

Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
September 11-12, 2014
Agenda Item 13(d)

Applicant & Program Sponsor: El Paso County

Water Activity Name: El Paso County Groundwater Quality Study Phase 2c

Water Activity Purpose: Water Quality Study

County: El Paso

River Basin: Arkansas

Water Source: Upper Black Squirrel Creek

Total Amount Requested: \$51,933

Source of Funds: \$10,000 Arkansas Basin Account; \$41,933 Statewide Account

Matching Funds: Basin Account Match (\$10,000) = 19% of total grant request
Basin Account & Applicant Match (\$112,950) = 218% of total grant request
Applicant Match (\$102,950) = 67% of total study costs (\$154,833)
(refer to *Funding Summary/Matching Funds*)

Staff Recommendation:
Staff recommends approval of up to \$10,000 from the Arkansas Basin Account and \$41,933 from the Statewide Account to help complete the study titled: El Paso County Groundwater Quality Study Phase 2c.

Water Activity Summary: The unincorporated area of El Paso County is the primary source of drinking water for many rural residents, as well as numerous municipal entities and their customers. More than 35,000 people depend on this groundwater supply, which is also in the same general area that oil and gas development companies have been writing leases with local landowners. The Groundwater Quality Study Committee is a group appointed by the Board of County Commissioners of El Paso County. In 2009 the Committee developed data necessary for the protection and enhancement of the alluvial storage space and groundwater dependent areas of the County. The mission of the coalition is to evaluate existing water quality data on nitrates and other contaminants, fill data gaps and explore land use and water resources planning implications. The County, under a shared funding arrangement with Committee partners, contracted with the Colorado Geologic Survey to conduct Phase 1 of the Groundwater Quality Study. The project is now ready to complete Phase 2c by building on the work of Phase 1 and work completed in 2011 and further water quality parameter sampling completed in 2013 & 2014 under Phase 2a and 2b, respectively. The US Geologic Survey was a technical advisor for Phase 1 and is the lead consultant for Phase 2. WSRA funds are requested for identification of and/or installation of monitoring wells to include in a long-term monitoring program, hydrologic evaluation, additional aquifer characteristics analysis and vulnerability potential, to provide for early detection of possible contamination that may be a risk to human health and the

environment. The El Paso County Groundwater Quality Study Phase 2c (Task 5) is the next step towards quantifying how much an enhanced storage and banking operation would protect water quality in the face of urbanized growth, oil and gas development and historic agricultural interests. Specific objectives are more thoroughly described in Task 5 in the attached Statement of Work.

Discussion:

Phase 1 was partially funded through a \$35,000 WSRA grant in 2012.

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:

Tier 1: (a) Numerous local entities and both local and State agencies will be able to utilize the Phase 2 baseline water quality study results and related age dating vulnerability assessment mapping for policy decisions and revisions that seek to address the goal of prolonging water supply and quality of El Paso County groundwater resources. The Arkansas Roundtable sees this as a project of Statewide significance given that the methodology used in the study for age dating the aquifer supply and correlating a groundwater pollution vulnerability and probability model is a tool that has been very valuable to this aquifer, to the Eagle River alluvial aquifer, and would likely be a valuable tool for many other alluvial aquifers throughout the state where competing uses and urbanization threaten to increase the gap through diminished water quality.

(b) The project is supported by the Cherokee Metropolitan District. Additional entities represented in the application include the local Designated Basin Management District (Upper Black Squirrel Creek), the Colorado Groundwater Commission, the El Paso County's Health Department and Development Services, and the Pikes Peak Regional Water Authority, whom are all vested in the long-term protection of the alluvial storage and water resources, but all recognize an insufficient data set on water quality, aquifer characteristics and vulnerability to contamination. The project will generate baseline water quality data that includes constituents of concern that may result from oil and gas development activities and in this respect the study has been scoped to promote cooperation and collaboration among traditionally competitive consumptive water interests and a blossoming energy sector.

(c) The collaborative protection and promotion of water quality and enhanced water storage will lead to greater cooperation, minimized evaporative losses from surface storage, better science based decisions, and utilization of El Paso County resources to meet El Paso County water demands, thereby reducing demand on the mainstem of the Arkansas and Platte Rivers and seeking to further develop efficient storage

that can reduce the Fountain Creek return flow and stormwater issues while making the most of any mainstem and/or trans-mountain water resources utilized in the County. This study will allow policy makers appropriate tools and resources in their decisions on how the basin is protected from potential contamination and further quantify how the basin could be used as enhanced storage and water making for future generations.

Tier 2: (d) The Phase 2 Groundwater Quality Study has a sizable scope of work with valuable deliverable which come at significant costs, for which there are very important long-range land use planning and supply security implications. Despite very significant local buy in from a wide variety of entities across a wide spectrum of industries and institutions, there is an unmet funding need. WSRA funding will provide measurable and significant leverage of the local dollars, allowing this valuable project to move forward.

(e) Local stakeholders have funded approximately 30% of the project, USGS matching funds can be leveraged up to 42% or \$144,000 if the full stream of adequate matching funds can be developed on top of local stakeholder contributions. Additionally, numerous other entities are making and have committed to on-going in-kind technical and/or manpower contributions that are essential to the budget and success of the Phase 2 project. El Paso County Health Department has committed to provide an intern, as needed, to assist USGS, in addition to a multitude of land use, zoning, small area master planning, and transportation and growth prediction mapping resources essential to the interface of vulnerability assessment with land use. Municipal districts and the Groundwater Management District have committed their consultants, staff, laboratory facilities, well logs and other relevant records.

Tier 3: (f) The project is essential to the protection of multiple use source of supply that supports everything from agriculture to industry..

(g) n/a

(h) n/a

(i) The oil and gas specific work and its incorporation into a vulnerability assessment based on geosciences is a model that can be utilized across this state and beyond.

(j) n/a

Funding Overview/Matching Funds:

	<u>Cash</u>	<u>In-kind</u>	<u>Total</u>
WSRA Statewide Account	\$41,933	n/a	\$41,933
WSRA Arkansas Basin Account	\$10,000	n/a	\$10,000
El Paso County	\$5,000	\$0	\$5,000
Cherokee Metro District	\$17,500	\$0	\$17,500
Woodmen Hills Metro District	\$5,000	\$0	\$5,000
Mountain View Electric Association	\$5,000	\$0	\$5,000
State Land Board	\$5,000	\$0	\$5,000
USGS	\$65,450	\$0	\$65,450
Total	\$154,883	\$0	\$154,883

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 and Final Deliverable: 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. 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.