

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

Applicant: Roaring Fork Conservancy (RFC)

Water Activity Name: Crystal River Watershed – Assessment and Design of Restoration Projects

Water Activity Purpose: Non-consumptive Non-Structural and Structural Water Project

County: Pitkin

Drainage Basin: Colorado

Water Source: Crystal River & Coal Creek

Amount Requested: \$317,073

Source of Funds: \$301,219 (Statewide Account) and \$15,854 (Colorado Basin Account)

Matching Funds: 194,961 (\$106,541 cash match and \$88,420 in-kind match). \$39,578 provided through CWCB Colorado Watershed Restoration Program. Match is 38% of total project cost. Match is 65% of statewide request (including basin and other CWCB funds). Non-CWCB match is 30% of total project cost.

Staff Recommendation
Staff recommends approval upon the condition of addressing concerns specified below in the Issues/Additional Needs section of up to \$15,854 from the Colorado Basin Account and \$317,073 from the Statewide account to help fund the Crystal River Watershed – Assessment and Design of Restoration Projects.

Water Activity Summary:

Funding is being sought to engage private consultants and a USFS-Rocky Mountain Research Station research geomorphologist to work on high-level, sub-watershed and site-specific land use and geomorphic assessments (Tasks #1 and #2) to provide the data necessary to design a comprehensive restoration plan for Coal Basin, the Coal Creek road corridor, and the highly-altered Coal Creek/Crystal River confluence area. The restoration plan will include the design and prioritization of site- and process-specific projects to achieve multiple non-consumptive objectives: (1) attenuate the Crystal River hydrograph, (2) contribute to the restoration of floodplain function at the Coal Creek/Crystal River confluence area, (3) improve overall riparian and in-stream habitat, and (4) reduce sediment and total iron delivery to the Crystal River from Coal Creek. This part of the project will use the *Watershed Assessment of River Stability and Sediment Supply (WARSSS)* as a guide.

WSRA funding will also be used to cover the cost of equipment and the labor associated with installing a permanent stream gage and companion meteorological station in Coal Basin to collect basic hydrologic/meteorologic information. One year of operation and maintenance (O&M) costs for the stream gage, suspended sediment sample processing and sampler maintenance, as well as coarse sample processing will also be covered by WSRA funds. (Task #3)

In Task #4 of the project, RFC will be collecting, analyzing and reporting water quality and macroinvertebrate data in Coal Basin and the Crystal River. These efforts are necessary to support the design of site- and process specific mitigation measures, and to determine the effectiveness of restoration efforts in the Coal Creek watershed. WSRA funds primarily will be used to cover a portion of the costs associated with macroinvertebrate analysis and water quality data analysis and interpretation.

RFC will be completing a 10.88 decommissioned mining road reclamation effort in Coal Basin (Task #5). The reclamation project will use biochar mixed with compost applied to constructed alluvial fans in some areas.

The upper portion of the old mining haul road at the project site will be reclaimed by recontouring the land surface to restore a more natural drainage pattern, applying compost. Erosion control materials (wattles, silt fencing, logs, and geotextile fabric) will be used on some of the fill slopes and treated with compost tea. Reclaimed areas will be re-vegetated with native grasses and trees, and fenced to prevent cattle grazing. WSRA funding is being sought to cover the cost of fencing, labor and materials costs associated with tree planting, some of the heavy equipment costs, and some of the personnel costs for a biogeochemist to monitor and report on soil conditions. RFC received \$39,578 from the CWCB Colorado Watershed Restoration Program to help fund Task #5.

Discussion:

The proposed project is designed to protect and enhance environmental and recreational values that benefit local and statewide economies. It is planned to improve channel/floodplain connections that have the potential to mitigate flood hazards while also improving habitat for aquatic and terrestrial species. Tasks 1 & 2 include a pragmatic approach to identify stream instabilities and areas of high sediment mobility. A similar assessment was implemented in the Horse Creek Watershed, tributary to the South Platte River, in the Hayman burn area. This strategy is also being considered for the Waldo Canyon burn area.

Tasks 3 & 4 will gather the baseline pre-implementation monitoring data that RFC will use later to demonstrate the effectiveness of its stabilization efforts. Task 5 is an implementation project proposed to demonstrate the effectiveness of biochar as a stabilizing soil amendment in Coal Basin.

Issues/Additional Needs:

- Staff requests that RFC make a good faith effort to secure other funding for this project. This can be accomplished by applying to grant programs outside of that which CWCB offers. Staff recommends that RFC seek an additional \$100,000 to offset the total amount needed from the Water Supply Reserve Account.
- RFC should work with CWCB Staff to ensure that geomorphic monitoring conforms to CWCB Measurable Results Program criteria.
- All proposed project designs for the Crystal River/Coal Creek confluence shall conform to the CWCB Rules and Regulations for Regulatory Floodplains in Colorado.

Staff Recommendation:

Staff recommends approval upon the condition of addressing concerns specified above in the Issues/Additional Needs section of up to \$15,854 from the Colorado Basin Account and \$317,073 from the Statewide account to help fund the Crystal River Watershed – Assessment and Design of Restoration Projects.

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.