COLORADO
Colorado Water Conservation Board
Department of Natural Resources

1313 Sherman Street, Room 718
Denver, CO 80203

April 21, 2016

Fountain Creek Watershed Flood Control & Greenway District
Attn: Mr. Larry Small, Executive Director
P.O. Box 26373
Colorado Springs, CO 80936-6373

RE: Notice to Proceed – WSRA Grant – **POGG1 2016-772 -** Evaluation of Flood Control Alternatives for the Fountain Creek Corridor in the Arkansas River Basin

Dear Larry,

This letter is to inform you that the purchase order (PO) to assist in the above WSRA grant project was approved on April 21, 2016. The attachments will serve as your original grant contracting documents.

With the executed PO, you are now able to proceed with the project and invoice the State of Colorado for costs incurred through January 31, 2017. As a courtesy, an additional 30 days has been added to the PO end date for final bill purposes. Please provide the project name, PO 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.

If an extension to the project is necessary, a formal letter of request must be submitted to the project manager along with a proposed completion date **60 days** prior to the current expiration date. There will be no prior notice from the CWCB grant manager informing the grantee that the project is approaching its deadline, therefore the grantee must monitor the completion progress accordingly.

If you have any questions or concerns regarding the project, please contact Brent Newman, Project Manager at 303-866-3441 x3222 or at brent.newman@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.us

cc: Terry Hart, Pueblo County Commissioner
Attachments

STATE OF COLORADO
Department of Natural Resources

ORDER
Number: POGG1 PDAA 20160000000000000772
Date: 03/17/16
Description:
WSRA GRANT PDAA 2500 Fountain Creek Watershed FC & Greenway
Effective Date: 05/01/16 Expiration Date: 01/31/17

BUYER
Buyer:
Email:

VENDOR
FOUNTAIN CREEK WATERSHED FLOOD
PO BOX 26373
COLORADO SPRINGS, CO 80936-6373

Contact: .
Phone: .

**** 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	$8,800.00	☐
Description: WSRA GRANT PDAA 2500 Fountain Creek Watershed FC & Greenway						
Service From: 05/01/16 Service To: 01/31/17						

Line Item	Commodity/Item Code	UOM	QTY	Unit Cost	Total Cost	MSDS Req.
2	G1000		0	0.00	$33,000.00	☐
Description: WSRA GRANT PDAA 2500 Fountain Creek Watershed FC & Greenway						
Service From: 05/01/16 Service To: 01/31/17						

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

DOCUMENT TOTAL = $41,800.00

Exhibit A

Statement of Work

WATER ACTIVITY NAME - Evaluation of Flood Control Alternatives for the Fountain Creek Corridor

GRANT RECIPIENT – Fountain Creek Watershed, Flood Control and Greenway District

FUNDING SOURCE – Water Supply Reserve Account

INTRODUCTION AND BACKGROUND

The Fountain Creek Watershed, Flood Control and Greenway District (District) is responsible for preventing and mitigating flooding conditions, and enhancing channel stability, ecosystem resources, and recreational opportunities in the Fountain Creek Watershed. A key District objective is to address flooding problems in the section of Fountain Creek between Colorado Springs and the Fountain Creek confluence with the Arkansas River (Corridor). Several past studies of Fountain Creek flood control alternatives have been performed, but to date no solution has been accepted for adoption by all stakeholders . The District funded a USGS Flood Control Study completed in December 2013 that identified 13 scenarios for flood control alternatives and evaluated their effectiveness on reducing sediment transport and peak flow at the USGS Pueblo Streamgage. The District reviewed the scenarios and identified two that would potentially achieve significant success in reducing sediment transport and peak flood flows. The District has identified these two scenarios as candidates for further evaluation. The District also developed a "Phased Fountain Creek Flood Control Feasibility Study and Implementation Program" (briefing attached as Appendix C) to show how the overall implementation program could be implemented in a logical manner to align with available funding, regulatory requirements, and stakeholder needs. The District has also recognized that facilities designed to address flow and sediment transport concerns may also simultaneously serve consumptive use objectives. This Project executes Phase 1 – Appraisal-Level Evaluation of Options and Alternatives to identify feasibile alternatives and set the stage for the execution of the remaining phases of the process leading to construction of flood control facilities (or multi-use facilities) along the Corridor. **The ability to prevent injury to decreed water rights while achieving overall project objectives will be a threshold goal.**

OBJECTIVES

1. Meet with holders of decreed water rights to discuss issues/concerns associated with the construction of infrastructure designed to meet project objectives, including the potential need to provide augmentation supplies so as to prevent material injury to any decreed water rights.
2. Assemble, review and summarize flood control and sediment management alternatives evaluated and described in previous reports by the District, USGS, the USACOE and others.
3. Assemble and summarize previous design information and costs estimates for projects similar to the candidate alternatives including the development of a fatal flaw analysis of costs associated with the operation of the analyzed alternatives.
4. Identify implementation issues, in addition to those referenced in #1 above, for the candidate alternatives.

5. Prepare graphics or animation to visualize the effects of implementation of candidate alternatives on properties in the flood pool during floods of 4 different magnitudes (10, 50, 100 and 500-year).
6. Identify and evaluate any potential opportunities for the use of the candidate alternatives to assist in meeting consumptive and non-consumptive needs, including a preliminary analysis of any fatal flaws associated with such use.
7. Compare the candidate alternatives conceptually and analytically using existing information.
8. Formulate and analyze options or combination of options to form feasible alternatives that meet project objectives.

TASKS

TASK 1 – Water Rights Protection

Description of Task

Meetings will be held with ditch associations, canal companies, Water Division No. 2 and independent water rights holders to keep the communities informed throughout the execution of this water activity and to seek input that will be valuable in establishing credible alternatives for analysis leading to a preferred alternative while ensuring no injury to existing water rights will occur.

Method/Procedure

This task will build on the Water Rights Protection Task funded by and completed by the District in October 2015 that analyzed administrative issues associated with the operation of a proposed flood remediation project in the Fountain Creek Watershed. District will hold scheduled meetings with ditch associations, canal companies and independent water rights holders to inform them on project progress and seek input valuable to the identification of a preferred alternative which can be implemented while adequately protecting decreed water rights and the river call regime. Conduct public meetings to seek input from non-water rights holders concerning economic, environmental and social considerations for flood control or multi-use facilities.

Deliverable

1. Identification, at concept level, of means to ensure that project infrastructure can be constructed and operated without causing any material injury to decreed water rights.

TASK 2 – Main-Stem Reservoir Evaluation and Alternative Comparison (USGS Scenario 10)

Description of Task

District will assemble, review and summarize lower Fountain Creek flood control and sediment management alternatives evaluated and described in previous reports by the District, USGS, USACOE and others. District will assemble and summarize previous design information and cost estimates for project similar to the candidate alternative. This will include previously developed options for single- and multi-purpose dam projects, consisting of: (1) one option for flood control only, and (2) one option for flood control combined with recreation and water supply purposes. The District will identify issues associated with implementing the main-stem, on-channel reservoir flood control solution. Evaluations will be qualitative and based on currently available information.

Implementation issues to be considered will include permitting concerns, landowner and transportation infrastructure impacts, sediment management, ability to effectively use conservation storage (water rights issues, potential owners of storage space, potential uses), operational costs, water quality and compatibility with natural ecosystem functions. The District will prepare graphics or animation to visualize the effects of the main stem reservoir on properties in the flood pool during floods of 4 different magnitudes (10, 50, 100 and 500-year). This will be based on flood hydrology for Fountain Creek developed by USGS in the 2013 Flood Control Study.

Method/Procedure

Data needs will be assessed with respect to the known areas of interest on Fountain Creek Corridor and similar projects. Specific data collection activities will provide the necessary data for technical activities as required for hydraulic model expansion, sediment transport modeling, alternatives analysis, and alternatives development.

Deliverable

1. Summary of previously studied flood control solutions for lower Fountain Creek.
2. Summary of implementation issues for two main-stem reservoir options.
3. Visualization tool showing inundation area of main stem reservoir under different floods

TASK 3 – Implementation Issues for Other Options

Description of Task

District will identify implementations issues for two other Fountain Creek flood control options (10 small side detention facilities (USGS Scenario 12), and one large side detention facility) using similar categories as outlined for Task 2.

Method/Procedure

Specific data collection activities will provide the necessary data for technical activities as required for hydraulic model expansion, sediment transport modeling, alternatives analysis, and alternatives development.

Deliverable

1. Summary of implementation issues for the evaluated side detention alternatives with reference to their use for flood control, sediment detention, enhancement of environmental and recreational amenities, and water supply management.

TASK 4 – Comparison of Options

Description of Task

District will compare the four previously referenced flood control options qualitatively and conceptually using existing information. The evaluation criteria may include:

- Technical feasibility
- Consistency with Fountain Creek Corridor vision and strategic plan
- Relative magnitude of required flood control infrastructure
- Relative area of inundation
- Relative project cost (high, medium, low)
- Potential for phasing
- Potential to achieve other benefits in addition to flood protection, specifically recreational and environmental benefits and water supply management
- Scalability
- Permitability, including requirements related to protecting existing water rights
- Operation and maintenance

Method/Procedure

Technical qualitative trade study and comparison of options.

Deliverable

1. Tables comparing qualitative strengths and weaknesses of the options vs. evaluation criteria
2. Draft Appraisal-Level Technical Report

TASK 5 – Appraisal-Level Evaluation Technical Report

Description of Task

District will review and validate the findings presented in the Draft Technical Report and incorporate any additional information developed during peer review and coordination with stakeholders. Technical reports will include detailed descriptions of the work performed, detailed descriptions of the data used to develop the conclusions being presented and supporting imagery and maps.

Method/Procedure

Stakeholders review including review by the District Technical Advisory Group and the District Citizens Advisory Committee.

Deliverable

1. Final Appraisal-Level Evaluation Technical Report

REPORTING AND FINAL DELIVERABLE

Reporting: The District 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 District 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.

Performance monitoring for the contract shall include the following:

(a) Performance measures and standards

The CWCB will have monthly phone meetings with the Fountain Creek Watershed, Flood Control, and Greenway District (District) to make sure the project is being completed in a timely manner.

(b) Accountability

Regular reporting of project status will occur monthly with the CWCB project manager and the lead project manager from the District. The District will submit documentation substantiating invoice amounts requested. Invoices will be submitted with brief reports of the planning, design, and management purposes served by the expenditures.

(c) Monitoring Requirements

The CWCB will have access to all documents and models associated with the project and will be copied on all progress reports.

(d) Noncompliance Resolution

In the event of a noncompliance issue the CWCB project manager will contact the District's project manager and discuss the problem and work towards a resolution. If this does not work then the issue will be escalated to the Director of the CWCB and the Chair of the District. The CWCB project manager will notify the DNR Purchasing Director and the Assistant Director of the Department. The DNR Assistant Director or the Deputy Director will try to resolve the issue.

EVALUATION OF FLOOD CONTROL ALTERNATIVES FOR THE FOUNTAIN CREEK CORRIDOR

BUDGET AND SCHEDULE

The schedule assumes a Contract Effective Date of May 1, 2016 and a Contract Duration of 8 months.

TASK	DESCRIPTION	START	FINISH	STATE FUNDS	BASIN FUNDS	MATCH FUNDS	IN-KIND	TOTAL
	APPRAISAL-LEVEL EVALUATION	5/1/2016	10/31/2017					
1	**Water Rights Protection**	5/1/2016	10/31/2017	$1,000.00	$1,000.00	$2,000.00	$2,000.00	$6,000.00
2	**Main Stem Reservoir Evaluation**	5/1/2016	7/31/2016	$11,500.00	$2,500.00	$9,500.00	$3,000.00	$26,500.00
3	**Implementation Issues For Other Options**	6/1/2016	8/31/2016	$10,200.00	$2,300.00	$8,500.00	$3,000.00	$24,000.00
4	**Comparison of Options**	9/1/2016	10/1/2016	$7,000.00	$2,000.00	$3,900.00	$3,500.00	$16,400.00
5	**Final Technical Report**	11/1/2016	12/31/2016	$3,300.00	$1,000.00	$1,600.00	$500.00	$6,400.00
	SUBTOTAL PHASE 1			**$33,000.00**	**$8,800.00**	**$25,500.00**	**$12,000.00**	**$79,300.00**
	PERCENT OF TOTAL PROJECT BUDGET			**42%**	**11%**	**32%**	**15%**	**100%**

** Final Billing to Close Project 1/31/17