

WATER and NATURAL RESOURCES

Water and the Kansas economy are directly linked, and providing farmers, ranchers and agribusinesses with tools and flexibility to better manage their water resources will be critical to future growth of Kansas agriculture. In recent years, tools like Water Conservation Areas, Local Enhanced Management Areas, Multi-Year Flex Accounts and more have been developed based on specific calls from Kansans for flexible tools to encourage water conservation and management. While these tools will be critical to water conservation efforts now and into the future, there also exists the need to continuously improve the regulatory environment in Kansas to ensure rules are fair and adequate and that water-users' needs are met in a timely fashion.

INITIAL LIST OF CHALLENGES AND IDEAS FOR POTENTIAL SOLUTIONS

Declining and Limited Resources

Initial List of Challenges

- Even with focused implementation of the *Vision for the Future of Water Supply in Kansas*, declines in the Ogallala aquifer and reservoir sedimentation will continue to be a challenge for all agriculture in Kansas.

Ideas for Potential Solutions

- Kansas has existing water rights available and is implementing proactive water conservation practices allowing farmers and ranchers to manage their own water while still preserving the aquifer for generations to come. An intentional focus on the implementation of the action items within the Kansas Water Vision is necessary to ensure a reliable water supply is available to support that growth.
- Many seed companies already have drought-tolerant product offerings that can be expanded upon to offer genetic traits that make crops more suitable to the arid climate of central and western Kansas without significant yield loss.
- Some of the highest crop yields in Kansas are achieved under irrigation. As available groundwater for irrigation is reduced it is important to find ways of achieving the same economic return with less water. Being more efficient with irrigation system in terms of water use will help reduce water use and potentially pumping costs while maintaining good yields.
- Agricultural technologies such as UAS can assist in addressing key challenges in other agriculture sectors, such as reducing water usage by increasing efficiency of water application consistent with the Kansas Water Vision.

Wastewater and Water Quality

Initial List of Challenges

- A significant amount of wastewater is generated at livestock and processing facilities. Identifying suitable quantities of land for waste application and securing adequate storage when land application is not feasible is challenging and the cost of treatment for onsite reuse can be costly.
- Due to limited staff, the Kansas Department of Health and Environment permit process for livestock waste management can take a long time.

Ideas for Potential Solutions

- Implement a pilot demonstration project to evaluate the feasibility of an on-site waste water treatment system capable of treating lagoon water to potable animal drinking water conditions.
- Evaluate opportunities to reduce review time of livestock waste permits such as streamlining the review process, increasing recruitment and retention efforts of KDHE staff environmental engineers, sharing qualified engineering employees across programs and agencies, and contracting and outsourcing reviews.

State Rules and Regulations

Initial List of Challenges

- Many areas of western Kansas are closed to new appropriations of water rights. Therefore, incoming or expanding operations needing water must purchase existing water rights. When water rights are purchased from an irrigation or municipal use for animal agriculture, such as dairies or feedyards, a consumptive use calculation is applied that reduces the available quantity of water.
- Environmental regulations related to livestock waste and confined animal feeding facilities such as minimum setbacks and maximum farm sizes as defined by animal unit capacity can be perceived as inhibitors to industry growth.

Ideas for Potential Solutions

- Create administrative or regulatory authority for a water right owner to add a beneficial use to an existing water right to allow dual uses. For example, a dairy operator may add stockwatering as a beneficial use to an existing irrigation water right without applying consumptive use on the full right. By adding the beneficial use, the water right would be permitted an authorized quantity assigned to that beneficial use which may be different than the authorized quantity on the original beneficial use.
- Develop a Flexible Management Plan that allows water right holders to divert any quantity of water, from any point of diversion, to any of the listed places of use and types of use limited to the overall annual quantity of the FMP.
- Evaluate Kansas livestock waste statutes and regulations and compare to other states' regulatory frameworks to identify potential opportunities to allow for better economic growth while ensuring the proper prevention of water pollution.

Federal Policy

Initial List of Challenges

- The list of specific species as threatened and endangered under the Endangered Species Act reduces the pace or viability of new projects and expansions. An example of this includes the lesser prairie chicken, which lives primarily in western Kansas and was a threatened species under the Endangered Species Act. As of December 2015 as a result of court orders, the U.S. Fish and Wildlife Service is not treating the species as protected and only voluntary conservation efforts are being encouraged. If a court decision reinstates the protection of the lesser prairie chicken, construction of new and expanding operations could be delayed.
- Though it is tied up in the legal system, the Waters of the U.S. regulation would have far-reaching, costly and negative effects on production agriculture.
- While some cost-share programs exist to promote water management and conservation practices, some eligibility criteria and limited outreach and coordination has resulted in low adoption. Federal crop insurance programs are typically based on the Actual Production History (APH) for a fully irrigated crop and do not encourage limited or reduced irrigation. To date, limited irrigation coverage in Kansas has only been available through individual written agreements on certain crops.

Ideas for Potential Solutions

- The Kansas Department of Agriculture and industry partners will continue to monitor and take appropriate action on policies that could adversely affect the agricultural industry such as Waters of the U.S., Endangered Species Act and more.
- Opportunities exist for increased National Resources Conservation Service program collaboration. Additionally, evaluating the Agricultural Act of 2014's crop insurance coverage for lower water use crops and limited irrigation could increase adoption of crop rotations and water conservation programs.