Alternative Agricultural Water Transfer Methods – Grant and Loan Program
Project Summary Sheet

Applicant: Farmers Reservoir and Irrigation Company (FRICO)

Water Activity Name: Alternative Water Transfers in the South Platte Basin using the FRICO system

Amount Requested: $225,000

Matching Funds: Yes ($25,000 Cash; plus $50,000 of in-kind legal analysis)

Drainage Basin: S. Platte River

Water Source: S. Platte River

Project Summary:

The project will evaluate the potential effectiveness of a variety of alternatives including rotational fallowing, interruptible supply agreements, lease back agreements, and changes in cropping patterns designed to free up consumptive use for purposes of transfer to M&I users. In addition, an innovative "shared" water bank concept shall be tested to optimize the physical, economic, and administrative structure needed to capture, store, and wheel water to purchasers in the Denver Metro area. Previous attempts at water banking in Colorado have failed due, in part, to inadequate attention being paid to the particular institutional, physical, and social constraints existing in Colorado. Despite this, there are numerous examples of successful water banking efforts throughout the Southwest.

The "shared" water bank concept being explored here would utilize existing FRICO infrastructure and recharge capabilities to capture and store, in wet years, otherwise unused agricultural and M&I consumptive use. The resulting augmentation credits would then be available to be used by agriculture and M&I users. The bank will be managed and administered by FRICO.

Contrary to previous water bank efforts, the shared water bank concept being explored here will allow for both intra and inter year banking opportunities. The potential for such an opportunity exists due to FRICO's unique infrastructure and recharge capabilities, as well as existence of a wealth of information about the FRICO system. Engineering studies currently underway to identify consumptive use, recharge capabilities, and the timing of return flows will provide much needed technical information not typically available.

The applicants foresee several benefits accruing to both agricultural and M&I users. Because this arrangement centers on utilizing underground storage to capture unused M&I supplies in wet years, M&I users will be given the opportunity to firm existing supplies without additional investments in infrastructure and without having to transfer additional supplies from current agricultural users. In exchange for facilitating the storage of otherwise

unused M&I supplies, FRICO shareholders would receive a portion of the credits. Moreover, both FRICO and other agricultural users will benefit in terms of having access to low cost augmentation credits that would otherwise not be available absent this arrangement. Additional environmental benefits, in terms of improved stream flow conditions due to lagged return flows and the creation of wetlands at the recharge and discharge sites, are also likely to result. Finally, water users outside the project area will benefit from the systematic study of the legal, financial, and institutional operations of a water bank. Such a case study, focused on a specific source of water and specific set of market participants, has not yet been done in Colorado. Moreover, such a project is necessary to move water banking forward in Colorado as it will provide valuable information on the transactions costs and third party impacts associated with water markets.

There are significant pressures to permanently transfer FRICO shares in all of its divisions to M&I use. These pressures will continue and are now being acutely felt in FRICO's divisions east of the South Platte River – the Barr and Milton Divisions. Stricter, more rigid river administration and reservoir winter fill rules and recent legislation on well augmentation requirements are placing additional stresses on Barr and Milton shareholders. Many Barr and Milton shareholders have wells and are part of the Central Colorado Water Conservancy District. They have a significant and unfilled need for additional water supplies to augment well pumping.

Many of FRICO's Barr and Milton shareholders desire to continue irrigated agriculture, but are having difficulty responding to the stresses from reduced yields and the prospect of realizing a higher return on their asset if selling their shares for M&I use.

The overarching objective of this project is to evaluate and illustrate opportunities for FRICO Barr and Milton shareholders to realize economic value from their shares and associated water assets using methods other than a traditional agricultural transfer resulting in permanent dry-up and avoidance of direct and third-party impacts associated with permanent dry-up such as weed and soil management and impacts to the local economy. This objective will be realized through the identification and examination of the various alternative agricultural transfer techniques identified by the SWSI Alternative Agricultural Technical Roundtable and an innovative shared water bank concept that could benefit both agricultural and M&I users without requiring any loss of agricultural irrigated lands or associated economic output. The process will involve active outreach and discussion with both the suppliers – the FRICO Barr and Milton shareholders and the potential customers – the M&I users in the greater Denver metropolitan area of the South Platte Basin. The end result of this process will be a base of both informed customers and suppliers lead to potential agreements under the alternative processes developed in this project. In addition, the information developed should have broad transferability elsewhere in Colorado.

FRICO is one of the largest irrigation companies in the state and is also the largest irrigation system closest to Denver metro area. The irrigated lands under the FRICO system have and continue to experience significant urbanization and continued acquisition of shares in all four divisions for transfer to M&I use.

It is important to note a key competitive advantage that makes the use of alternative agricultural transfer techniques feasible for meeting Denver metro area demands. The FRICO system is situated such that it can wheel water to numerous water providers in Adams, Arapahoe, Boulder, Denver, Douglas, Jefferson, and Weld Counties. FRICO infrastructure currently exists to physically provide water to many providers with little or no additional infrastructure. In addition, the use of exchanges can provide additional supplies to many other providers.

FRICO has recently completed a ditch-wide analysis of the Barr Division and is currently adjudicating this change in Water Court. See the attached engineering report for additional information on the FRICO system and the Barr Division ditch-wide change case application. FRICO also has an existing application for a ditch-wide change of the Milton Division and has conducted extensive engineering analyses on water supplies, irrigated acres, cropping, return flows, and water demands in both divisions. FRICO has also developed a groundwater model of the Beebe Draw alluvium. FRICO has invested over $750,000 in these analyses and model and all are directly relevant to this project. Please see the attached engineering report for additional detail.

A summary of the applicant's scope of work is below:

Task 1—Survey of FRICO Barr and Milton Shareholders

Task 2—Survey of M & I Providers

Task 3—Shared Water Bank Structure

Task 4—Engineering Analysis of Alternative Transfer Mechanics

Task 5—Water Administration Challenges

Task 6—Legal Analysis (no grant funding)

Task 7—Summary Report

Discussion:
The Applicant did a good job describing how the FRICO system is ideal to investigate for potential municipal and agricultural arrangements due to the system's proximity to the Denver metro area, the network of infrastructure available to "wheel" the water to numerous municipalities with little or no infrastructure improvements and the ability to maintain the production of important agricultural lands near an urban area.

The application states that the project will evaluate the potential effectiveness of a variety of alternatives including: rotational fallowing, interruptible supply agreements, lease back agreements and changes in cropping patterns. It is unclear from the application and/or the scope of work how the applicant intends to evaluate these alternatives. It appears that most

of the study's emphasis is heavily on the water bank concept although the analyses of engineering, water administration, and legal issues associated with the alternatives are listed as separate tasks in the scope.

Issue/Additional Needs:

- Realizing that the objective of this project is to evaluate and illustrate alternatives to permanent dry-up for the FRICO Barr and Milton shareholders, the scope of work does not include sufficient detail to fully determine how these various alternatives will be analyzed. Please address exactly how the alternatives will be analyzed and to what detail will they be analyzed. In Task 1 and 2, the identification of alternatives to permanent dry-up are identified. Once these alternatives are identified, it is entirely unclear if any further advancement of the alternatives is being considered.
- Eligibility requirement #3 specifies that the applicant shall identify groups(s) of agricultural users that are or may be willing to transfer a portion of their water and to identify entity(s), group(s) or area(s) where the transferred water could or would be put to the new use and a description of the new use. It appears that the only water that is being contemplated for the proposed water bank are M&I return flows not captured by the municipalities or those M&I waters not able to be stored. The application states that in exchange for facilitating the storage of otherwise unused M&I waters in the shared water bank, FRICO shareholders would receive a portion of the credits. While this appears to be a great concept and should be pursued, it does not appear to perpetuate agriculture in the long-term and there appears to be no requirement for a farmer to continue irrigating in the long-term and does not appear to meet the third eligibility requirement. If the proposal were the reverse and if FRICO had excess agricultural water that could be available for M&I purposes, then the shared water bank concept would most likely be eligible.

Staff Recommendation:

Since the application does not fully meet the eligibility requirements and specifically #3, staff recommends that funding not be approved at this time for the Alternatives Water Transfers in the South Platte Basin using the FRICO System project. The applicant is encouraged to refine the project's scope of work to meet the eligibility requirements and evaluation criteria and resubmit the grant request at the November 2008 CWCB meeting. The deadline for grant submittal for that meeting is September 30, 2008.