

Impact Analysis of the Wet Walnut Creek Intensive Groundwater Use Control Area

Bill Golden

Kansas State University

Grant Number 2007-35102-18138

Justification:

As we move into the 21st century, societal goals for our water resources are gradually changing. Public concerns over aquifer decline rates, diminishing stream flow, decreasing wildlife populations, the desire for more water-oriented recreational facilities, the water needs of an expanding industrial sector, and increased population concentration call into question the current allocation of water resources. With increasing frequency, policy makers are asked to decide how to equitably transfer water rights from the agricultural sector to competing sectors. When these situations occur, policy makers, producers, and other stakeholders are concerned about the likely negative economic impacts that the regional economy will incur as water resources are shifted away from the production of irrigated crops, the cost of the policy, and the benefits to the water resource. Unfortunately, there is little economic literature and less empirical data that is capable of providing guidance on the likely regional economic impacts.

Objectives:

In 1992, an intensive groundwater-use control area (IGUCA) was established on the Wet Walnut Creek in central Kansas. This IGUCA was the result of a lack of continuous flow in the Arkansas River and Walnut Creek. The Wet Walnut Creek IGUCA stopped the authorization of new water rights and cut back groundwater withdrawals by existing water right holders. The objective of this project is to provide policy makers, producers, and other stakeholders with historically relevant information on which to base future water resource policy. This will be accomplished by applying both ex-anti (beforehand) and ex-post (after the fact) case study techniques to the Wet Walnut Creek situation.

Progress to date:

Based on ex-post analysis, preliminary research indicates the IGUCA had a short-run negative impact on irrigated acres and revenue, but these impacts did not persist in the long run. This suggests that when water-use is restricted, irrigated producers develop and implement strategies to mitigate potential revenue losses. The implication is that ex-anti estimation may overstate regional economic impacts. Additional research is needed to verify these results.

Impacts:

Preliminary results have been shared with the State and other stakeholders at the 2007 Water and the Future of Kansas Conference and the 2008 Watershed Restoration and Protection Strategy Conference.