Alternative Agricultural Water Transfer Methods – Competitive Grant Program
Water Activity Summary Sheet
Agenda Item 13c

Applicant: Lower Arkansas Valley Water Conservancy District

Water Activity Name: Potential Impacts to Long-Term Farm Financial Planning Resulting from Water Transfers

Water Activity Purpose: Nonstructural Activity

Drainage Basin: Arkansas

Water Source: Arkansas River

Amount Requested: $31,633

Matching Funds: 10% cash match plus management overhead

Staff Recommendation
Staff recommends approval of up to $31,633 from the Alternative Agricultural Water Transfer Methods Program to help complete the project, Potential Impacts to Long-Term Farm Financial Planning Resulting from Water Transfers.

Water Activity Summary:
This effort's objective is to develop a whole-farm financial planning analysis that considers irrigation water transfers over an extended period of time along with the inherent uncertainties underlying irrigators' decisions to lease, sell, or keep all or a portion of their water supply. To accomplish this objective, a farm financial planning model will be developed.

A cash flow model will be the basis for the analysis, with each line item drawing from a component of the model. This analysis would consist of four components to account for (1) nature of the contract, water demand, and lease revenues; (2) sources of funds; (3) uses of funds; and (4) carryover balances. The model will cover the time period 2010-2050, which is estimated to be the approximate life of a water lease contract and is long enough to experience a wide range of hydrologic conditions.

The Water component defines the proposed lease type, its terms, the frequency of water deliveries, and other information needed to determine lease proceeds in a given year. For example, the lease could require fallowing a proportion of irrigated acreage at a given frequency, say 1 in every 4 years. The lease terms may require some compensation to the operator every year, with additional compensation in years when water is delivered. The price received for water, either on a per acre basis or per acre-foot basis, would be initially specified but price escalators would be used to adjust prices over time.

The model will analyze the sources of funds, uses of funds, and contribution to reserves. The results of the analysis are the comparative cash flow impacts of water transfer options for various types of operations with differing financial situations. These options would include rotational fallow leases, outright sales, and no-action. Important financial components would be the annual contribution to annual reserves, its variability over time, and the ability to maintain a positive balance in cash reserves over the entire period of analysis. In addition, an uncertainty analysis will be performed via a Monte Carlo simulation method. The output of the uncertainty analysis would be cash flow paths over time corresponding to each decision made – whether to sell, lease, or continue farming, that have statistical distributions associated with each.

The project scope includes the following tasks:

1. Cash Flow Model
2. Case Studies
3. Uncertainty Analysis
4. Irrigator Workshops
5. Draft and Final Reports

Discussion:
The proposed project is an additional component of the "Super Ditch Company" which was originally funded through the first round of ATM grants. The Super Ditch Company was created as an alternative to historical "buy-and-dry" of agricultural water rights for M&I uses. More specifically, it seeks to create a viable alternative to historical M&I purchases, permanent transfers, and dry-up of irrigated land to make irrigation water rights available for municipal use and also preserve irrigated agriculture, the economic lifeblood and future of rural communities in the Lower Arkansas Valley.

The proposed analysis would explore important economic factors that are critical to the operations and success of the Super Ditch Company. However, some similar work has been performed in the South Platte Basin by the Colorado Corn Growers Association as part of the project titled: Alternative Agricultural Water Transfer Measures for Preservation of Colorado Irrigated Agriculture (also funded by the ATM program). As such, staff recommends incorporating any applicable components of this previous economic modeling in the proposed analysis.

Issues/Additional Needs: Staff recommends revising the scope to incorporate applicable aspects of the similar economic model already developed by the Colorado Corn Growers Association as part of the project titled: Alternative Agricultural Water Transfer Measures for Preservation of Colorado Irrigated Agriculture (also funded by the ATM program).

Staff Recommendation:
Staff recommends approval of up to $31,633 from the Alternative Agricultural Water Transfer Methods Program to help complete the project, Potential Impacts to Long-Term Farm Financial Planning Resulting from Water Transfers.

All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and will help promote the development of a common technical platform.

In accordance with the Criteria and Guidelines of the Alternative Agricultural Water Transfer Methods Competitive Grant Program, staff would like to highlight additional reporting and final deliverable requirements. The specific requirements are provided below.

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the scope of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

Engineering: All engineering work (as defined in the Engineers Practice Act (§12-25-102(10) C.R.S.)) performed under this grant shall be performed by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.