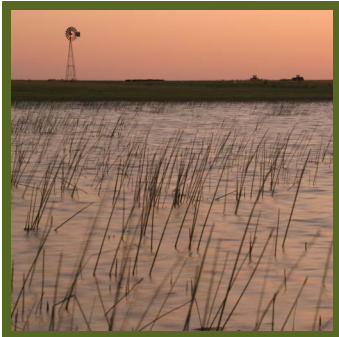




PLAYA LAKES

JOINT VENTURE



about playas

- Small, temporary wetlands at the lowest point of their own watershed
- Important ecosystems that support diverse wildlife
- A primary source of groundwater recharge to the Ogallala Aquifer
- Filter and clean the water as it travels toward the aquifer
- Almost entirely on private land
- More than 80% have been modified by land conversion

restoring playas

- Prevent the most pervasive threat, which is sediment accumulation, by planting native shortgrass buffers
- Easily restore playa function by filling pits and trenches that drain the playa

playas of the high plains providing water for wildlife & people

What Are Playas?

Playas—also called mud holes, buffalo wallows, and lagoons—are relatively small, round, shallow depressions found primarily in the western Great Plains. Their basins are lined with clay soil, which collects and holds water from rainfall and runoff, creating temporary lakes. They are the most numerous wetlands in the region, with more than 80,000 scattered across six states from Nebraska and Colorado south to Texas and New Mexico.

Wet-dry Cycle

The extreme wet-dry cycle that playas experience is the lifeblood of their ecosystem. When dry, the clay soils contract and form large cracks in the bottom of the playa basin. Plant seeds and invertebrate eggs from the last wet period lay dormant in the soil, waiting for the next large rainfall to germinate and hatch. When the rain comes, the first flush of water runs into the playa and through the cracks, beginning its journey to the underlying aquifer.

As the runoff continues, the clay soils expand; the cracks seal and the playa begins to fill with water. Wetland plants and invertebrates complete their life-cycle, and birds and mammals use the playa for food (e.g., those invertebrates in the upper middle photo), water, and shelter.

Biodiversity Hotspots

In this grassland landscape, playas are the main source of water, providing much-needed rest stops and food to migrating waterfowl and shorebirds as well as resident prairie birds. Playas are the center of biodiversity on the plains—supporting 185 bird species, 450 plant species, 13 amphibian species, and 37 mammal species at some point in their life-cycle.

Photo Credits

Top left to bottom right: Northern Shoveler by Tom Grey. Invertebrates by Darryl Birkenfeld. Playa and Windmill by Brian Slobe. Great Plains Toad by Darryl Birkenfeld. Aerial View of Playas by Brian Slobe.

playa restoration

benefits people, birds & other wildlife



Playas Benefit People, Not Just Wildlife

Not only are playas critical for wildlife, but they also provide important benefits for the people who live in this region.

More Water

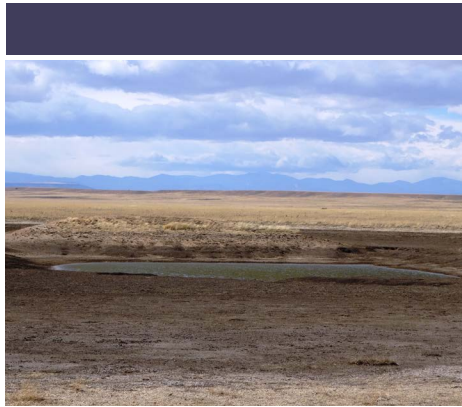
Playas are a primary source of groundwater recharge. Playas recharge at an average rate across the region of about three inches per year—that's three inches of water the size of the playa moving toward the aquifer each year. Since this is a continuous process, the water recharging through playas today will be available for use by the next generation

Cleaner Water

Playas are water filtration systems—keeping fertilizers, herbicides, and pesticides out of the groundwater. Studies show that water reaching the aquifer through playas is of higher quality than that going through other pathways.

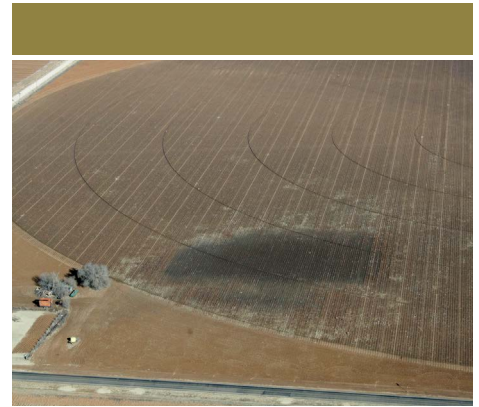
Recreational and Educational Opportunities

Wet playas attract thousands of ducks, geese and a variety of shorebirds during migrations, providing local hunting and birdwatching opportunities. Also, playas are a living laboratory where students can learn about wetlands, geology and the history of the region.



Playa Modifications Reduce Habitat

Modifications such as pits, ditches, berms, and roads also pose a threat to playas. These modifications concentrate water in a smaller area, thus reducing suitable habitat for water-dependent birds. For example, shorebirds require shallow water or mudflats for foraging, and concentrating water in deep pits eliminates those habitat types. In addition, road construction and pitting can disturb the playa floor by altering the clay layer, which may reduce the recharge capacity of the playa.

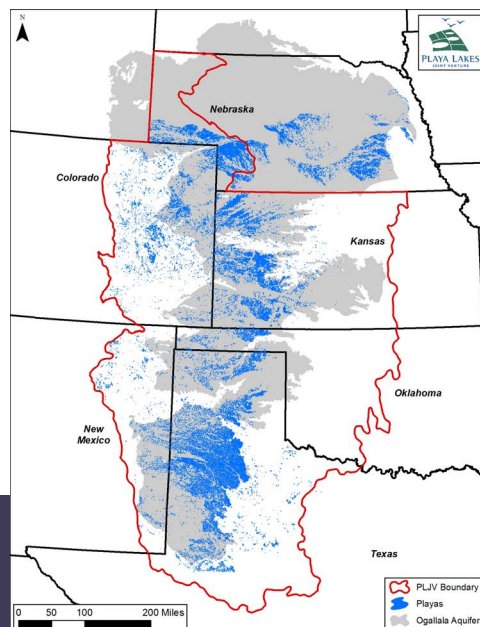


Accelerated Sediment Accumulation Threatens Playas

The greatest continuing threat to playas is culturally-accelerated sediment accumulation from row-crop agriculture. Due to their small size and the fact that they are often dry, producers often till through playas to plant crops. However, even if the playa is large enough to be avoided, the surrounding upland is often farmed to the edge of the playa, resulting in increased sediment accumulation in those playas. Tillage also exacerbates the problem by mixing sediments with the underlying clay layer. These sediments may interfere with the shrinking and swelling of the clay layer, which is vital to aquifer recharge, and reduce playa volume and length of time a playa will hold water, which significantly affects the plant and wildlife community supported by the playa.

Photo Credits

Left to right: Clean Drinking Water by photodee. Pitted Playa by Christopher Rustay. Tilled Playa by Dave Haukos.



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