

Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
September 21-22, 2016
Agenda Item 19(h)

Applicant & Fiscal Agent: Upper Arkansas Water Conservancy District

Water Activity Name: Groundwater and Surface Water Interactions and Potential for Underground Storage

Water Activity Purpose: Study (Multipurpose Water Balance)

County: All Counties w/in Arkansas Basin

Drainage Basin: Arkansas

Water Source: Arkansas River and all tributaries

Amount Requested/Source of Funds: \$50,000 Arkansas Basin Account
\$256,618 Statewide Account
\$306,618 Total Grant Request

Matching Funds: Basin Account Match (\$50,000) = 16.3% of total grant request;
Applicant/3rd Party Match (\$360,442) = 118% of Total Grant Request (meets 5% min);
Basin & Applicant/3rd Party Match (\$101,000) = 134% of Total Grant Request (meets 25% min).
(refer to *Funding Summary/Matching Funds* section)

Staff Recommendation:

Staff recommends approval of up to \$50,000 from the Arkansas Basin Account; and \$256,618 from the Statewide Account to help fund the project titled: Groundwater and Surface Water Interactions and Potential for Underground Storage.

Water Activity Summary: WSRF grant funds, if approved will be expended to assist the Upper Arkansas Water Conservancy District in conducting the Groundwater and Surface-Water Interaction and Potential for Underground Water Storage study that will address the ‘gap’ through the evaluation of the available supply of water and the water balance of the Upper Arkansas Basin. This study will provide the tools necessary to manage future water supplies and will offer insight on the potential for alluvial aquifer storage, and create a mechanism for evaluating and implementing efficient irrigation practices. This study will quantify surface-water and groundwater, including recharge rates, and characterize the interactions between them in order to estimate the availability and sustainability of water resources and the effects that changes in water use or climate might have on water supplies. Agriculture represents the largest user group in the upper basin and agricultural water management will be evaluated through field-scale irrigation management data collection to create an agricultural water balance. Study results will meet both Basin and State needs for consumptive and non-consumptive use. Study results can be used for both water and land use planning and will provide important data for future water management and storage options. This study will provide data for

multiple purposes through a collaborative approach to meet future water challenges and addresses all measurable objectives identified in Colorado's Water Plan.

Discussion: This project furthers multiple goals and objectives of the Arkansas Basin Implementation Plan. With respect to the Colorado Water Plan, this project supports Objective A. Supply-Demand Gap: "Meet Colorado's Water Supply Gaps" Objective D. Agriculture: "Support Agricultural Conservation and Efficiency," Objective E. Storage: "Assess and promote opportunities for multipurpose and multi-partner storage projects that address strategic needs," and Objective F. Watershed Health, Environment and Recreation: "Protect healthy environments" (Section 10.3).

Issues/Additional Needs: No issues or additional needs have been identified.

Threshold and Evaluation Criteria:

The application meets all four Threshold Criteria.

Tier 1-3 Evaluation Criteria:

This activity has undergone review and evaluation and staff has determined that it satisfies the Evaluation Criteria. Please refer to WSRA Application for applicant's detailed response.

Funding Summary/Matching Funds:

<u>Funding Source</u>	<u>Cash</u>	<u>In-kind</u>	<u>Total</u>
Upper Arkansas Water Conservancy District	\$43,639	\$25,000	\$68,639
Chaffee County & Municipalities	\$30,000	\$0	\$30,000
Fremont Counties & Municipalities	\$30,000	\$0	\$30,000
Custer County & Municipalities	\$10,000	\$0	\$10,000
USGS	\$192,300	\$0	\$192,300
CSU Pueblo	\$29,503	\$0	\$29,503
Subtotal Matching Funds	\$335,442	\$25,000	\$360,442
WSRA Arkansas Basin Account	\$50,000	n/a	\$50,000
WSRA Statewide Account	\$256,618	n/a	\$256,618
Total Project Costs	\$642,060	\$25,000	\$667,056

CWCB Project Manager: Andy Moore

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 revised WSRA Criteria and Guidelines, 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.