino town is so poor that kids used to play soccer in the graveyard, until a community center was built in 2005, and the water is so unpleasant that many people buy water from a machine at the One Stop Market for \$2.50 per five-gallon jug.

“There could be more services, but we live out here in the middle of these orchards,” said John Mataka, 71, a retired drug and alcohol counselor and one of the restoration volunteers. He said those who donated their labor to the project that day “were laughing and having a good time. It brought a sense of importance to the community.”



(Above) Julie Renter, president of the non-governmental organization River Partners, speaks at former farm land that has been restored to a floodplain near Grayson

REUTERS/Nathan Frandino



(Above) The San Joaquin River is seen cutting through residential, industrial, and agricultural lands in Stockton, California

REUTERS/Nathan Frandino

