



PURCHASE ORDER GRANTS GIVEN
STATE OF COLORADO
Department of Natural Resources

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ORDER		** IMPORTANT **	
Number: POGG1 PDAA 20150000000000000129		The order number and line number must appear on all invoices, packing slips, cartons and correspondence	
Date: 08/13/14			
Description: inundation mapping for Double El Cons Dist sev tax grant		BILL TO	
		COLORADO WATER BOARD CONSERVATION 1313 SHERMAN STREET, ROOM 718	
BUYER			
Buyer: Steven Shull		DENVER, CO 80203	
Email: steven.shull@state.co.us		SHIP TO	
VENDOR		COLORADO WATER BOARD CONSERVATION	
DOUBLE EL CONSERVATION DISTRICT		1313 SHERMAN STREET, ROOM 718	
PO BOX 215			
SIMLA, CO 80835-0215		DENVER, CO 80203	
Contact: .		SHIPPING INSTRUCTIONS	
Phone: .		Delivery/Install Date:	
		F.O.B:	
		VENDOR INSTRUCTIONS:	

Line Item	Commodity/Item Code	UOM	QTY	Unit Cost	Total Cost	MSDS Req.
1	G1000		0	\$0.00	\$11,000.00	<input type="checkbox"/>
Description: inundation mapping for Double El Cons Dist sev tax grant						
Start Date: 08/12/14		End Date: 06/15/15				
TERMS AND CONDITIONS						
https://www.colorado.gov/osc/purchase-order-terms-conditions						

DOCUMENT TOTAL = \$11,000.00

August 4, 2014

Project: Inundation Mapping for the Double El Conservation District

Vendor: Double El Conservation District
Ms. Cheryl Churchwell, District Manager
504 Washington Avenue
P.O. Box 215
Simla, CO 80835
Phone: (719) 541-2359

Consultant: W.W. Wheeler & Associates, Inc.
Ms. Danielle Tripp, P.E.
3700 S. Inca Street
Englewood, CO 80110-3405
Phone: (303) 761-4130

CWCB funding source: Severance Tax Operational Account

SCOPE OF WORK

W.W. Wheeler, Inc. (Consultant), at the direction of the Double El Conservation District (Vendor), will perform a dam breach modeling study and flood inundation mapping for Ramah Dam located in El Paso County in the Arkansas River Basin. The Ramah Dam is a part of the Ramah Detention Recreational Reservoir on the Big Sandy Creek, and is owned and operated by the Vendor.

Consultant or Vendor will submit the final report and mapping to the Colorado Division of Water Resources, Dam Safety Branch, for approval. Grant funds will not be disbursed until the project has been approved by the Dam Safety Branch.

PROPOSED METHODOLOGY

The Consultant shall perform a clear day dam breach analyses in accordance with the State of Colorado Rules and Regulations for Dam Safety and Dam Construction (1/1/2007), and the Dam Safety Guidelines for Dam Breach Analysis (2/10/2010). Correspondence shall be with Mark Perry, P.E., of the Colorado Division of Water Resources, Dam Safety Branch, to present preliminary dam breach parameters, water surface profile modeling, and inundation mapping and to determine if field measurements are necessary for critical bridges.

Inundation mapping for High Hazard dams shall show the calculated extents of the dam breach flood wave. Include cross sections at critical locations showing lateral and vertical flood extents, flood wave velocity, and flood wave arrival time. Inundation mapping shall be extended downstream to a location where no potential for loss of life and/or no significant property damage exist.

Inundation mapping for Significant Hazard dams shall show the route of the dam breach flood wave, the estimated time of arrival of the flood wave at critical sections and the estimated lateral extent of inundation. The inundation mapping shall be extended downstream to a location where no significant property damage exists. The inundation mapping requirements for Significant Hazard dams may be modified for good cause, with the approval of the State Engineer.

DELIVERABLES

The Vendor shall provide the CWCB electronic copies of the following: a final report for the inundation mapping analysis stamped by a licensed Colorado professional engineer; digital files of the inundation limits, maps and supporting spreadsheets; and hydraulic/hydrologic models. Additionally the Vendor shall provide a copy of the project's Colorado Division of Water Resources, Dam Safety Branch, approval letter.

SCHEDULE

Work may initiate on the date of the State's Purchase Order. Deliverables are due no later than June 15, 2014.

BUDGET

The Consultant will complete the work described for a not-to-exceed budget of \$11,500. The Consultant shall invoice Vendor on a Time and Materials basis for services performed. See attached Cost Estimate for a detailed cost projection.

PAYMENT

The State shall pay Vendor up to \$11,000 (95% of Project Cost) for Consultant's project related invoices following receipt of final deliverables. The Vendor is responsible for all expenses in excess of the State's contribution. Any overages or increases in project costs shall be the responsibility of the Vendor.

Estimated Project Cost Sharing:

Owner Match	\$ 500
CWCB Grant	<u>\$ 11,000</u>
TOTAL	\$ 11,500

CWCB shall issue payment following receipt and processing of Vendor's Request for Payment submittal. The Request for Payment must include: a summary of Consultant's labor effort and direct costs in accordance with the attached estimate, copies of corresponding invoices from Consultant, and identification of any major issues with proposed or implemented corrective actions. The Deliverable, including the Dam Safety Branch's approval letter, must be provided to the CWCB as part of project documentation prior to CWCB issue of payment.