

**Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
Agenda Item 17a**

Applicant: El Paso County

Water Activity Name: Groundwater Quality Study, Phase Two

Water Activity Purpose: Study

County: El Paso

Drainage Basin: Arkansas

Water Source: Upper Black Squirrel Creek Basin

Amount Requested: \$35,000

Source of Funds: Arkansas basin account

Matching Funds: In-kind contributions

Staff Recommendation
Staff recommends approval of up to \$35,000 from the Arkansas basin account to help fund the Groundwater Quality Study, Phase 2 Project contingent upon resolution of the items listed in the issues/additional needs section below.

Water Activity Summary:

The objective of this project is to gain a better understanding of the groundwater resources in the upper Black Squirrel Creek Basin, about 25 miles east of Colorado Springs, which supplies most of the water for irrigation and domestic use in the basin. This project seeks to aid in planning, decision making and public education related to groundwater and drinking water supplies and to provide for long term water resources protection and management. The results of this project will help to determine the age and flow directions of the groundwater and identify areas sensitive to groundwater contamination. Substantial growth of subdivisions in the upper Black Squirrel Creek Basin has led to considerable concern related to potential contamination of groundwater and to the municipal wells used to supply the smaller communities in the basin. Potential contamination from agricultural activities, unregulated industrial waste disposal, fueling facilities and storm water runoff is also a concern. Furthermore, there is interest in artificially recharging the groundwater in the aquifer in the future to help augment the existing groundwater resources and maintaining the quality of the groundwater resource is important to preserve options.

As indicated in the application, this project is the second phase of a project potentially consisting of three phases. Phase one of the project was the result of work sessions on the topic of groundwater contamination by the El Paso County Board of Commissions in 2009 and consisted of a summary of available data and literature search of studies completed in the basin. One of the recommendations was to implement a Phase 2 to investigate and refine the understanding of the groundwater flow system and to acquire the water quality data needed to support and scientifically defend land use planning decisions. If implemented, Phase 3 would utilize the information gained during the first two phases and develop recommendations on topics such as:

- Land-use planning regulations,
- Voluntary water quality protection programs,

- Public education and outreach,
- County administration and refinement of onsite wastewater system regulations,
- Future aquifer recharge sites,
- Areas of special concern for oil and gas drilling,
- Zones for wellhead protection,
- Long-term sampling of wells to monitor the potential effects from land-use development and oil and gas exploration, and
- Future susceptibility assessments in the Denver Basin bedrock aquifers.

Discussion:

Staff agrees that if the Upper Black Squirrel Aquifer will continue to be relied upon for domestic and outdoor uses as well as potential recharging of the aquifer, an understanding of the land use and potential contaminants is important. The Upper Black Squirrel Creek aquifer has been determined to be a suitable storage location (through a 2006 Colorado Geologic Survey study partially funded through the WSRA program) and this program will help to make sure that if the aquifer were to be used for aquifer recharge and storage, then the water quality would be protected to the extent possible through land use regulations, education and other means. Considering that this area has moderate land use densities (approximately one resident per 2.5 acres) and is located in close proximity to Colorado Springs, examination and protection of the groundwater quality is prudent to the long-term sustainability of the area.

Issues/Additional Needs: None

Reporting and Deliverables: 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.