Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
Agenda Item 25.c.

Applicant: Upper Arkansas Water Conservancy District

Water Activity Name: Building and Assessing Accounting and Administration Tools for Lease-Fallowing in the Arkansas River Valley

Water Activity Purpose: Nonstructural Activity

Drainage Basin: Arkansas

Water Source: Arkansas

Amount Requested: $59,215 ($39,215 Statewide Funds and $20,000 Arkansas Basin Funds)

Matching Funds: $17,605 (LAVWCD)

Staff Recommendation
Staff recommends approval of up to $39,215 from the Statewide Account and up to $20,000 from the Arkansas Basin Account to help complete Phase 4 of the project, Building and Assessing Accounting and Administration Tools for Lease-Fallowing in Colorado's Lower Arkansas River Valley. Phase 4 will document the accounting tool and prepare a methods reference document for the tool.

Water Activity Summary:
The project will build and assess a tool to quantify values of transferrable consumptive use and assess impacts to the stream-aquifer system. The tools built and assessed will help make available water supplies through lease fallowing by: reducing transactional costs, protecting existing water rights from injury in the least costly fashion, maintaining the area agricultural economy and preserving the institutionalized and long recognized water court process.

The main objective of this project is to develop and assess accounting and administration tools that calculate transferrable consumptive use and assess impacts to return flows pursuant to lease fallowing agreements. The result will be a common platform that can be a template to others for accurately calculating transferrable consumptive use and assess impacts. A common platform will facilitate implementation of rotational crop fallowing/leasing such as the Super Ditch.

The purpose of this project is not to transfer water via temporary leases but make possible the water transfer by: constraining costs, protecting other water rights from potential injury, maintaining agricultural economies, and preserving the institutionalized and long recognized water court process. Without a common technical and widely accepted platform to quantify consumptive use and return flow impacts the marketing through the "Super Ditch" style program may very well be futile due to the high water costs of changing the water rights through water court. In this regard this project helps advance alternative transfer methods via rotational crop fallowing/leasing forward to an actual on the ground program that can provide a reliable water supply while sustaining key elements of the agricultural area from which the water is transferred.

The objectives of the accounting and administration tools are to:

1. Quantify the transferrable consumptive use derived from fallowed land parcels;
2. Quantify the associated changes in the *amount, timing, and location* of:

    (a) surface runoff to drains and to the river,
    (b) recharge to the alluvial aquifer, and
    (c) groundwater return flow to drains and to the river;

3. Support the development of plans to maintain return flows at or above historical levels and to quantify transferrable consumptive use at or below historical levels in a manner that complies with Colorado water law and the Arkansas River Compact; and
4. Develop data interfaces that will complement the Arkansas River Decision Support System (ArkDSS) and build a common technical platform for the transfer of data to and from Hydrobase.

Discussion:
Through the CWCB's ATM program, the IBCC Ag Subcommittee and discussions with grant recipients and other stakeholders, several key barriers have been identified to the successful implementation of alternative water transfers. These include: (1) the lack of specific methodologies to ensure non-injury of other water rights, (2) potentially high transaction costs with alternative methods, (3) water rights administration and accounting issues and (4) certainty/permanence of long-term supply for municipalities. To address these barriers, several key recommendations have been developed. Those recommendations include:

1. Development of special review procedures to facilitate ATM agreements;
2. Adoption of presumptive CU procedures;
3. Determination of historical CU for a canal or ditch system;
4. Develop specific methodologies for measuring, calculating, and monitoring CU water transferred through ATM projects;
5. State funding of infrastructure cost;
6. Pursue transfer of a portion of a water right.

If successful these tools will help address the first three barriers listed above and will address those barriers through the implementation of recommendation number four, "developing specific methodologies for measuring, calculating and monitoring CU water transferred through ATM projects." As the application indicates, this effort has been a collaborative effort from the start and includes five sponsors: the UAWCD, SECWCD, LAVWCD, Pueblo Board of Water Works and Colorado Springs Utilities. In addition, the project/technical team has put in significant effort to provide a well thought out scope of work and to ensure the incorporation and coordination of past and current related modeling efforts in the Arkansas basin such as the Division of Water Resources' Irrigation System Analysis Model (ISAM), Colorado State University's enhanced model (predicts groundwater flows and return flows) and the CWCB's Arkansas River DSS.

Staff believes that this project meets many of the Statewide Evaluation Criteria. If successful, this administration tool will allow for easier transfers of water for multiple purposes helping to address the water supply gap in the Arkansas Basin as well as statewide if adopted in other basins. Thus far

with phases 1-3, the project team has been very committed to ensuring wide participation and cooperation between water users, SEO, CWCB, CSU and others.

Issues/Additional Needs: None

Staff Recommendation:
Staff recommends approval of up to $39,215 from the Statewide Account and up to $20,000 from the Arkansas Basin Account to help complete Phase 4 of the project, Building and Assessing Accounting and Administration Tools for Lease-Fallowing in Colorado's Lower Arkansas River Valley. Phase 4 will document the accounting tool and prepare a methods reference document for the tool.

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 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.