

**Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
Agenda Item 7a**

Applicant: Lost Creek Groundwater Management District

Water Activity Name: Lost Creek Aquifer Recharge and Storage Study

Water Activity Purpose: Study of nonstructural/consumptive water needs

County: Arapahoe, Adams and Weld

Drainage Basin: South Platte

Water Source: South Platte

Amount Requested: \$160,000 (\$80,000 South Platte and Metro Basin Accounts)

Matching Funds: \$13,000

Staff Recommendation
Staff recommends approval of up to \$80,000 from the South Platte Basin Account and \$80,000 from the Metro Basin Account to help fund the Lost Creek Aquifer Recharge and Storage Study contingent on resolution of the items in the issues/additional needs section.

Water Activity Summary:

The objectives of this study are to compile, collect, and analyze hydrologic, aquifer property and water quality data to characterize the ground water resources in the alluvial aquifer and evaluate geographic, infrastructure, land ownership/use information for the purposes of assessing the potential for aquifer recharge and storage implementation. To address the needs of in-basin water rights holders and assist the management district in their decision-making processes, the applicants propose to:

1. Characterize the configuration and extent of the alluvial aquifer within the Lost Creek basin;
2. Compile and present current and historic ground-water levels and water level trends;
3. Characterize the amount of natural recharge and estimate the available storage capacity in the alluvial aquifer;
4. Determine hydraulic and storage properties of the alluvial aquifer;
5. Present the spatial relationship with the underlying Denver Basin bedrock aquifers;
6. Characterize the land use and ownership; and
7. Identify the existing water delivery infrastructure.

Discussion:

As indicated by the applicant, storage of water underground has many benefits over surface water storage including no evaporative losses, less security threat, lower vulnerability of contamination, less permitting hurdles and potentially lower implementation costs. The applicant also highlighted several relevant findings identified in SWSI including the fact that the South Platte basin has a water supply gap over 90,000 AF, competition in the basin is fierce, water supplies are not necessarily where demands are located, the reliance on non-renewable groundwater remains unresolved and new water development will most likely require additional storage. Lastly, the applicant refers to SB 06-193 directing the CWCB to study potential underground water storage areas in the South Platte and Arkansas River basins. Aquifers within those basins were evaluated for 10 criteria representing hydrogeologic, environmental, and implementation considerations. The two highest scoring subregions in the South Platte River basin were Lower Lost Creek and Upper Lost Creek, where the estimated storage capacity in the Lost Creek basin was over 1.4 million acre-feet.

While staff agrees with the applicant on the benefits of aquifer storage and recharge and that the SB 06-193 study demonstrated potential for aquifer recharge and storage in the Lost Creek aquifer, there are still broader questions that appear to remain unanswered. Primarily, the project does not identify a source of water for recharge purposes nor does it identify an end user. The scope of work includes the “identification of priority areas for potential aquifer recharge pilot areas” but does not provide enough information to determine if an evaluation of potential water supplies or end users is contemplated. Staff supports the overall concept of investigating aquifer recharge and recovery yet feels that without an identified water source or end user these funds could potentially be used for a project more likely to be implemented.

Threshold and Evaluation Criteria:

The application/project meets all four Threshold Criteria. No Statewide funds are being requested, therefore the evaluation criteria does not apply.

Issues/Additional Needs:

- Please include a more detailed project schedule that includes start and completion dates for key project milestones.
- Please provide a more detailed budget including level of effort for each task.
- Please provide more information for Task 3, specifically the analysis dealing with infrastructure and the subtask that will “identify priority areas for potential aquifer recharge pilot studies.”

Staff Recommendation:

Staff recommends approval of up to \$80,000 from the South Platte Basin Account and \$80,000 from the Metro Basin Account to help fund the Lost Creek Aquifer Recharge and Storage Study contingent on resolution of the items in the issues/additional needs section.

All products, data and information developed as a result of this grant must be provided to 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.