

1. EXHIBIT A – STATEMENT OF WORK

WATER ACTIVITY NAME – Tenmile Creek Restoration Project

GRANT RECIPIENT – Blue River Watershed Group

FUNDING SOURCE –

Colorado Basin account: \$17,500. Water Supply Reserve account: \$332,500.

INTRODUCTION AND BACKGROUND

Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal) This project includes stream and floodplain restoration, soil amendment, wetlands creation, and re-vegetation in a heavily impacted reach of Tenmile Creek near the Copper Mountain ski area. This area has been impacted by historic mining, timber harvest, ski area development, and railroad and highway construction. Development along Tenmile Creek has altered its course and narrowed its floodplain. As early as the 1860's, Tenmile Creek had been altered by widespread deposition of sediments, including sediments from mining activity. The resulting morphology is a braided stream channel flowing over poorly vegetated alluvium. Additionally, direct inputs of storm water, traction sand, and petroleum products from State Highway 91 affect water quality in Tenmile Creek. This project will enhance floodplain connectivity, fish habitat quality, scenery, and wetlands function by recreating the stream morphology and floodplain characteristics that existed before mining and development. The project will increase sinuosity and length in the stream channel, increase pool habitat and cover for fish, and increase the total area of vegetated wetlands. The project will improve recreational opportunities and public access to Tenmile Creek. The project will create a vegetated buffer between the stream and State Highway 91, reducing stream sedimentation and flood damage to the highway.

OBJECTIVES

List the objectives of the project

1. Re-create desirable stream and floodplain characteristics believed to have existed before early mining practices
2. Create a stream channel with morphology resembling reference conditions for a stream in a broad sub-alpine valley
3. Convey water and sediment delivered from upstream without major channel change
4. Allow periodic flooding sufficient to support vigorous wetland and riparian habitat
5. Improve habitat for fish and other aquatic species
6. Reduce direct discharge of highway runoff into Ten Mile Creek

TASK 1 – Design- build scope and cost analysis

Description of Task

This task includes the final scoping of the design build project including the development of detailed costs for the project. This has been completed and the costs are not included in the reimbursement from the CWCB.

Method/Procedure

The BRWG has contracted with Ecological Resource Consultants, Inc. (ERC) to prepare final drawings for this design-build project. They have worked closely with the USFS to make sure that all of their objectives are included in the project plan. This has been a collaborative effort of ERC, the United States Forest Service (USFS), and the Blue River Watershed Group (BRWG). This phase has been completed and is not a part of this contract, but is an important task of the project.

Deliverable

This effort has produced a detailed work plan and detailed cost estimates that allow for the development of a construction contract for the project.

TASK 2 – Stream Improvements

Description of Task

This task includes the excavation of a new stream channel, the screening of excavated materials, the placement of material in the oxbow connection and old channel fill, the fine grading for riffle/pool sequences, the placement of a low permeability “liner” layer, the placement of riffle material, and the placement of instream habitat boulders and bank stabilization.

Method/Procedure

A design build contract has been entered into with Ecological Resource Consultants, Inc. who will subcontract with an excavation firm under their supervision to mobilize construction equipment and do the excavation using heavy equipment. Excavated material will be screened so it can be reused in the most effective manner.

Deliverable

The excavation and movement of materials will assure that the new stream channel remains wet during low flows, stays in the desired alignment during high flows and has the structural complexity needed to create quality habitat for aquatic organisms. The lining will assure that water is not lost to groundwater in the new channel.

TASK 3 – Riparian and Upland Restoration and Revegetation

Description of Task

This task includes the restoration of riparian and upland areas with the addition of soil and the revegetation with shrubs and grasses. This includes the use of vegetation to help in bank stabilization in key areas. This task also includes bank revegetation, native shrub planting in oxbow areas, and upland and riparian seeding .

Method/Procedure

A soil amendment recipe has been determined for the site. This soil will be distributed across the areas to be revegetated. Shrubs will be provided by the USFS and purchased commercially. A contractor will do the planting. Appropriate areas will be hydroseeded and hydromulched.

Deliverable

This will establish the desired native plant community on disturbed areas near the stream that would not be flooded often enough to support true wetland species.

TASK 4 – Construction Costs

Description of Task

This task includes mobilization and demobilization of construction equipment, water control during construction, site reclamation from construction impacts and construction best management practices.

Methods/Procedure

Heavy equipment will be mobilized for the instream excavation. An area on the Far East parking lot at Copper Mountain will be utilized to store equipment and materials. Best management practices to prevent runoff of disturbed areas will be implemented. All off site construction impacts will be mitigated and disturbed areas revegetated.

Deliverable

The project is being designed to minimize disturbances other than those planned in the stream, oxbow or riparian areas. This will result in minimal unwanted disturbance with all such areas reclaimed.

Budget & Timeline Table

Task	Description	Target Start Date	Target Completion Date	CWCB Funds	Other Funding Cash	Other Funding In-Kind	Total
1	Design/Build Scope and Cost Analysis	4/1/2013	7/31/2013	\$0.00	\$45,000.00		\$45,000.00
2	Stream Improvements	8/19/2013	10/18/2013	\$120,000.00		\$152,000.00	\$272,000.00
3	Riparian and Upland Restoration and Re-vegetation	9/15/2013	7/31/2015	\$155,000.00		\$5,000.00	\$160,000.00
4	Construction Costs	8/19/2013	10/18/2013	\$65,000.00	\$15,000.00		\$80,000.00
5	Construction Management	8/19/2013	7/31/2015	\$10,000.00	\$38,000.00		\$48,000
	TOTALS			\$350,000.00	\$98,000.00	\$157,000.00	\$605,000.00