COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Gunnison – Tornay Highline Diversion Improvement Project
PO# POGG1 2019-2389

October 26, 2018

Diane E. Martin
525 CR 75
Gunnison, CO 81230

Dear Grantee:

We are pleased to inform you that the Colorado Department of Natural Resources, Colorado Water Conservation Board (CWCB) has approved your application for funding pursuant to the WSRF Grant Program ("Program") in the amount of $15,000.00. This letter authorizes you to proceed with the Tornay Highline Diversion Improvement Project ("Project") in accordance with the terms of this Grant Award Letter.

Attached to this letter are the terms and conditions of your Grant. Please review these terms and conditions, as they are requirements of this Grant to which you, Diane Martin, agree by accepting the Grant Funds.

The WSRF Criteria & Guidelines can be located on our website for additional information.

If you have any questions or concerns regarding the project, please contact Craig Godbout, Project Manager at 303-866-3441 or at Craig.Godbout@state.co.us. Please send the 6-month progress reports and invoices directly to the Project Manager and cc me at Dori.vigil@state.co.us.

Thank you.

Sincerely,

//s//

Doriann Vigil
Program Assistant II
O 303-866-3441 ext. 3250
1313 Sherman Street, Rm. 719, Denver, CO 80203
Dori.vigil@state.co.us / cwcb.state.co.com

Attachments

STATE OF COLORADO

Department of Natural Resources

ORDER ******IMPORTANT******

Number: POGG1,PDAA,201900002389

Date: 10/26/18

Description:

PDAA WSRF TORNAY HIGHLINE DIV. IMPROVE_GUN

The order number and line number must appear on all invoices, packing slips, cartons, and correspondence. Please review each line for its corresponding shipping/ billing address and delivery instructions.

Effective Date: 10/29/18 **Expiration Date:** 06/30/19

BUYER

Buyer:

Email:

VENDOR

DIANE E MARTIN
22157 RED HAWK LANE
GOLDEN, CO 80401

Contact: .

Phone: .

EXTENDED DESCRIPTION

Line Item	Commodity/Item Code	UOM	QTY	Unit Cost	Total Cost	MSDS Req.
1	G1000		0	0.00	$15,000.00	☐

Description: PDAA WSRF TORNAY HIGHLINE DIV. IMPROVE_GUN

Service From: 10/29/18 Service To: 06/30/19

Delivery Instructions

FOB: FOB Dest, Freight Allowed Delivery Date: -

Ship To:	Bill To:
COLORADO WATER BOARD CONSERVATION	COLORADO WATER BOARD CONSERVATION
1313 SHERMAN STREET, ROOM 718	1313 SHERMAN STREET, ROOM 718
DENVER, CO 80203	DENVER, CO 80203

TERMS AND CONDITIONS

https://www.colorado.gov/pacific/osc/small-dollar-grant-award-terms-conditions

DOCUMENT TOTAL = $15,000.00

Last Update: October 24, 2017

Colorado Water Conservation Board	
Water Supply Reserve Fund	
Exhibit A - Statement of Work	
Date:	**10/30/17**
Water Activity Name:	**Tornay Highline Diversion Improvement**
Grant Recipient:	**Diane Martin**
Funding Source:	**WSRF GBRT basin account**

Water Activity Overview: (Please provide brief description of the proposed water activity (no more than 200 words). Include a description of the overall water activity and specifically what the WSRF funding will be used for.

This project is a collaborate effort between Green Mesa Ranch and Trout Unlimited to reconstruct the Tornay Highline diversion structure. The project is located on Quartz Creek approximately 12 miles east of the city of Gunnison. Green Mesa Ranch is a 330-acre ranch owned by Johnny Leverett. Owners produce grass hay and pasture livestock on the irrigated land.

The Tornay Highline ditch is owned by Green Mesa Ranch and delivers water for irrigation of 224 acres of grass hay meadow and pasture. There are three water rights associated with the Tornay Highline ditch totaling 20.7 cfs: 3.6 cfs adjudicated 1915, 9.6 cfs adjudicated 1943, and 7.5 cfs adjudicated 1943.

The existing Tornay Highline diversion is difficult and dangerous to operate, is a barrier to trout, and is contributing to channel instability thru the segment of Quartz creek. This project will replace the existing structure with a new structure will improve ditch operations, operator safety, channel stability, and fish passage.

Trout Unlimited is contributing in-kind labor to assist the applicants in funding, design, and construction of the new diversion. Trout Unlimited is a national sportsmen conservation organization working to conserve, protect, and restore North America's cold-water fisheries.

Objectives: (List the objectives of the project)

Completing the diversion reconstruction by December 1st, 2018 will:

- Improve access and control of pre-compact water rights.
- Improve safety of personnel operating diversion
- Reduce in channel disturbance caused by diversion maintenance.
- Reduce risk of diversion failure during high flow periods.
- Improve trout passage for spawning and migration.
- Improve channel stability and instream habitat.
- Improve wintering trout habitat with pooling below the diversion.

Last Update: October 24, 2017

Tasks
Provide a detailed description of each task using the following format:
Task 1 – Remove existing Diversion
Description of Task:
This diversion is located next to Gunnison County Rd 87. The inlet pipe goes from the head gate directly under the county road so the pipe and head gate will remain in place. The existing diversion consists of two concrete block abutments, one located on each side of the channel, and a concrete apron on the channel bed. The channel width between abutments is 13 feet. Beams are staked between the abutments to raise the water elevation for the ditch inlet during low flow periods and ideally removed as flows increase. The process of placing and removing beams requires the use of heavy equipment and adjustments are often postponed due to staffing and equipment availability. If beams are in place during high flows water overtops and erodes bank material around the buttress blocks. Additionally, when the beams are in place this diversion is a complete barrier to trout migration. If the beams are not in place, or not placed properly, during low flow periods water users are unable to get water into the ditch inlet. The width between the abutments is too narrow and material tying the abutments to the bank is unstable. The apron on the channel bed has shifted. This task will involve deconstruction of the existing structure and reshaping the channel to the width and slope appropriate for this segment of stream.
Method/Procedure:
An excavation contractor will be hired to remove existing abutment blocks, apron, and material near the abutments. Usable material will be sorted and stockpiled for use during reconstruction. Construction of the new channel profile will occur during this task by widening the channel by 5-8ft. A coffer dam will be constructed to dewater the left side of the channel. Channel substrate will be graded in preparation for the new apron and abutment. Mobilization of equipment to the site is also included in this task.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
• Hire contractor • Mobilize equipment to site • Old diversion removal • Material sorted • Channel clean up and reshaping

Last Update: October 24, 2017

Tasks
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
Contract with contractor Photos of work to document progress Summary report of work completed.

Tasks
Provide a detailed description of each task using the following format:
Task 2 – New Diversion Construction
Description of Task:
To reduce costs and minimize the risks of damage from icing and flooding, the new diversion will use a similar design to the existing structure in that it will have two abutments and concrete apron base. The changes to the structure design will include an increase in the width between the abutments, improved rock reinforcement of the stream bank and channel near the structure, and installation of a metal walkway. To adjust the water elevation individual 12'-24' wide vertical panels will be used instead of channel wide horizonal beams. The walkway and panels will be described in Task 3. Raising the elevation of the apron will compensate for the throat width increase and will improve the availability of water at the ditch inlet during a range of flow levels. The apron will have a 2ft segment in the center consisting grouted rock. This segment will aid in trout passage as panels are placed other segments. In addition to the improvements described above, angular rock will be used to reinforce stream banks near each abutment. A cross-vane will be constructed with angler rock downstream of the structure apron to reduce velocities, create pooling, and control scouring below the structure. The goal is to maintain velocities through the center segment near or below 4-5 feet/sec. This velocity range may be difficult to meet when all other check panels are in place, but the grouted rock segment, and cross-vane below will provide roughness and pooling to increase the chances trout can dart through the center segment. There may be times when this segment is blocked, during that period passage will be restricted.
Method/Procedure:

Tasks
Rock and additional concrete blocks will be purchased and stockpiled at the site. Beginning with the left side of the channel, the contractor will construct a new apron on the stream bed using 2'x2'x6' concrete blocks. Blocks will be placed long ways in line with flow direction. The apron elevation will be 6-8 inches higher than the invert of the inlet pipe. The abutment will be tied into the outer 2ft of the apron. Angler rock and cobble material will be used to fill around the abutment and rip-rap the banks above and below the structure. The coffer dam will be adjusted to dewater the opposite side of the channel. The same method will be repeated to build the right side of the structure. The 2ft segment in the center of the apron will be set at a lower elevation than the others grouted rock or natural rock substrate will be used to fill that segment. The cross vane will be constructed as an upstream arch with arms shaped at a 20% angle to the direction of flow. The elevation in the center of the arch will be lower and slope upward to the elevation of bank full stage. The cross-vane will rest on footer rocks and be keyed into each stream bank.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
We expect to see a newly constructed diversion that will allow for operational ease and safety, channel stability, and passage for trout.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
• Progress photos as work is completed. • Invoices for contracting and materials. • 6-month reporting describing progress. • Final reporting summarizing project.

Tasks
Provide a detailed description of each task using the following format:
Task 3 – Walkway and Panel construction
Description of Task:
This task will involve the construction and placement of a walkway that spans over the channel. The walkway will rest on and be secured to the right bank and the left bank abutment. The walkway will be used to adjust the vertical check panels and to mount the lifting mechanisms. The panels and vertical angle iron supports will be supported by the walkway and by an angle iron or concrete lip on the upstream base of the structure. The width between vertical panels will be easily adjustable to compensate for water pressure resistance. It will not be necessary to have all the panels in place across the channel except for during lower flow conditions. Two small hydraulic jacks or hand cranks will be mounted on the walkway and used

Tasks
to mechanically raise the panels.
Method/Procedure:
A contractor will be hired to weld the walkway to span the channel. Two pieces of iron tubing or I-beams will be placed at a 3-foot width and secured to each abutment. Three cross members will be welded between the two spanning beams. Pressure treated decking will be attached to the top of the beams. Metal tubing railing will be constructed in 3-4 foot segments and inserted into circular slots welded on the upstream side of the walkway. Eight 4 foot pieces of 2-inch angle iron will cut and welded back-to-back and be hinged to the upstream spanning beam. They will pivot on the hinge so they can drop into place in the stream or be flipped up and secured in a vertical position when not needed to support check panels. Check panels will be cut from pressure treated plywood. Panel width will be 2 feet and height will vary from 1-2 feet.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
The ability to manually and safely adjust the elevation of water at the ditch head gate during a range of flow levels.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
• Progress photos as work is completed. • Invoices for contracting and materials. • 6-month reporting describing progress. • Final reporting summarizing project.

Tasks
Provide a detailed description of each task using the following format:
Task 4 – Project Management
Description of Task:

Last Update: October 24, 2017

Tasks
This task will involve general management the of the construction project. Including contracting, invoicing and project reporting to funding agencies.
Method/Procedure:
Diane Martin and Jesse Kruthaupt will share the role of project managers. Diane will oversee contracts between the ranch and the excavation company and welding contractor hired to perform work on the diversion. Diane will also manage and invoice for work completed by ranch personnel with ranch equipment. Jesse Kruthaupt will assist the applicant with design, onsite management during construction, contracting with funding agencies, and reporting to funding agencies. Jesse is employed by Trout Unlimited and his time will be TU's in-kind contribution to the project.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
Record of project management hours and billing rates.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
• Invoice describing Diane Martins hours spent on project management and billing rate for those hours. • Invoice describing Jesse Kruthaupt hours spent on project management and billing rate for those hours.

Budget and Schedule
Budget: This Statement of Work and Schedule shall be accompanied by a Budget (link?) that reflects the Tasks identified in the Statement of Work and Schedule and shall be submitted to CWCB in an excel format.
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Last Update: October 24, 2017

Reporting Requirements
Reporting: The grantee shall provide their respective Roundtable(s) and the CWCB a Progress Report every 6 months, beginning from the date of executed contract. The Progress Report shall describe the status of the water activity, 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 to address these issues. The CWCB may withhold reimbursement until satisfactory Progress Reports have been submitted.
Final Deliverable: At the completion of the water activity, the grantee shall provide their respective Roundtable(s) and the CWCB a final report on the grantee's letterhead that: • Summarizes the water activity and how the water activity was completed • Describes any obstacles encountered, and how these obstacles were overcome • Explains the Proposed Budget versus the Actual Budget • Confirms that all matching commitments have been fulfilled • Includes photographs, summaries of meeting and engineering reports/design, if appropriate The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the water activity and purchase order or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to CWCB within 90 days of the expiration of a purchase order or contract may be denied consideration for future funding of any type from CWCB.

Last Update: May 19, 2017

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Supply Reserve Fund
Exhibit B - BUDGET AND SCHEDULE

Date: 10/30/2017

Water Activity Name: Tornay Highline Diversion Improvement

Grantee Name: Diane Martin

Task No.	Description	Start Date[1]	End Date	Matching Funds (cash & in-kind) Ranch/Water Users	Matching Funds TU (In-kind)	Matching Funds (Cash) Requested UGRWCD	WSRF Funds (Basin & Statewide combined)[2]	Total
1	**Remove Existing Diversion**	**10/29/2019**	**06/30/2019**	**$1,000.00**	**$375.00**	**$2,800.00**	**$0.00**	**$4,175.00**
	Ranch Loader/Backhoe and labor			$1,000.00	$0.00	$0.00	$0.00	$1,000.00
	Excavation including (mobilization to from site)			$0.00	$0.00	$2,800.00	$0.00	$2,800.00
2	**New Diversion Construction**	**10/29/2019**	**06/30/2019**	**$2,000.00**	**$375.00**	**$11,200.00**	**$7,000.00**	**$20,575.00**
	Excavation including (mobilization to from site)			$0.00	$0.00	$3,000.00	$7,800.00	$10,800.00
	Ranch Loader/Backhoe and labor			$2,000.00	$750.00	$0.00	$0.00	$2,750.00
	1-4 foot rock rip rap and boulders			$0.00	$0.00	$6,700.00	$0.00	$6,700.00
	2x2x6 Block			$0.00	$0.00	$1,500.00	$0.00	$1,500.00
3	**Walkway and Panel construction**	**10/29/2019**	**06/30/2019**	**$1,700.00**	**$700.00**	**$3,000.00**	**$8,000.00**	**$13,400.00**
	Welding and materials			$1,000.00	$0.00	$3,000.00	$6,300.00	$10,300.00
	Decking labor			$700.00	$700.00	$0.00	$0.00	$1,400.00
	Decking materials			$0.00	$0.00	$0.00	$800.00	$800.00
	Panels and angle iron supports			$0.00	$0.00	$0.00	$900.00	$900.00
4	**Project Management**	**10/29/2019**	**06/30/2019**	**$1,050.00**	**$1,550.00**	**$0.00**	**$0.00**	**$2,600.00**
	Contracting			$300.00	$300.00	$0.00	$0.00	$600.00
	Reporting and invoicing to funders			$0.00	$500.00	$0.00	$0.00	$500.00
	Construction on site management			$750.00	$750.00	$0.00	$0.00	$1,500.00
			Total	$5,750.00	$3,000.00	$17,000.00	$15,000.00	$40,750.00

Reimbursement eligibility commences upon the grantee's receipt of a Notice to Proceed (NTP)

NTP will not be accepted as a start date. Project activities may commence as soon as the grantee enters contract and receives formal NTP if prior to the listed "Start Date"

CWCB will withhold the last 10% of the entire grant budget until the Final Report (Deliverable) is completed and accepted (2016 WSRF Criteria & Guidelines).

Additonally, the applicant shall provide a progress repost every 6 months, beginning from the date of contract execution