

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

Applicant: Cross Creek Metropolitan District

Water Activity Name: Hale Reservoir Renovation—Final Design and Permitting

Water Activity Purpose: Structural Water Project

County: El Paso

Drainage Basin: Arkansas

Water Source: Fountain Creek

Amount Requested: \$120,000

Source of Funds: \$100,000 (Statewide Account)

\$20,000 (Arkansas Basin Account)

Matching Funds: \$50,000 cash (\$35,000 Cross Creek Metro District and \$15,000 Mesa Ridge Metro District)

Staff Recommendation
Staff recommends approval of up to \$100,000 from the Statewide Account and up to \$20,000 from the Arkansas Basin Account to help fund the Hale Reservoir Renovation—Final Design and Permitting.

Water Activity Summary:

Hale Reservoir is a Low Hazard Classification Dam located in Fountain, Colorado. It is an embankment dam built around 1945 and it is in extremely poor condition. The original Hale Reservoir is decreed for 18 ac-feet of storage. The existing reservoir configuration is approximately 6 ac-ft in size with a dam height of 13.5 feet. The outlet works have been inoperable since 1985. The crest and downstream face of the dam are covered in heavy vegetation and are eroded. The dam has failed twice since CCMD took ownership of the property and there was a near-failure in 2011 as well.

Cross Creek Metropolitan District is seeking to renovate the reservoir in a way that meets multiple needs, including stormwater management, but also to serve non-consumptive aesthetic and recreational opportunities, including the environmental restoration of surrounding wetlands, providing wildlife habitat and birding opportunities.

The Hale Reservoir renovation is being designed so that it may be considered a non-potable well, serve as a supply for irrigation in the Cross Creek Regional Park, and perhaps serve surrounding landscape irrigation needs as well. This will free up funds in the District that are currently being spent on a potable source of supply, and will also free up that potable supply for future consumptive needs in El Paso County, serving municipal conservation goals. The Regional Park used 247,340 gallons of water in 2011.

In July, 2011, CCMD engaged the services of Applegate Group, Inc. in order to explore the possibility of enlarging Hale Reservoir and using it as a source of non-potable water. Applegate's work to date includes a Hazard Classification Report which has been submitted to the State. The District has paid a

total of \$34,393 for preliminary design and planning, and is now prepared to engage Applegate Group for Final Design and Permitting of the renovation.

The renovated Hale Reservoir will have a capacity of 100 ac-ft with an 18 ft embankment dam. A new water right will be obtained by the District for the additional storage capacity in the enlarged reservoir. The reservoir is filled with natural groundwater and a groundwater seep located to the north of the reservoir.

The existing dam will be completely removed and a new embankment constructed. The proposed Hale Reservoir Dam will be constructed of zoned cohesive earth fill. At this point in the design process a 4:1 side slope on downstream and upstream face of the dam are proposed.

This grant application is for the funding of the Final Design and Permitting of Hale Reservoir. An updated survey will be needed, along with updated wetlands delineation. A full geotechnical investigation of the site will be made, and hydrology and geotechnical reports will be prepared. A design report will be prepared to SEO regulations. Construction drawings and specifications will be completed and submitted to the SEO. A Section 404 Permit will be obtained from the ACOE and a Section 206 Grant application will be submitted. The non-potable water system will be designed, and a well permit obtained.

Discussion:

The Hale Reservoir Final Design and Permitting project appears to be project that appears to provide multiple benefits. The applicant articulates how a renovated Hale Reservoir will serve Environmental, Recreational, and Municipal/Industrial purposes. It will be used for Stormwater Management and as a Non-Potable source of Irrigation Water, conserving Municipal potable supplies. The reservoir will be re-sized and much more aesthetic, incorporating a large, unsightly drainage channel which is currently adjacent to the lake. Environment restoration of surrounding wetlands will be included, which will provide wildlife habitat. Also, if feasible, the lake may become a warm water fishery. In addition, the applicant has indicated that the District intends to apply for a CWCB loan/WSRA grant funding to complete the construction of the project. Due to these considerations, staff believes this project meets many of the Statewide Evaluation Criteria.

Issues/Additional Needs: None

Staff Recommendation:

Staff recommends approval of up to \$100,000 from the Statewide Account and up to \$20,000 from the Arkansas Basin Account to help fund the Hale Reservoir Renovation—Final Design and Permitting.

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.