

2023



Innovating Solutions FOR WATER QUALITY REQUIREMENTS

835 acres

converted offsite to no-till

5,344 pounds

of phosphorus prevented from
washing into aquatic systems
(estimated)*



2,672 tons

of offsite sediment reduced annually
due to cropland BMPs

53,440 pounds

of nitrogen prevented from washing
into aquatic systems (estimated)*

WATERSHED *benefits*

The offsite program is designed to benefit water quality in the Arkansas River by removing at least twice the amount of sediment as would be achieved by expensive onsite installations for sediment reduction. By choosing to participate in the offsite program, urban development projects have the option to pay an annual fee instead of installing and maintaining onsite sediment reduction systems. These annual fees help incentivize area farmers to convert their acres to no-till, which reduces significantly more sediment upstream, and for a fraction of the cost of on-site methods. In addition, the best management practices implemented on croplands have the potential to provide other benefits, such as helping build healthier soils.

PROTECTING ECOSYSTEMS

BMPs upstream can reduce the load of nutrients and other chemicals washed into rivers and reservoirs, which can help reduce the occurrence of algal blooms and low dissolved oxygen conditions that are harmful to fish.

REDUCED SEDIMENT

By converting to no-till, farmers keep soils on the cropland where they belong, not flowing into streams, rivers, or reservoirs.

CARBON SEQUESTRATION

Conversion to no-till through this program will help build healthier soils upstream of Wichita. These healthy soils play a role in storing more carbon, which can support higher crop yields and help to mitigate global climate extremes.

**K-State researchers estimate that for every ton of sediment retained on the watershed's landscape from no-till or other BMPs, up to 20 lbs of nitrogen and 2 lbs of phosphorus are also retained on the land.*

PROGRAM *success*



The City of Wichita has leveraged the money-saving benefits of the offsite BMP program for municipal projects, such as construction of the public library. The offsite BMP program in Wichita will continue to grow and evolve, and its continued success will help to establish a model for a regional approach to water quality management. As the offsite BMP program forges ahead, careful monitoring and accurate reporting is necessary to establish actual costs and savings for all involved. Local engagement and detailed accounting of sediment removal and other water quality impacts such as atrazine use is a key requirement for city, state, and federal regulators. Ensuring that water quality benefits from the offsite practices continue in perpetuity remains the fundamental key to this program's long-term success. Progress hinges on participation by farmers in the Little Arkansas watershed, located upstream from the City of Wichita.

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EYES ON THE *future*

Wichita and Kansas State have been pioneers in shaping a Midwest urban stormwater management program into something more than a regulatory exercise; the creation of the offsite implementation program has re-directed city and developer dollars from marginal water quality practices inside Wichita to install more effective management practices in the surrounding rural watershed. In Kansas, heavily influenced by agricultural non-point sources, Wichita's offsite implementation program yields greater environmental benefit than traditional stormwater management while supporting economic development within the city.

TOM STILES, Director

Bureau of Water, Kansas Department of Health and Environment

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A no-till field of soybeans in the Little Arkansas River Watershed

For more information about the Offsite BMP Program, contact us at: kstatekcare@ksu.edu.



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