

WATER CONSERVATION AND RE-USE

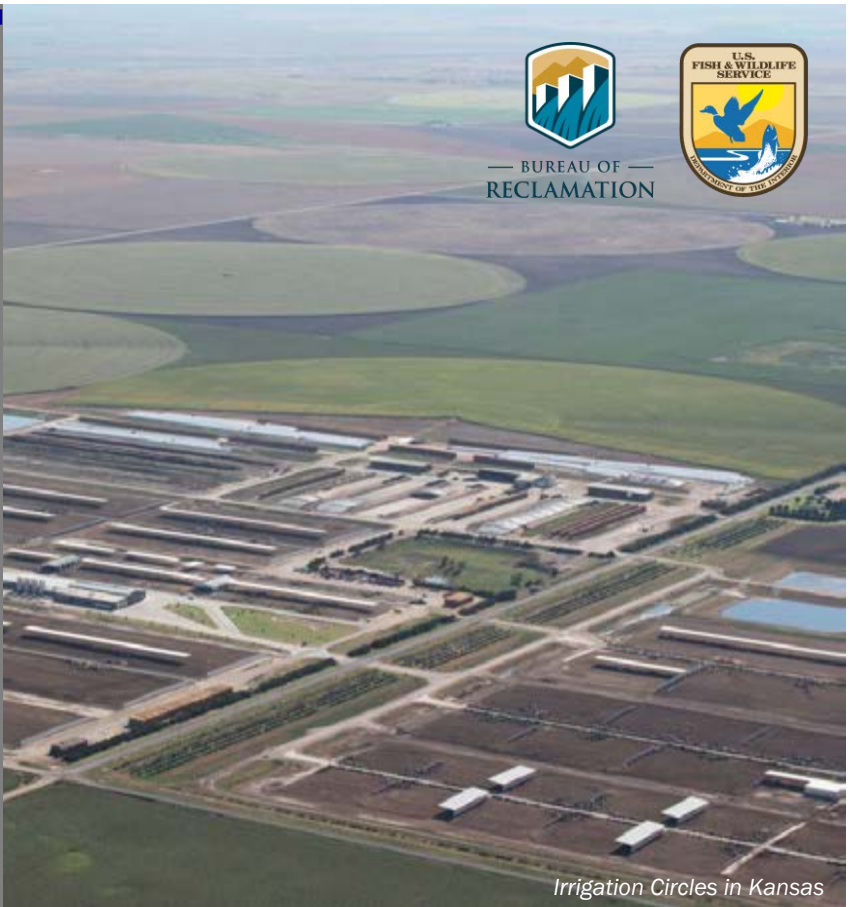
Kansas Water Conservation Areas Program



The Ogallala Aquifer provides nearly all of the water for the High Plains' residential, industrial, and agricultural uses. The aquifer is especially important for farming, which accounts for ninety-four percent of groundwater use in the region. However, the aquifer is depleting faster than it is able to recharge due to the region's semiarid climate and high demand for water. A dwindling water supply threatens agricultural production and economies dependent on the aquifer's water. To prolong the Ogallala Aquifer and avoid harsh regulatory measures, the Kansas Department of Agriculture established the Water Conservation Areas (WCAs) program in 2015 to incentivize voluntary water conservation among farmers.



Project Location



BUREAU OF
RECLAMATION



KEY ISSUES ADDRESSED

Due to the region's semiarid climate, drought frequency, and the high demand for water, the Ogallala Aquifer is depleting faster than it is able to recharge from precipitation. Agriculture is the leading economic driver in Kansas; western Kansas is almost completely reliant on the aquifer for its agricultural needs. To ensure the longevity of the aquifer and prevent economic collapse, the state can impose regulatory measures to minimize water use. Such mandates, however, leave little flexibility and autonomy to farmers, generating tension among stakeholders. Though Kansas established several non-regulatory programs over the years, barriers to working within the Kansas water laws (e.g., application timeliness and ease) still exist.

PROJECT GOALS

- Reduce water withdrawals from the Ogallala Aquifer to ensure it is available for future generations
- Promote tools that support farmers' voluntary water conservation
- Empower farmers to use less groundwater while maintaining and increasing profitability

MIDDLE GROUND

WCAs prove that conservation plans that work for everyone are possible. Shifting efforts from mandating to supporting action is an important requisite to this outcome.



Irrigation at Roth Family Farm, Garden City Company

PROJECT HIGHLIGHTS

Working Within Statutes: Instead of investing considerable effort to change Kansas water laws, WCAs work within existing laws to achieve the same outcomes. Creative program design can prevent political partiality from disrupting important natural resource actions.

Voluntary Consent Agreement: Entering a WCA is completely voluntary. Farmers decide the parameters of their water conservation efforts without any changes to their water rights. If the plan does not satisfy the farmers, they can back out of the consent agreement at any time with no penalty.

Maintaining Economic Viability: WCAs offer incentives to involvement, such as cost-sharing opportunities. Research based on real-world outcomes of using water-reducing practices demonstrates that these practices can result in improved profitability.

Water Technology Farms: The Kansas Water Office provides a technology cost-share opportunity for farmers enrolled in WCAs. These farms support irrigation technology, research, and water use reduction. The technologies, management strategies, and cropping patterns that are tested on these farms provide lessons learned for others attempting new water conservation practices.

Collaborators

- Kansas Department of Agriculture
- Kansas Water Office

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Photos courtesy of Kansas Department of Agriculture

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LESSONS LEARNED

When crafting their WCA plan, farmers commonly set out with lower, more comfortable, conservation goals of 10 to 15 percent reductions in water use. However, farmers often end up reducing as much as 35 percent. Upon realizing the effectiveness of certain management practices and technologies, farmers expanded their toolkits and increased conservation goals. For example, soil probes and scheduled irrigation help producers use less water while increasing profitability.

Because the program is relatively new, and completely voluntary, the Kansas Department of Agriculture is not yet sure of its long-term viability. WCAs have proven to be successful, with the only terminated plans resulting from changes in farm ownership. Individuals involved in WCAs have experienced profit increases by using less water.

The Kansas Department of Agriculture advertises WCAs through local meetings, postcards, and radio shows; however, farmers have been the biggest advocates for WCAs. The growing involvement in WCAs by farmers demonstrates the importance of peer-to-peer exchange in these voluntary efforts.

NEXT STEPS

- Increase WCA enrollment
- Diversify WCA enrollment from individuals to partnerships among different producers, cities, and other local entities to conserve water together
- Expand support from local groundwater management districts

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Mobile Drip Technology