

## ECONOMIC ANALYSIS

As stated by Governor Brownback during his Call to Action, "Water and the Kansas economy are directly linked." Recognizing the significance of this connection, the Vision will be accompanied by a complete economic analysis of the role of water in Kansas and how its use can best benefit the Kansas economy. Following is a description of the components and timeline for completion of the economic analysis.

### WATER CONSERVATION

Policy makers should ensure that stakeholders have the best possible tools available in order to make decisions regarding water conservation. At first glance, water conservation seems to imply reductions in short term income. However, alternate sources of income in the short term as well as increased certainty in long term incomes may partly or wholly offset any short term losses.

### IMPACT ANALYSIS

In order to extend the economic life of the aquifer and maintain the economic base of the region, water conservation alternatives will be evaluated. Economic analyses will be conducted to estimate the impacts to producers, the regional economy and hydrologic impacts to the Ogallala aquifer associated with a variety of water conservation policies. The economic impact of drought will be assessed with cooperation from the National Oceanic and Atmospheric Administration (NOAA) and the National Integrated Drought Information System (NIDIS).

### DECISION MAKING TOOLS

Results from the impact studies and current research on limited irrigation economics will be utilized to create decision-making tools for stakeholders. These tools can quantify short versus long term costs and benefits. This ensures that stakeholders are well informed when considering policy alternatives to affect the entire area or make decisions in their businesses. These tools will also assist stakeholders in developing water rate structures that provide an economic incentive to conserve water.

These studies and tools will also be used to create educational materials on water conservation practices. Materials will be geared toward specific stakeholders highlighting the potential economic benefits of conservation.

### VALUE OF WATER

Calculations of incomes, expenses and net income generated per acre-foot of water use for crops, dairy and cattle have been estimated and will continue to be refined. These calculations will be expanded to include other sectors.

Determining the value of water allows policy makers to consider alternatives such as water trading among users, sectors or even basins if policies allow water rights holders to do so. Market structures allowing for trading amongst users will also be evaluated.

## **WATER CONSERVATION OUTREACH**

Public outreach based on the environmental as well as economic benefits of water conservation will appeal to a broader audience, increasing effectiveness.

## **WATER MANAGEMENT**

A full economic analysis on the value of water to the Kansas economy will be conducted. This study will draw from previous, current and future research. Breaking down water strengths and challenges by region within the state and the value of water to each region will aid in regional planning.

## **TECHNOLOGY AND CROP VARIETIES**

An evaluation of the economic cost and benefits of water saving technologies will be conducted. Studies on the profitability of alternative crops, new varieties and dry land versus irrigated returns will continue to provide stakeholders accurate information. These studies will aid stakeholders in making decisions to maximize the return from their limited water resource.

## **ADDITIONAL SOURCES OF SUPPLY**

Studies that evaluate the economic costs and benefits of dredging versus other conservation practices that reduce soil erosion and gully formation will be expanded. Determine the feasibility of allowing interbasin water transfers based on the value of water and its importance to regional economies. The costs and benefits of constructing new reservoirs and other sources such as lower quality water will be evaluated.

## **ECONOMIC ANALYSIS TIMELINE**

### **CURRENT STUDIES**

- Value that irrigation water adds to the local and state economies
- Income, expense and net income generated from an acre-foot of water
- Long-term supply and demand for water in all basins
- Costs and benefits of various sediment management strategies

### **FUTURE STUDIES - PHASE I**

- Impact analysis on policy alternatives
- Decision making tools
- Water conservation outreach

### **FUTURE STUDIES - PHASE II**

- Economic analysis of value of water in Kansas, by region
- Decision making tools