COLORADO
Colorado Water Conservation Board
Department of Natural Resources

1313 Sherman Street, Room 718
Denver, CO 80203

November 1, 2016

Nature Conservancy
Attn: Celene Hawkins, Project Manager
4245 Fairfax Drive, Suite 100
Arlington, VA 22203-1637

RE: Notice to Proceed – WSRF Grant – **POGG1 2017-494 – Wines Ditch #1 Diversion Structure & Conveyance System Improvement, Phase I Preliminary Design, Alternatives Analysis & Construction Cost Opinion**

Dear Celene,

This letter is to inform you that purchase order to assist in the above WSRF grant project has been approved. The email notice and attachments serve as your original contract documents.

With the executed purchase order you are now able to proceed with the project and invoice the State of Colorado for costs incurred through July 31, 2018. Please provide the project name, POGG1 number, and basin when corresponding with or invoicing for your project. Upon receipt of your invoice(s), the State of Colorado will provide payment no later than 30 days after review and signed approval of the project manager.

Please refer to the WSRF Criteria & Guidelines for reporting requirements for the six month progress report and final deliverable requirements in order to avoid a delay in payment.

If you have any questions or concerns regarding the project, please contact Anna Mauss, Project Manager at 303-866-3441 x3224 or at anna.mauss@state.co.us. You can contact me at 303-866-3441 ext. 3250 for invoicing and payment disbursement questions.

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
Number: POGG1 PDAA 201700000494
Date: 11/01/16
Description:
PDAA 2500 WSRF Wines Ditch Diversion Evaluation in the SW
Effective Date: 10/15/16 Expiration Date: 07/31/18

BUYER
Buyer:
Email:

VENDOR
NATURE CONSERVANCY
4245 FAIRFAX DR
STE 100
ARLINGTON, VA 22203-1637

Contact: Fax Information
Phone: 719-456-0720

**** IMPORTANT ****
The order number and line number must appear on all invoices, packing slips, cartons and correspondence

BILL TO
COLORADO WATER BOARD CONSERVATION
1313 SHERMAN STREET, ROOM 718
DENVER, CO 80203

SHIP TO
COLORADO WATER BOARD CONSERVATION
1313 SHERMAN STREET, ROOM 718
DENVER, CO 80203

SHIPPING INSTRUCTIONS
Delivery/Install Date:
F.O.B: FOB Dest, Freight Allowed
VENDOR INSTRUCTIONS:

Line Item	Commodity/Item Code	UOM	QTY	Unit Cost	Total Cost	MSDS Req.
1	G1000		0	0.00	$40,000.00	☐

Description: PDAA 2500 WSRF Wines Ditch Diversion Evaluation in the SW

Service From: 10/15/16 Service To: 07/31/18

Line Item	Commodity/Item Code	UOM	QTY	Unit Cost	Total Cost	MSDS Req.
2	G1000		0	0.00	$25,000.00	☐

Description: PDAA 2500 WSRF Wines Ditch Diversion Evaluation in the SW

Service From: 10/15/16 Service To: 07/31/18

TERMS AND CONDITIONS
https://www.colorado.gov/osc/purchase-order-terms-conditions

DOCUMENT TOTAL = $65,000.00

Exhibit A
Statement of Work
Date: July 1, 2016

WATER ACTIVITY NAME - Wines Ditch No 1 Diversion Structure and Conveyance System Improvements, Phase I - Preliminary Design, Alternatives Analysis, and Construction Cost Opinion

GRANT RECIPIENT – The Nature Conservancy

FUNDING SOURCE – CWCB Water Supply Reserve Account, Basin and Statewide Accounts (55%), The Nature Conservancy (26% cash and in-kind), and American Whitewater (9% cash and in-kind). In-kind funding from Colorado Parks and Wildlife (6%) and Western Sky Investments (4%).

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 will evaluate the preliminary design, alternatives analysis, and construction cost opinions for the reconstruction of the Wines Ditch No. 1 Diversion Structure located on the Dolores River near Gateway, Colorado. The project will address multiple consumptive and non-consumptive water interests, including water delivery improvement, sensitive species enhancement and protection, channel stabilization, riparian improvement, and recreation improvement.

Currently, the diversion structure requires substantial maintenance to provide full delivery of a pre-Compact water right, does not allow for regular boat passage, and may create stream bank erosion. In addition, during high water events, the diversion structure is typically breached and no longer acts as a fish barrier, thus increasing the potential for introgression and hybridization of sensitive native upstream species in the San Miguel and Dolores Rivers.

The WRSA funds requested are for preparation of a preliminary design for construction of an improved diversion structure that will allow the fulfillment of the Wines Ditch No. 1 water right with potential for enhanced fish protection, riparian restoration, and improved recreational usage. The work will include topographic, hydraulic, and economic analysis, a fishery characteristic and riparian habitat evaluation, the preparation and evaluation of several alternative schematics for design consideration, and stakeholder input.

OBJECTIVES

The purpose for this project is to develop a preliminary design, alternatives analysis, and construction cost opinion for the Wines Ditch No. 1 Diversion Structure and Conveyance System located approximately 3.5 miles downstream of Gateway, Colorado, and approximately 4 miles upstream of the Colorado-Utah Border. Anticipated benefits of the project include:

1. Allowing for the full delivery of a pre-Compact water right.

2. Improving the Wines Ditch No. 1 capacity of for effective conveyance of the diverted water.
3. Enabling regular boat passage.
4. Enhancing riparian habitat.
5. Stabilizing the channel.
6. Implementing a fish barrier to protect and enhance upstream sensitive fish species from introgression and hybridization of downstream nonnative species.

The proposed project is the first phase of a multi-phase project. Phase 1 includes scoping, alternatives analysis, and the development of a preliminary design. Phase 2 will include the final design, permitting, contractor selection, and construction.

TASKS

The following describes the steps and methods that will be used to complete the objectives of this proposed project.

TASK 1 – Project kick-off meeting

Description of Task

- Initial meeting between Wright Water Engineers (WWE), Western Sky Investments, Bureau of Land Management (BLM), Mesa County, The Nature Conservancy (TNC), American Whitewater (AW) and Colorado Division of Parks of Wildlife (CPW) representatives to coordinate on goals and objectives for Dolores River in vicinity of subject diversion dam and downstream.

Method/Procedure

- Schedule a time and place to have the meeting, allow for phone conference capabilities.
- Prepare a meeting agenda that includes discussion on the scope and schedule of the project as well as discussion of possible design concepts.

TASK 2 – Site Visit Kickoff

Description of Task

- Site visit kickoff meeting with project partners to do a preliminary field investigation.

Method/Procedure

- Schedule a time to meet at the site.
- Prepare an agenda

TASK 3 – Bathymetric & topographic mapping by surveyor

Description of Task

- Prepare bathymetric and topographic mapping of the Wines Ditch No. 1 Diversion structure area, including river banks and overbank areas.

Method/Procedure

- The surveying will be conducted by a professional land surveyor licensed in Colorado.

TASK 4 – Fishery evaluation by BLM, CPW, and fish biologist

Description of Task

- Fishery evaluation will be completed and includes consultation with a fishery biologist and ecologist and coordination with CPW and BLM.

Method/Procedure

- Evaluate fish species populations and migration patterns and riparian attributes of Dolores River, with special emphasis on species of special concern.
- Develop a list of design considerations for providing a barrier for non-native fish migration.

TASK 5 – Hydrology Analysis

Description of Task

- Hydrology analysis will be performed to develop important hydrologic data necessary for the development of design alternatives for the diversion structure.

Method/Procedure

- Analyze Dolores River hydrology and prepare graphical statistical representation of average, low, and high-flow-year discharges downstream of Gateway, CO.
- Analyze the hydrology for storm event flow rates and spring runoff rates for development of a suitable design basis flow.
- Provide a cost benefit analysis of various design flows based on higher initial construction cost and lower maintenance costs for higher design flows compared with lower initial construction cost and higher maintenance costs for lower design flows and other factors.

TASK 6 – Water Surface Profiles

Description of Task

- Water surface profile analysis.

Method/Procedure

- Prepare profiles of water surfaces for various flows at the existing diversion structure and estimate critical velocities.

TASK 7 – Develop possible recreational uses

Description of Task

- A representative of AW will analyze possible recreational uses for the stretch of river.

Method/Procedure

- Possible recreational uses of the Dolores River from Gateway to the Colorado-Utah border will be developed.

TASK 8 – Coordinate with BLM and CPW on conceptual design alternatives

Description of Task

- Coordinate with BLM and CPW on conceptual design alternatives

Method/Procedure

- Coordination with the BLM and CPW on the development of fish and boat passage design and alternatives analysis.

TASK 9 – Coordinate with USACE and BLM on permitting considerations

Description of Task

- Coordinate with US Army Corps of Engineers (USACE) and BLM on permitting considerations for the proposed design and construction of the diversion structure.

Method/Procedure

- Coordination with the USACE and BLM on permitting and authorization.

TASK 10 – Review historical documentation

Description of Task

- Review historical documentation relevant to the project site/area.

Method/Procedure

- Review of historical documentation, as available, to attempt to estimate the historical footprint of the structure and historical functions of the structure.

TASK 11 – Alternative Schematics

Description of Task

- Develop alternatives schematics.

Method/Procedure

- Prepare several alternative schematics for redevelopment of the subject diversion dam that would address a boater passage, non-native fish barrier, boater safety and riparian values.
- Develop bank stabilization and grading guidelines for excavated areas along the Dolores River, including adjacent disturbed areas.
- Provide additional evaluations for a do-nothing alternative.

TASK 12 – Project partner review of alternatives designs

Description of Task

- Alternative design narrative and schematics will be made available for review by all the project partners.

Method/Procedure

- Review and comment by Project partners of alternatives developed in Task 10.
- Refine or discard unfeasible alternatives.

TASK 13 – Evaluate water rights implications

Description of Task

- An evaluation of implications to the water rights as a result of proposed changes to the diversion structure based on each alternative.

Method/Procedure

- Evaluate water rights implications of each alternative.

TASK 14 – Develop conceptual construction costs

Description of Task

- Construction costs for each design alternative will be developed.

Method/Procedure

- Conceptual construction cost opinions will be developed for each selected alternative with analyzed operations and maintenance needs and estimated costs.

TASK 15 – Stakeholder meetings

Description of Task

- Meeting with stakeholders will be arranged.

Method/Procedure

- Conduct stakeholder meetings and invite public comment and input.

TASK 16 – Preliminary design and cost estimate

Description of Task

- A preliminary design and cost estimate will be developed.

Method/Procedure

- A design alternative chosen as the best design to accomplish the objectives of this proposal and the objectives of project partners will be used for the preliminary design and cost estimate.

TASK 17 – Administration

Description of Task

- Administration of the grant proposal, budget, and deliverables.

Method/Procedure

- Maintain/balance budget.
- Develop a progress report every 6 months.

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

A detailed budget itemized by tasks for Phase 1 of the Wines Ditch No 1 Structure and Conveyance System Improvements is shown in Table 1. Consultant labor and expenses, in-kind labor and expenses by organizations, and applicant administrative costs make up the total budgeted cost to complete the project. Total cash and in-kind matching funds are organized by organization and shown in Table 2, along with the total requested funds from SW Basin Roundtable and WSRA Statewide account, and the percent matching funds of the total project cost.

Table 1
Budget

Description of Services	Project Cost						
	Consultant Labor and Expenses	CPW In-kind Labor and Expenses	AW In-kind Labor and Expenses	TNC In-kind Labor and Expenses	Western Sky Investments In-kind	TNC Requested Administrative Cost	Total Budgeted Cost
Task 1 – Project kick-off meeting	$3,470.00	$200.00		$105.82	$500.00		$4,275.82
Task 2 – Site Visit Kickoff	$1,600.00			$423.28	$500.00		$2,523.28
Task 3 – Mapping	$9,348.00						$9,348.00
Task 4 – Fishery evaluation	$6,165.00	$7,200.00		$529.10			$13,894.10
Task 5 – Hydrology analysis	$2,008.00		$450.00	$317.46			$2,775.46
Task 6 – Water surface profiles	$4,833.00						$4,833.00
Task 7 – Develop possible recreational uses	$6,176.00		$3,500.00	$158.73	$1,000.00		$10,834.73
Task 8 – Conceptual design alternatives	$3,364.00		$500.00	$264.55	$500.00		$4,628.55

Task 9 – Regulatory and permitting considerations	$3,740.00			$105.82	$1,000.00		$4,845.82
Task 10 – Review historical documentation	$2,064.00			$105.82			$2,169.82
Task 11 – Alternative schematics	$11,315.00				$500.00		$11,815.00
Task 12 – Review of alternative designs	$3,096.00			$105.82	$500.00		$3,701.82
Task 13 – Evaluate water rights implications	$2,544.00						$2,544.00
Task 14 – Develop conceptual construction costs	$6,322.00				$500.00		$6,822.00
Task 15 – Stakeholder meetings	$4,898.00		$550.00	$529.10			$5,977.10
Task 16 – Preliminary design & cost estimate	$13,505.80						$13,505.80
Task 17 - Administration				$7,991.21		$5,551.20	$13,542.41
Estimate Total	$84,448.80	$7,400.00	$5,000.00	$10,636.71	$5,000.00	$5,551.20	**$118,036.71**

Table 2
WSRA Requested Funding

Matching Funds	In-kind	Cash	Total
CPW	$ 7,400.00		$ 7,400.00
TNC	$ 10,636.71	$ 20,000.00	$ 30,636.71
AW	$ 5,000.00	$ 5,000.00	$ 10,000.00
Western Sky Investments	$ 5,000.00		$ 5,000.00
Total Matching Funds	**$ 28,036.71**	**$ 25,000.00**	**$ 53,036.71**

Project Cost Estimate Total (from Table 1)	$ 118,036.71
Requested Matching Funds - SW Basin Roundtable	$ 40,000.00
Requested Matching Funds - WSRA Statewide Account	$ 25,000.00
Total Requested Funds	**$ 65,000.00**
Percent Matching Funds of the total Project Cost	45%

SCHEDULE

Table 3 shows the proposed project schedule for each task and the time period from the Notice to Proceed (NTP). This scheduling method allows flexibility in the event of potential delays from the procurement process.

Table 3

Schedule by Month

Task	1	2	3	4	5	6	7	8	9	10	11	12
Task 1 - Project kick-off meeting												
Task 2 - Site Visit Kickoff												
Task 3 - Mapping												
Task 4 - Fishery evaluation												
Task 5 - Hydrology analysis												
Task 6 - Water surface profiles												
Task 7 - Recreational uses												
Task 8 - Conceptual design alternatives												
Task 9 -Permitting												
Task 10 - Historical documentation												
Task 11 - Alternative schematics												
Task 12 - Review of alternative designs												
Task 13 - Evaluate water rights implications												
Task 14 - Conceptual construction costs												
Task 15 - Stakeholder meetings												
Task 16 - Preliminary design & cost estimate												

Wines Ditch Diversion Evaluation

Budget

Item	Description	WSRF Funding	Matching Funds (cash & in-kind)	Total Costs
Task 1	Project Kickoff Meeting	$2,268	$2,008	$4,276
Task 2	Site Visit Kickoff	$1,600	$923	$2,523
Task 3	Mapping	$0	$9,348	$9,348
Task 4	Fishery Evaluation	$6,165	$7,729	$13,894
Task 5	Hydrology Analysis	$0	$2,775	$2,775
Task 6	Water Surface Profiles	$4,833	$0	$4,833
Task 7	Develop Possible Recreational Uses	$1,176	$9,659	$10,835
Task 8	Conceptual design alternatives	$3,364	$1,265	$4,629
Task 9	Regulatory and Permitting Considerations	$3,740	$1,106	$4,846
Task 10	Review Historical Documentation	$2,064	$106	$2,170
Task 11	Alternative Schematics	$11,315	$500	$11,815
Task 12	Review of Alternative Designs	$3,096	$606	$3,702
Task 13	Evaluate water rights implications	$0	$2,544	$2,544
Task 14	Develop conceptual construction costs	$6,322	$500	$6,822
Task 15	Stakeholder Meetings	$0	$5,977	$5,977
Task 16	Preliminary Deisgn & Cost Estimate	$13,506	$0	$13,506

Task 17	Administration	$5,551	$7,991	$13,542
Total Costs		$65,000	$53,037	$118,037

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. 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 help promote the development of a common technical platform.