

Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
September 15-17, 2015
Agenda Item 18(n)

Applicant & Fiscal Agent: Boulder County (Boulder County Parks and Open Space Department - BCPOS)

Water Activity Name: Swede Lake Dam and Reservoir Rehabilitation Project

Water Activity Purpose: Structural

County: Boulder

Drainage Basin: South Platte

Water Source: South Platte River

Amount Requested/Source of Funds: \$40,000 South Platte Basin Account
\$160,000 Statewide Account
\$200,000 Total grant request

Matching Funds: Basin Account Match (\$40,000) = 20% of total grant request (meets 5% min);
Basin Account and Applicant Match (\$645,000) = 322% of total grant request (meets 25% min);
Applicant Match (\$605,000) = 75% of total project costs (\$805,000)
(refer to *Funding Summary/Matching Funds* section)

Staff Recommendation:

Staff recommends approval of up to \$40,000 from the South Platte Basin Account and \$160,000 from the Statewide Account to help fund the project titled: Boulder County: Swede Lake Dam and Reservoir Rehabilitation Project.
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Water Activity Summary: WSRA funds will be expended to restore storage capacity to the AHI property (223 acre feet preserved) that is currently owned by Boulder County and is managed as a producing farm, under a farmer/tenant lease. With this storage the property will be able to retain farm production of the total 230 acres, with the potential of 47 additional acres. This property is in the process of transitioning to organic production. Without this storage a significant amount of surface water will need to be purchased in a basin that is already very over appropriated. In addition to its use as agricultural open space, this property provides beneficial habitat opportunities directly on the reservoir as well as the multiple areas of fringe agricultural fields and riparian corridors that are directly and indirectly supported by water from this reservoir.

This reservoir was acquired in April 2011 in conjunction with the purchase of the 757-acre AHI property. In 2010, the Division of Water Resources inspected the reservoir dam, as the reservoir is a jurisdictional dam under the State of Colorado Rules and Regulations for Dam Safety and Construction, and any work done to the dam beyond general maintenance needs to have the approval of the State Engineers Office (SEO). Due to the condition of the dam, the storage was restricted in 1987; the 2010 report noted that the condition of the structure appeared to be in a satisfactory condition at the restricted level; this report also noted that the owner was completing all required maintenance and that the condition of the dam was improving. When Boulder County acquired the

property, the condition of the reservoir was functional, however the reservoir failed in June 2013 when the outlet pipe collapsed.

Discussion:

An engineering study and report has been completed for Boulder County that more completely identifies the items requiring repair and provided a conceptual level cost estimate. Geotechnical field and office investigation of the dam embankment and prospective earth borrow sources was conducted (Engineering Analytics 2015) to determine the soils and bedrock characteristics of the site and the extent of embankment rehabilitation that would be needed. This investigation resulted in a report that concluded it was technically feasible from a geotechnical standpoint to rehabilitate the dam and that adequate local borrow sources exist. A design was completed to a preliminary design level that describes/illustrates the geotechnical components that will need to be included in the final design of the project rehabilitation. The main components are tree removal; filling, surface grading, and compaction; and construction of a drain/filter embankment zone along the toe of the dam. This geotechnical documentation can also be provided upon request. The dam and reservoir are currently existing and located off-stream. Their modification will have a minimal impact on the surrounding environment and minimal impact on riparian and wetland areas. Likewise, the dam and reservoir purpose is 100% for irrigated agriculture. This simplifies the overall project by requiring less evaluation and documentation and allowing it to proceed relatively promptly to construction.

Issues/Additional Needs: None identified.

Threshold and Evaluation Criteria: The application meets all four Threshold Criteria.

Tier 1-3 Evaluation Criteria:

This project has undergone review and evaluation per the Supplemental Scoring Matrix and staff has determined that this request satisfies the Evaluation Criteria. Further analysis of the project, and how the project will meet Tiered Evaluation Criteria, is provided by the applicant in the WSRA Application.

Funding Summary/Matching Funds:

	<u>Cash</u>	<u>In-kind</u>	<u>Total</u>
Boulder County	\$605,000	\$0	\$605,000
WSRA South Platte Basin Account	\$40,000	n/a	\$40,000
WSRA Statewide Account	\$160,000	n/a	\$160,000
Total Project Costs	\$805,000	n/a	\$805,000

CWCB Project Manager: Brent Newman

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.