



STATE OF COLORADO  
Department of Natural Resources

<b>ORDER</b>		<b>** IMPORTANT **</b>				
Number: POGG1 PDAA 20160000000000000737		The order number and line number must appear on all invoices, packing slips, cartons and correspondence				
Date: 02/18/16						
Description: PDAA6000 S T Grnt inundation map for Sanchez Dam		<b>BILL TO</b>				
Effective Date:                      Expiration Date:		COLORADO WATER BOARD CONSERVATION 1313 SHERMAN STREET, ROOM 718 DENVER, CO 80203				
<b>BUYER</b>		<b>SHIP TO</b>				
Buyer:		COLORADO WATER BOARD CONSERVATION				
Email:		1313 SHERMAN STREET, ROOM 718 DENVER, CO 80203				
<b>VENDOR</b>		<b>SHIPPING INSTRUCTIONS</b>				
SANCHEZ DITCH & RESERVOIR COMPANY		Delivery/Install Date:				
RR 1 Box 215		F.O.B:				
San Acacio, CO 81150		<b>VENDOR INSTRUCTIONS:</b>				
Contact: .						
Phone: .						
<b>Line Item</b>	<b>Commodity/Item Code</b>	<b>UOM</b>	<b>QTY</b>	<b>Unit Cost</b>	<b>Total Cost</b>	<b>MSDS Req.</b>
1	G1000		0	0.00	\$7,150.00	<input type="checkbox"/>
Description: PDAA6000 S T Grnt inundation map for Gurley Dam						
Service From: 02/10/16                      Service To: 06/15/16						
<b>TERMS AND CONDITIONS</b>						
<a href="https://www.colorado.gov/osc/purchase-order-terms-conditions">https://www.colorado.gov/osc/purchase-order-terms-conditions</a>						
<b>DOCUMENT TOTAL = \$7,150.00</b>						

February 16, 2016

Project: Inundation Mapping for Sanchez Dam

Vendor: Sanchez Ditch and Reservoir  
Mr. Keith Caldon, President  
RR1 Box 215  
San Acacio, CO 81151  
Phone / email: 719-672-3963 / [sanchezditch@gojade.org](mailto:sanchezditch@gojade.org)

Consultant: Applegate Group, Inc.  
Ms. Lindsay George, P.E.  
7405 U.S. Highway 50, Suite 123  
Salida, CO 81201  
Phone / email: (303) 452-6611 / [lindsaygeorge@applegategroup.com](mailto:lindsaygeorge@applegategroup.com)

CWCB funding source: Severance Tax Trust Fund Operational Account

#### SCOPE OF WORK

Applegate Group (Consultant), at the direction of the Sanchez Ditch and Reservoir (Vendor), will perform a dam breach modeling study and associated flood inundation mapping for the above dam. Sanchez Dam is a Significant Hazard dam located in Costilla County in the Rio Grande River Basin. The dam is located on Ventero Creek south of San Luis, CO.

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 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. The mapping will also 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

For each reservoir, 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, 2016.

#### BUDGET

The Consultant will complete the work described for a not-to-exceed budget of \$14,300 based on Consultant's current rate schedule and projection of effort. The estimate is summarized. The Consultant shall invoice Vendor on a Time and Materials basis for services performed below:

Task	Budget
Breach Routing, Flood Routing, Deliverables, Invoicing	\$14,300
TOTAL	\$14,300

#### PAYMENT

The State shall pay Vendor up to \$7,150 (50 % 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	\$ 7,150
CWCB Grant	<u>\$ 7,150</u>
TOTAL	\$ 14,300

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.