

## **EXHIBIT A**

### **SCOPE OF WORK**

#### **OUTLINE AND BUDGETARY COSTS FOR A UNIFIED PLAN AND COST ESTIMATE FOR FULL UPPER SWAN RIVER RESTORATION PROJECT**

**OBJECTIVE:** The major goal of this additional engineering study is to produce a single, consistent plan that incorporates the area from the 2011 Blue River Watershed Group, (BRWG), recent plan and the 2009 Summit County plan into a single document. It is the intent that this document will take the design to a level that is adequate for design/build level restoration for all stream, riparian and upland areas. The plan will include road and road crossing designs taken to the level needed to set stream elevations throughout the entire project reach and develop construction cost estimates. The anticipated work scope contemplated by engineer for this budgetary cost estimate does not include final construction level design for the road crossings. Plans produced as part of this work scope would be taken to the level required for permit submittals, but actual permit applications, submittals and supporting work is not included in this intended work.

This proposed level of design detail anticipated as part of this work represents a rather significant refinement for the portions of the overall area that are part of the 2009 plan. As currently written the 2009 plan does not define key stream elevations, cross sections, road crossings details or related channel profiles, all of which are critical when contemplating an overall design plan for the full area. The 2011 plan area currently under final development by Ecological Resource Consultants, Inc., (ERC), include these design features, so the work scope anticipated as part of this plan will require less additional effort for these upstream areas.

As part of the work plan scope considered for this estimate, costs will be generated for the various reaches within the overall project area. Reaches will be defined based on logical construction phases. This reach based cost estimating will facilitate the group's ability to seek funding for project implementation for the various individual reaches.

**ITEM #1:** This plan will size of the road crossing at Tiger Run Road and determine the elevation of this crossing so that it can act as the single fish barrier along the overall project area. A vertical concept will be employed and it will produce a complete preliminary level design of this new crossing and also a revised Tiger Run Road profile. Design will include culvert crossing size, elevation and plan and profile for the revised Tiger Run Road. Culvert crossing evaluations will be completed using Fish X-ing software. As part of this evaluation, the necessary culvert sizing for all stream crossings within the project area, (including County Road 355, "County Line Road" and Parkville Road), will be defined.

**ITEM #2:** Prepare designs for the removal of the existing Muggins Gulch spur & reclamation and the creation of a new spur road that will link Tiger Run Road to Muggins Gulch. Design will include the plan and profile of the proposed new Muggins Gulch Spur.

**ITEM #3:** Define design/build level elevations for the full Swan River from the downstream end of the 2009 plan area through the upstream end of the 2011 plan area. Prepare design/build level plan and profile drawings for the full project area. Intended elevations for the key stream features including riffles and pools will be determined. Please note that the 2009 plan does not provide any stream

elevations, so this task will include the full project area yet a majority of the work will be focused on the downstream half of the project where no elevations have been defined.

ITEM #4: Develop design/build level cross sections and details for the restored stream that are compatible with the full project area. It is believed that the details being prepared for the 2011 project can be utilized for the 2009 plan area, where such details were not defined. However, this assumption will be verified as part of this work task.

ITEM #5: Define the extents of the riparian restoration for the full project area and develop a planting plan for the riparian and upland areas. The design will include typical cross-sections extending from the channel edge, through the riparian area and into the upland zones. For the design/build level plan, the planting plan will evaluate species and planting densities and recommend configurations, (i.e. define planting zones or areas), but will not identify exact planting locations within the overall plan. This approach will facilitate development of detailed construction cost estimating and will include per acre revegetation costs for riparian and upland areas.

ITEM #6: Develop detailed, itemized construction cost estimates for the entire project area. Costs will split the full area into defined project reaches, (identified on the overall), to facilitate funding requests for the project on a reach-by-reach basis. The cost for this item was assumed to also include compilation of a technical design memo that is the basis for the full project and the drafting & preparation of the overall design plan. Interaction with the project team including limited numbers of project meetings is assumed to be part of this item. As a part of this plan, the engineer will quantify the total open surface water area as well as the area of any proposed wetlands. It will also quantify existing surface areas. This information will be presented to help facilitate an evaluation of water rights required for this project. It is assumed that the water rights evaluation itself will be conducted by others or at a later time by the engineer.

ITEM #7: Develop a plan showing locations for the test pits that can be used to monitor seasonal fluctuations in groundwater levels on both the 2009 and the current project areas. Pit locations will be selected to provide a spatial and temporal picture of groundwater levels throughout the valley. Data collected as part of this monitoring effort will be evaluated and predicted groundwater levels throughout the valley, as it relates to the proposed stream restoration will be defined. It is assumed that others will be responsible for constructing the monitoring pits. Staff gages and associated infrastructure should be monitored and Summit County, or others, would be responsible for collection of the weekly groundwater levels and transferring this data to the engineer for analysis.

OVERALL PROJECT BUDGETARY COST: \$42,000.00

## 1. WATERRIGHTS, AVAILABILITY, AND SUSTAINABILITY

At this time, it is unknown the amount of new water rights that may be required by the creation of new wetlands and riparian area associated with the implementation of this project. The river will be restored to the original state of riparian habitat, just as it was before the mechanical mining took place about one hundred years ago. As stated above, the engineer performing the additional study will quantify the new total of open surface water and any proposed wetlands, which will help facilitate an evaluation of water rights required for the project. Mr. Scott Hummer, Project Manager for the Colorado Water Trust, has committed his help and expertise in the establishment of the required amount of new water rights required by this project. New water rights should be available for purchase throughout this basin.

## **BUDGET FOR ADDITIONAL ENGINEERING STUDY**

### **FUNDING SOURCES FOR THE PROJECT**

Water Supply Reserve Account Grant, (CRT)	<b>\$ 30,000.00</b>
Matching Funds	
1. Town of Breckenridge	10,000.00
2. Summit County Open Space and Trails	10,000.00
<b>TOTAL FUNDING</b>	<b>\$ 50,000.00</b>

### **PROJECT EXPENDITURES**

Consultant Fees for Additional Studies	\$ 42,000.00
Administration Fees – Blue River Watershed Group	4,200.00
Education and Outreach	2,000.00
Additional Work & Miscellaneous Expenses	1,8000.00
<b>TOTAL EXPENDITURES</b>	<b>\$ 50,000.00</b>

## **PROJECT SCHEDULE**

Startup Date	June, 2012
Work is expected to take four months for completion	
Completion of Project	September, 2012