

# Reconnecting the Pecos River



Ten years ago, the Pecos River as it flowed through Bitter Lakes National Wildlife Refuge provided no quality habitat for riverine fish. During the early part of the 20<sup>th</sup> century, the river had been channelized to create ponds that would attract waterfowl. Barricaded behind a wall of invasive salt cedar, the Pecos had also become disconnected from the plains through which it flows.

But on a 12-mile stretch of river, all of that is changing. A three phase project on the Pecos has reconnected an oxbow, repaired floodplain connectivity by lowering the riverbank and removing salt cedar, and removed salt cedar from another four river miles and 1,300 acres.

"Now it's really cool," says Paul Tashjian, senior hydrologist with the US Fish and Wildlife Service (FWS). "It's wide open. It's like the old pictures of the Pecos—wide open where you can see for miles." Working in partnership with other federal and state agencies, nonprofits, and the Carlsbad Irrigation District, Tashjian has watched a pipedream transform into a healthy stretch of river.

Fish are moving back as well: The fish community within the restored river very closely resembles the control site, says Stephen Davenport with FWS's New Mexico Fish and Wildlife Conservation Office, which has been monitoring populations of the federally protected Pecos bluntnose shiner since before the restoration project began. "The river is changing quite a bit," he says, pointing out that in the past it had a clay bottom. Now sand is migrating from upstream. "As the sand migrates, we expect to see the fish community will come in," he says.

The restoration also appears to be helping the river itself: "When the river dried up last year, it was dry to the [newly reconnected] oxbow," says Davenport, "and it rewetted from the oxbow downstream."

More than a decade ago—in the midst of water wars on the Pecos—biologists with what was then called FWS’s fisheries office noticed a pattern. North of Roswell, the Pecos offered good fish habitat—the riverbed was sandy and mobile—and supported adult fish populations. Below Roswell, the river was channelized, the habitat was poor, and the fish community consisted almost entirely of young-of-year fish. Meanwhile, the river was always wet in that southern stretch with the poor fish habitat; the best habitat was where the river would dry.

Back in 1999, a handful of scientists at FWS started wondering how to extend that good habitat into the poor habitat—and reconnect those two stretches of the Pecos. In 2002, Tashjian wrote an Environmental Assessment of the proposed restoration project—a document that was not well-received, particularly by water users who feared it would cause depletions. Years passed and Tashjian continued to dream about and plan for the project. Over time, it gained supporters, then partners, and eventually, funding.

Initially resistant to the project, the New Mexico Interstate Stream Commission (ISC) eventually came on board under director Estevan López. Running a water budget, scientists learned that the project would not cause depletions. Conservatively, the channel restoration project and the salt cedar removal would actually mean more than 1,000 acre feet of water savings each year.

“That tipped the scales, and all of a sudden we had ISC supporting us—and not only supporting us, but being an active participant,” says Tashjian. “We had a support letter from Carlsbad Irrigation District, and then we got the Chaves County Chamber of Commerce to support us.”

When FWS applied to the state for New Mexico’s River Ecosystem Restoration Initiative (RERI) funding in 2007, López and many others supported the grant. “And we hit it out of the park,” Tashjian says. “We were able to demonstrate that this wasn’t going to be this huge depletion loss, and if anything, it was going to push things on the positive side because of all the salt cedar removal.”

From there, the project took off. The same year that \$518,000 in RERI funding came through, the US Bureau of Reclamation (BOR) was completing its Biological Opinion for Pecos River water operations—and took the lead on reconnecting the oxbow. Then in 2009, FWS received funding under the American Recovery and Reinvestment Act for the northern section of the project. All told, the project has received more than \$2.5 million in funding.

“We couldn’t have done this without partners, without working closely with folks and looking at the issues closely and trying to figure out if there’s a solution,” says Tashjian, who recalls that even ten years ago, in 2002, people said there was no way the project could happen. “If people care about having a healthy environment, it’s good to know that there’s a place in New Mexico where some of these conflicts can be solved.”

**For more information:**

Bitter Lakes National Wildlife Refuge:

<http://www.fws.gov/southwest/refuges/newmex/bitterlake/>

BOR's Pecos River Restoration website:

<http://www.usbr.gov/uc/albuq/progact/pecosRest/index.html>