Scope of Work

GRANTEE and FISCAL AGENT (if different) -The Upper Walker Ditch Company/Walker Ditch Company % Doug Monger 12110 CR 69 Hayden, Co. 81639

PROJECT NAME -Yampa River/Walker Ditch River Restoration Project

GRANT AMOUNT –$20,000 1177 Basin Account, $20,000 1177 State Account, $20,000, $20,000 Watershed protection grant. Total CWCB Grants $60,000.

INTRODUCTION AND BACKGROUND

Provide a brief description of the project.

The Walker Ditch point of diversion is located on the south side of the YampaRiver on the Carpenter Ranch near Hayden. The YampaRiver is a dynamic river, constantly moving and evolving, and this is documented by past aerial photos and past and present surveys of the river. The Walker Ditch and its head gate were both constructed in the late 1800's. In the early 1900's the river evolved and moved to the point where the ditch had to be lengthened and a new diversion head gate had to be constructed. In 1985, the river moved again, causing the main body of the river to shift away from the second head gate. Since the river shift in 1985, the river has continued to migrate further north. During the last few years another new channel has developed north of the main river channel. This new channel is now capturing almost the entire flow of the river. Since 1985 when the river made a major shift, temporary gravel dams have been required to get water to the Walker ditch head gate in low flow times. Recently, with the main body of the river moving increasingly further away from the diversion point, more and bigger seasonal gravel dams are required to divert late summer low flows into the South meander bend (pre 1985 channel) that supplies water to the ditch. The goal of the project is to construct an obstruction of the new north side channel with root wads,

boulders and other approved natural materials that will create an effective floodplain in the newly created north channel, decrease the rate of river migration, and maintain low flows in the south channel that feeds the Walker Ditch head gate. In addition to the north channel obstruction, two low head boulder diversion structures will be installed to provide a long-term and sustainable diversion system that is not a barrier to fish migration and recreational boating, but will deliver a full decree of reliable irrigation water to local ranches, the Town of Hayden, and other users who make up the ditch members.

The project will be managed and administered by the Upper Walker Ditch Company or their representative. Funding partners include the Upper Walker Ditch Company, the Walker Ditch Company, the Upper Yampa River Water Conservancy District. In kind contributions will come from the Town of Hayden, Wolf Mountain Ranch, the two ditch companies, and possibly others.

(Please limit to half a page)

OBJECTIVES

List the objectives of the project. Please include objectives for all aspects of the project whether funded by the CWCB or not

1. The river restoration project will stabilize this particular river section while adding benefits to the down river properties, including decreasing the rate of river migration and increasing public safety by adding indirect protection to the Town of Hayden's water filtration plant. This project will help maintain the existing water rights of the Walker Ditch and will not in any manner amend the existing water rights adjudication system or restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law.
2. This project affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This project will not diminish, impair, or cause injury to any property or contractual right created by

intergovernmental agreements, contracts, or stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This project will not supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights and does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

3. Provide a full decree of irrigation water to the Walker Ditch
4. Reconstruct the floodplain with natural materials that will recreate an effective floodplain to dissipate flood stage hydraulic energy and revegetate with native riparian species.
5. Provide water to critical aquatic and terrestrial habitat around ElkIsland.
6. Eliminate routine annual excavation in the river bottom.
7. Construct two low-head rock diversion structures that will divert both irrigation and environmental sustaining flows without creating a barrier to fish migration and recreational boating.

TASKS

Provide a detailed description of each task using the following format. Detailed descriptions are only required for CWCB funded tasks. Other tasks should be identified but do not require details beyond a brief description.

TASK 1 – Hydrologic Analysis

Description of Task Hydrologic and hydraulic analysis of the river above and below the diversion

Method/Procedure Field data collection and creation of a HEC-RAS model to determine the bankfull water surface elevation and the change in water surface elevations at various flow events due to floodplain reconstruction.

Deliverable Output files from HEC-RAS model.

TASK 2 – Design Drawings

Description of Task Development of design drawings for construction of the project.

Method/Procedure Field surveying data collection and development of AutoCAD drawings.

Deliverable Design drawings & material quantities for construction.

TASK 3 – Floodplain Reconstruction

Description of Task

Rehabilitate the north side channel into an effective floodplain with native riparian vegetation.

Method/Procedure

Fill with root wads, boulders, woody debris, gravel & native riparian plantings to the bankfull height of the floodplain.

Deliverable

Effective floodplain for dissipation of flood flow energies and low flow diversion to south channel and Walker Ditch.

TASK 4 – Diversion Structures

Description of Task

Construct two low-head diversion structures to divert low flows into the Walker Ditch and to critical habitat around ElkIsland.

Method/Procedure

Install boulder diversion structures in the existing south channel to direct water through the historic ElkIsland meander bend and slough and at the point of diversion into the Walker Ditch.

Deliverable

Delivery of minimum flow necessary to fulfill Walker Ditch water right and provide environmental enhancement flows to ElkIsland.

TASK 5 – Project Management

Description of Task

Construction management and grant administration

Method/Procedure

Semi-annual reporting and accounting to funding entities

Deliverable

Final report and account reconciliation to the Colorado Water Conservation Board

REPORTING AND FINAL DELIVERABLE

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 statement 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.

Budget & Timeline Table

Task	Description	Target Start Date	Target Completion Date	CWCB Funds	Other Funding Cash*	Other Funding In-Kind*	Total
1	**Hydrologic Analysis**	9/19/2011	10/7/2011	$0	$10,000	$5,000	15,000.00
2	**Design Drawings**	9/19/2011	10/3/2011	$0	$10,000		10,000.00
3	**Floodplain Reconstruction** Materials (logs delivered, cable) Construction & Installation	10/24/2011	11/30/2011	 $16,500 $19,795	 $12,805		 49,100.00
4	**Diversion Structures** Materials (large boulders) Construction & Installation	10/24/2011	11/30/2011	 $10,250 $13,455	 $10,000	 $7,800	 41,505.00
5	**Project Management**	9/1/2011	1/31/2012	$0	$12,195		12,195.00
	TOTALS			**$60,000**	**$55,000**	**$12,800**	**127,800.00**

This table is a guide. Variations may be submitted. For example, if a task includes purchase of materials, a column that identifes cost per unit should be included.

Other Cash Funding		
Walker Ditch Users	$	30,000
Upper Yampa Water Conservancy Di	$	25,000

*Please include new columns for different sources of cash and/or in-kind funding sources. Identify the funding source.

In Kind			
Wolf Mountain Ranch (Surveying)	$	5,000	
CDOT rock donation	$	7,800	300 tons @ $26/ton

$200/tree delivered + $75/tree for anchoring X 60 trees

1-50,000 lb excavator, 1-50,000 lb loader, 1 jackhammer and compressor for 5 days

205 cy of boulders X $50/CY for 2 in-stream structures

1-50,000 lb excavator, 1-50,000 lb loader for 3 days

13.5% of construction costs