

From Dry Streambed to Desert Pupfish: Regenerative Ranching in West Texas



Las Cienegas Ranch in Jeff Davis County, Texas is “not a lot by west Texas standards,” according to landowner Robert Potts. When Robert and Lana Potts first bought their 300-acre ranch in 2006, it had been subject to out-of-control grazing for years. Patches of cracked, bare ground and the mostly dry creekbed confirmed the assessment. Not much there.

After gaining control of the grazing on their Chihuahuan Desert ranch, their first step was small: they rested the land for a few years. Next they began a **rotational grazing system**, assisted by **neighbors** whose **cows** would be brought in to graze intensively for a month or two each year. The pulse grazing was managed using electrical fencing that the Potts purchased themselves, and in their first 10 years of ownership, they participated in the **Conservation Reserve Program’s creekside restoration program** in collaboration with the **Natural Resources Conservation Service (NRCS)**. Those early years combining pulsed grazing with rest helped to regenerate the grasslands.

Wetland Restoration during a Megadrought

For the next step in their restoration journey, Robert and Lana Potts participated in the **Texas Parks and Wildlife Department (TPWD) Landowner Incentive Program**, which supported rebuilding an old well by installing a solar pump. They used the pump to move water to the **small playa lake** on the ranch. This was needed because in the current Southwestern mega-

Photos of Las Cienegas Ranch above, clockwise from top left: 1. Incised Cienega Creek dry streambed in 2006, 2. Newly installed BDA on Cienega Creek in 2022, 3. Grasslands surrounding the creek in 2022, 4. Restored playa lake in 2022—all by Robert Potts. Page 2: Chestnut-collared Longspur by Scott Somershoe, and Robert Potts standing next to volunteer trees on his ranch.

drought—billed as the driest 23-year period in over 1,200 years—the lake fills up only periodically after a big rainfall.

In recent years, the Potts have worked with the **Rio Grande Joint Venture** (RGJV) and its partners to restore the ranch's Cienega Creek. The RGJV is a public-private partnership conserving birds, their habitats, and the ecosystems that support wildlife and people in priority habitats of southern Texas and northern Mexico. With funding from Joint Venture partner **TPWD's Inland Fisheries Division** and the **National Fish and Wildlife Foundation**, the **JV habitat restoration hydrologist** has worked alongside the Potts to **rehydrate Cienega Creek** and its wetlands using three small projects that are making a big impact.

They began by installing man-made “beaver dams” known as **beaver dam analogs or BDAs** in Cienega Creek, **the first project of its kind in Texas**. Next, small **one-rock dams**—so called because they are literally one or two rocks wide and high—were installed across numerous side channels draining into the creek, transforming them from “pipes” to something more akin to a natural stream. Both BDAs and one-rock dams slow down water, catch sediment, and help to build up the bottom of the deep, eroded creek channel, which in turn is allowing greater water infiltration and may eventually allow water to overflow its banks.

Over the course of 16 years, this stewardship has coaxed verdant grasses from bare ground and helped lessen erosion of the deeply incised creekbed, allowing water infiltration and resulting in a riot of luxuriant vegetation spanning at least 50 yards, attracting not only diverse species of birds, but also herds of 50 to 60 mule deer as well as ground mammals and amphibians.

The third project required support from an additional partner, the **Fort Worth Zoo**. The goal was to restore a fish with an historic range in NM and TX. This entailed **drilling a well** to supplement Cienega Creek flows, ensuring permanent pools on the upper creek even during a time of megadrought. The project now provides the **Pecos Pupfish** its first home in the wild in Texas since being proposed for listing under the Endangered Species Act in 1999—a big step for a tiny fish!

Birds, Wildlife, and Plants Respond to Restoration

“The grass cover, the creeks – despite a 20 year drought, I’m pleased,” says Robert Potts. “We have more grass this year than ever, with a lot less bare ground than we’ve ever had. This morning I saw over 200 **Chestnut-collared Longspurs**, they’re everywhere!” The ranch boasts a list of **173 avian species**, including many grassland birds (like the longspur) in severe decline: **Baird’s Sparrows, kestrels, shrikes, and meadowlarks** to name a few. Last summer, he spotted an **American Bittern**—another victim of declining numbers due to habitat loss—among the rushes of Cienega Creek.



With many small steps and the support of innumerable public and private partners, Las Cienegas Ranch is living up to its name, which is Spanish for “desert wetlands,” as well as the reputation of the **Chihuahuan Desert ecosystem—considered the most diverse desert in the Western Hemisphere**.

“I like to keep every raindrop on my land! I personally don’t want it running off, so I manage my land to keep and utilize every drop.”

—Robert Potts, Las Cienegas Ranch, March 2023