

6-11-2002


Towards Sustainable Management of the Ogallala High Plains Aquifer [abstract]

Susan Stover

Thomas L. Huntzinger

Brownie Wilson

Follow this and additional works at: <http://scholar.law.colorado.edu/allocating-and-managing-water-for-sustainable-future>

 Part of the [Natural Resources and Conservation Commons](#), [Natural Resources Law Commons](#), [Natural Resources Management and Policy Commons](#), [Public Policy Commons](#), [Sustainability Commons](#), [Water Law Commons](#), and the [Water Resource Management Commons](#)

Citation Information

Stover, Susan; Huntzinger, Thomas L.; and Wilson, Brownie, "Towards Sustainable Management of the Ogallala High Plains Aquifer [abstract]" (2002). *Allocating and Managing Water for a Sustainable Future: Lessons from Around the World (Summer Conference, June 11-14)*.

<http://scholar.law.colorado.edu/allocating-and-managing-water-for-sustainable-future/49>



Susan Stover, Thomas L. Huntzinger & Brownie Wilson, *Towards Sustainable Management of the Ogallala High Plains Aquifer* [abstract], in *ALLOCATING AND MANAGING WATER FOR A SUSTAINABLE FUTURE: LESSONS FROM AROUND THE WORLD* (Natural Res. Law Ctr., Univ. of Colo. Sch. of Law 2002).

Reproduced with permission of the Getches-Wilkinson Center for Natural Resources, Energy, and the Environment (formerly the Natural Resources Law Center) at the University of Colorado Law School.

Towards Sustainable Management of the Ogallala High Plains Aquifer

By: Susan Stover, Thomas L. Huntzinger,
and Brownie Wilson

Susan Stover, Environmental Scientist IV
Kansas Water Office
901 South Kansas Avenue
Topeka, Kansas 66612-1249
Phone: (785) 296-0876
Fax: (785) 296-0878
TTY: (785) 296-6604
Email: [sstover@kwo.state.ks.us](mailto:ssstover@kwo.state.ks.us)

Thomas L. Huntzinger
Water Appropriations Project Manager
Kansas Department of Agriculture
109 SW 9th Street, 2nd Floor
Topeka, Kansas 66612-1283
Phone: (785) 296-4621
Email: thuntzinger@kda.state.ks.us

Brownie Wilson
GIS/Data Manager
Kansas Geological Survey
Moore 514, 1930 Constant Avenue
Lawrence, Kansas 66047-3726
Phone: (785) 864-2118
Fax: (785) 864-5317
Email: bwilson@kgs.ku.edu

Stover earned a BA in geology from the University of Nebraska, studied sedimentology and hydrology at Louisiana State University and University of Arizona, and completed an MS degree in geology from the University of Kansas. An Environmental Scientist IV, she is a planner for the Cimarron, Upper Arkansas and Lower Arkansas River Basins, and works on issues related to the High Plains Aquifer.

Huntzinger is a graduate of Colorado State University with BS and MS degrees in Agricultural Engineering. He is the appropriation program manager under the chief engineer in Kansas. He spent 23 years as a hydrologist with the US Geological Survey before coming to the Kansas Department Of Agriculture in July 1997.

Wilson is a GIS/data manager at the Kansas Geological Survey with a master's degree in Geology from Kansas State University.

ABSTRACT

The State of Kansas has been making a renewed effort towards sustainable use of the Ogallala High Plains Aquifer in Kansas. Irrigation has driven most of the development, accounting for roughly 95% of the ground water uses in western Kansas. The continuing declines of the Ogallala Aquifer portend potentially severe impacts to the economy, the lifestyles it helps support, and the environment.

Kansas Governor Graves addressed the importance of planning to meet future water needs in his 2001 State of the State address. He proposed setting a goal of 2020 to achieve zero depletion in the aquifer resources. Although a bold vision, his proposal was strongly criticized by western Kansans as unachievable without severe economic hardships. The

water right appropriations from the Ogallala would need to be reduced by 50 - 75% to achieve zero depletion.

The Kansas Legislature directed the Kansas Water Authority to report on the condition of the ground water resources and the potential for competing water needs. The January 2001 Authority report included the *Atlas of the Kansas High Plains Aquifer* by the Kansas Geological Survey. The atlas contains maps that project the time to deplete the aquifer below levels necessary for large volume pumping. In addition to standard hydrologic maps, the atlas displays the aquifer resources in terms of time, which provides an assessment that is easily understood by all viewers. From this report, the Kansas Water Authority recommended a policy be developed that assured the aquifer was managed for sustainability to meet future needs. This recommendation was further developed into a "two pools" proposal, where one pool would be used at the current rate and the other pool would be managed for sustainable yield based on the average, annual recharge rate. In theory, this would provide a constant source of water to meet future human needs.

Western Kansans strongly resisted the proposal by Governor Graves, and were skeptical as to the practicality of the "two pools" idea. The *Atlas on the Kansas High Plains Aquifer* was a welcome report until management strategies were considered based on its findings. Then the report received much more criticism. State leadership was rejected. Local community leadership did not acknowledge depletion was a priority problem.

An agreed upon starting point has been reached by turning the process around and working with local, western leadership to develop recommendations. Two ad hoc Ogallala advisory committees recommend keeping the local Groundwater Management Districts in the lead, but with an accountability to the State level. The Districts will identify aquifer subunits within the Ogallala that are homogenous in character. A water use goal is to be set for each aquifer subunit in decline, based on the rate of decline, estimated usable life, and cultural and economic considerations. It is an incremental step towards sustainable use of the aquifer. Options available to achieve water use reductions include water right purchase, water banking and flex accounts.

Kansas Representative Moran recently introduced federal legislation, as did New Mexico Senator Bingaman, to conserve the eight-state Ogallala High Plains Aquifer. This legislation was heavily influenced by another western Kansans committee's recommendations for federal actions necessary for conservation of the aquifer. That grass roots support convinced our federal delegates of its importance. The momentum has also led to a charter coalition between the eight state geological surveys and the US Geological Survey.

Challenges of working with citizen based ad hoc committees include the communicating complex ideas of aquifer systems and agricultural economics quickly and simply, balancing the legal rights and wants of those seeking to maximize short term economic benefit of the water with those that want to extend the aquifer life and preserve a lifestyle, and those that are already facing transitioning to less water. It is through the bottom up approach, however, that support is generated and progress is made in developing new approaches for sustainable management of the Ogallala Aquifer.