

the connection

As communities struggle to deal with drought and declining aquifers, playas are playing a role in replenishing and improving the quality of the region's water supply. Playas are the most numerous wetlands in the region, with more than 80,000 scattered across the western Great Plains. Healthy, properly functioning playas have intact clay basins, are surrounded by grass buffer strips or prairie, and collect runoff from the surrounding area after large rain storms.

These shallow, temporary wetlands are a primary source of recharge for the Ogallala Aquifer, contributing up to 95 percent of water flowing to the aquifer and improving the quality of that water. Recharge rates in playa basins are 10 to 1,000 times higher than under other areas, and groundwater recharge may exceed three inches per year in unaltered playas. This recharge through playas is a continuous process. In fact, water reaching the aquifer today started its journey during our parents' and grandparents' lifetimes; the water recharging now will be available for today's children and future generations.

Healthy or unaltered playas also filter and clean the water going into the aquifer. To continue to work effectively, playas need their basins to be intact, excess sediment removed, and a filtering grass buffer that traps sediment while allowing water to reach the playa.



Finding Your Playa

Explore the playa landscape, calculate an estimate of how much water recharges through specific playas, and learn about past patterns of wetness for playas in different seasons using this interactive tool: **PlayaEstimators.com**.

Learn more at PLJV.org/playas.

how playas recharge the aquifer

Aquifer recharge occurs through playa basins and along the perimeter of playas. When a dry playa receives a surge of water from rainfall, water flows into the playa basin and moves through the clay layer via large cracks. These cracks eventually close as the clay is saturated, allowing the playa to hold water. Recharge continues to occur along plant roots and at the playa's perimeter as long as it is submerged in water, much like water running over a bowl's lip.

The PLJV Partnership

Playa Lakes Joint Venture (PLJV) works to conserve the playas, prairies and landscapes of the western Great Plains. Our purpose is to find solutions to address habitat conservation challenges in the western and other wildlife, agricultural producers, and local communities all prosper and thrive in this landscape. Like all migratory bird joint ventures, we are a partnership organization. We have a small staff that brings together and supports a large regional state wildlife agencies, conservation groups and which you'll see represented on our management board.

Learn more about us at **PLJV.org.**



playas improve groundwater quality

Healthy, functioning playas are areas of focused recharge and improve the quality of water flowing into the Ogallala Aquifer. Water reaching the aquifer through playas is of higher quality than that going through other pathways. This happens in two ways: first, as rainfall and runoff travel toward the playa, the surrounding vegetation traps sediment, which can carry contaminants into the playa; then, as the water moves through the clay floor of the playa, a second 'cleaning' process occurs as the soils beneath the playa remove nitrates and other dissolved contaminants.

help playas do their job

Playas work best when they are surrounded by a native grass buffer that filters out soil and agricultural contaminants and there are no pits or other modifications to the playa. Filling in pits is one of the easiest ways to restore a playa. In most cases, the spoil pile from the original excavation is present and used to refill the pit. Once the pit is filled, rainwater and runoff can reach the large cracks in a dry playa — which is essential for recharge to occur — rather than collecting in the pit. The shallow water that spreads across the playa also allows plants to flourish, which in turn provides important food and habitat for migrating birds and other wildlife. USDA Farm Bill conservation programs are available to help landowners restore and conserve playas. Contact your local USDA Service Center for more information.

Revised February 2024