



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources
1313 Sherman Street, Room 718
Denver, CO 80203

WSRF Grant – Southwest – Innovative Ag. Mgmt
& Co's Next Project
POGG1 2020-3012

April 9, 2020

Montezuma Land Conservancy
Attn: Travis Custer, Exec. Director
P.O. Box 1522
Cortez, CO 81321

Dear Grantee:

We are pleased to inform you that the Colorado Department of Natural Resources, Colorado Water Conservation Board (CWCB) has approved your request for funding for your project pursuant to the WSRF Grant Program ("Program"). This letter authorizes you to proceed with the 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, Montezuma Land Conservancy, agree by accepting the Grant Funds.

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 all grant correspondence directly to the project manager and cc me on your invoice billing requests.

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: Lindsay Yarbrough, Operations Manager.





STATE OF COLORADO
Department of Natural Resources

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ORDER				*****IMPORTANT*****			
Number: POGG1,PDAA,202000003012				The order number and line number must appear on all invoices, packing slips, cartons, and correspondence.			
Date: 4/9/20				BILL TO			
Description: WSRF Montezuma Land_Ag Mgmt. & Co's Next_SW Basin				COLORADO WATER BOARD CONSERVATION 1313 SHERMAN STREET, ROOM 718 DENVER, CO 80203			
Effective Date: 04/15/20							
Expiration Date: 10/31/21							
BUYER				SHIP TO			
Buyer:				COLORADO WATER BOARD CONSERVATION			
Email:				1313 SHERMAN STREET, ROOM 718			
VENDOR				DENVER, CO 80203			
MONTEZUMA LAND CONSERVANCY PO BOX 1522 CORTEZ, CO 81321-1522				SHIPPING INSTRUCTIONS			
Contact: travis custer				Delivery/Install Date: -			
Phone: 9705331058				FOB: FOB Dest, Freight Allowed			
VENDOR INSTRUCTIONS							
EXTENDED DESCRIPTION							
Line Item	Commodity/Item Code	UOM	QTY	Unit Cost	Total Cost	MSDS Req.	
1	G1000		0	0.00	\$24,192.00	<input type="checkbox"/>	
Description: WSRF Montezuma Land_Ag Mgmt. & Co's Next_SW Basin							
Service From: 04/15/20				Service To: 10/31/21			
TERMS AND CONDITIONS							
https://www.colorado.gov/pacific/osc/small-dollar-grant-award-terms-conditions							
DOCUMENT TOTAL = \$24,192.00							



Last Update: January 9, 2018

Colorado Water Conservation Board	
Water Supply Reserve Fund	
<u>Exhibit A - Statement of Work</u>	
Date:	4-2-2020
Water Activity Name:	Innovative Agricultural Management and Colorado's Next Generation of Water Leaders
Grant Recipient:	Montezuma Land Conservancy (MLC)
Funding Source:	Southwest Basin Roundtable Account - WSRF
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.	
<p>This project seeks to bring together a diverse collaboration of partners in Montezuma County to engage, educate, and empower youth, agricultural producers, and the general public. Our goal is to help create a more resilient, connected, and collaborative community that is positioned to transition into the future of water in Colorado in the face a changing climate and a growing population. The project is broken into two objectives described below. To accomplish this goal, we will bring together dedicated community partners to collaborate on a project that no single partner would be able to carry out on their own. The project will utilize MLC's education center, called Fozzie's Farm, as a site for research and public education. The research component will look at regenerative agricultural strategies that focus on building soil health as a method for conserving water, and the use of soil moisture technology as a method for more efficient irrigation applications.</p>	
Objectives: (List the objectives of the project)	
<p>Objective 1: Design and Implement a long-term irrigation and soil health monitoring protocol that includes methods of measurement, monitoring, and analysis which will be carried out by student interns in collaboration with researchers from Colorado State University (CSU). Emphasis will be placed on exploring transformative, climate smart agricultural practices combining the use of management informed water savings technology with regenerative agricultural practices;</p> <p>Objective 2: Empower and engage the next generation of conservation leaders, our youth, through hands-on experiential opportunities to take science into their own hands, explore career opportunities in natural resources and agriculture, and advocate for a more resilient and transformative future;</p>	

Tasks
Provide a detailed description of each task using the following format:

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Tasks
Task 1 - Irrigation and Soil Research Monitoring
Description of Task:
<p>With Colorado State University (CSU) research staff at the helm, this task will seek to design and implement a scientific research project on MLC's Fozzie's Farm with youth program participants assisting. This project will focus on soil moisture monitoring for the purpose of enhanced irrigation water application strategies, and monitoring soil health over time as management changes occur on the farm. The goal is to show producers and the public strategies for conserving water through both application management and changes in overall farm management that seek to use improved soil health as a method of water conservation. While this protocol will be developed with Fozzie's Farm needs in mind, the goal is to create something easily replicable on other agricultural operations.</p>
Method/Procedure:
<p>Irrigation will be blocked across a 5-acre field based on replicated time domain reflectometry (TDR) probes (CR655, Campbell Scientific, Logan, UT) placed within the field at depths of 12 and 24 inches using data loggers (CR 1000x) taking measurements in 15 minute intervals. The control portion of the field will be irrigated based on volume determined on weekly measurements (i.e. 1 inch/week). Sensor-based irrigation will be timed based on soil moisture measurements indicating need based on the electromagnetic soil capacitance as a function of water content.</p> <p>A Giddings probe will be used to take soil samples to 3 feet June 2020 and June 2021. We will take three replications of samples in both the research and control fields. Soil samples will be analyzed for total nitrogen, total organic carbon, total organic nitrogen; H3A extract: nitrate-nitrogen, ammonium-nitrogen, inorganic nitrogen, total phosphorus, inorganic Phosphorus, organic phosphorus, potassium, calcium, magnesium and the Haney test for an indicator of soil health.</p> <p>In the research and control field three Global Positioning System (GPS) points will be selected as representative points in the fields. At this location photo-points and line transects will be done. Southwest Colorado Research Center (SWCRC) staff will train MLC staff and Fozzie's student interns. MLC staff and Fozzie's student interns will complete the monitoring. Using a 4.8 ft² hoop, clippings will be done by randomly throwing the hoop from this GPS point. This will be done to calculate pounds of standing forage before and after grazing. At the same time, photo points will be completed using the GrassSnap App in established points that will be replicated throughout the study each time before and after grazing.</p> <p>Using the protocols established by the Colorado Rangeland Monitoring Guide 100-foot line transects will be conducted at the beginning of this study and at the end of this study in the month of June to evaluate the changes in plant composition. While we do not anticipate many changes in plant composition over the course of this grant, this data will give us baseline data for future pasture monitoring.</p> <p>MLC will work with CSU to find appropriate avenues for youth engagement and public outreach and will work with Southwest Open School staff to connect youth programs to high school credits. MLC will also act in collaboration with CSU staff to develop the white paper and distribute to stakeholders.</p>
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)

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Tasks
Grantee will receive valuable information about on-farm management practices which will inform future decision making. The installation of the research plot also creates a hands-on opportunity for long-term curriculum for youth and adult programs. Data derived from the research will also be used to provide valuable outreach and education opportunities to the public. Additionally, this research also helps to strengthen local partnerships and helps to add to a local body of critical knowledge about how to address natural resource concerns (soil and water) in our community.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
Deliverables from this task include a written scientific procedure and design with clear monitoring protocols that will allow this research to continue long-term. CSU will assist in the installation of the research components. All monitoring will be recorded and evaluated and grantee will deliver a final white paper at the conclusion of the project. MLC in collaboration with CSU will also deliver one field day per year to producers and the public during the course of the grant. In addition, grantee will draw from the experience to document all successes, challenges, and lessons learned to incorporate into grant reporting and future fundraising and program design.

Tasks
Provide a detailed description of each task using the following format:
Task 2 - Citizen Science: Youth Exploration and Engagement
Description of Task:
<p>We believe in the power of youth and the importance of preparing the next generation to meet the challenges of water conservation and climate change head on. For the Water Plan to be successfully implemented, emphasis on youth engagement should be a primary priority. By engaging youth in the direct scientific research of this project, as well as the public outreach, we seek to empower these young people to take agency in conservation and advocacy. To this end, youth will be a key player in this grant at all steps.</p> <p>Research has also shown the power and impact of experiential education in schools and the importance of getting youth outdoors to connect to nature. By engaging youth in the research portion of this grant we offer a unique opportunity to learn about physical sciences, agriculture, scientific method, and critical thinking further developing important lifelong skills. <u>Additionally, youth participants will be eligible to receive credits towards graduation.</u></p> <p>MLC has worked diligently with Southwest Open School (SWOS) to identify opportunities for students to receive credits towards graduation for participation in our Summer Agricultural Immersion Program and Student Internships. Not only do these programs provide youth the opportunity for academic credits but they also touch on key principles emphasized in the Colorado Department of Education's work based learning and Innovative Learning Opportunities which state:</p> <p><i>"Innovative learning opportunities may include work-based learning such as apprenticeships or residency programs, enrollment in postsecondary courses taught on college campuses, competency-based learning or capstone projects, and other learning experiences that are designed to help students</i></p>

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Tasks
<p><i>develop and demonstrate personal, entrepreneurial, civic and interpersonal, and professional skills as described in CDE's Essential Skills Required in the Colorado Academic Standards."</i></p> <p>SWOS staff have identified the following Work Based Learning opportunities and essential skills created by this grant:</p> <ol style="list-style-type: none"> 1. Initiative/Self Direction 2. Adaptability/flexibility 3. Perseverance/Resilience Critical thinking/problem solving 4. Inquiry/Analysis 5. Collaboration/teamwork 6. Communication 7. Global/Cultural Awareness 8. Civic engagement 9. Task/time management 10. Career awareness 11. Leadership <p>Students are eligible to receive .25 credits per 30 hours for work based learning that incorporates these essential skills. Work based learning that incorporates on-farm labor allows students .25 credits per 60 hours. Students are also eligible to receive academic credits for English and speech for the public outreach component of this grant as well as science and math credits (including integrated science, life science, earth science, and agricultural science) for the research component. Please feel free to contact applicant for a complete breakdown of Colorado State educational standards used by SWOS administration to cite these credits as it is to extensive for the purposes of this application.</p>
<p>Method/Procedure:</p>
<p>MLC will first work with SWOS staff and administration to identify how the scientific research component and public outreach fits into student's graduation requirements. Applicable credits will be applied to eligible youth participants. MLC and CSU will design the four-week summer program, and internship scopes of work to include direct participation of students in the research and analysis of the irrigation and biological monitoring. MLC will work in collaboration with SWOS teachers to find relevant opportunities for students to present their findings at school and incorporate their experience into other projects.</p>
<p>Grantee Deliverable: (Describe the deliverable the grantee expects from this task)</p>
<p>MLC's youth programs have received national attention as they represent a changing paradigm for land trusts around the country. For MLC and our partners, the continuation of these programs is paramount and they define the future of conservation. With youth engagement in the outdoors at the lowest point it's ever been, it is more important than ever to create opportunities for these connections. This project provides an important opportunity to continue to develop a deeper relationship with Southwest Open School and for our organization to grow our programs. Additionally, youth will help to collect and analyze important data that drives the management of Fozzie's Farm.</p>
<p>CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)</p>



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Tasks
The deliverable of this portion of the grant will include documentation of students receiving school credit for their participation and connection to state standards that could help to inform future programs and strengthen experiential strategies between SWOS and MLC, as well as a model for other programs statewide. Documentation of youth participation will be included in the white paper and final report. This will include but is not limited to: pictures, recorded interviews, student surveys, and quotes. In addition, grantee will draw from the experience to document all successes, challenges, and lessons learned to incorporate into grant reporting and future fundraising and program design.

Tasks
Provide a detailed description of each task using the following format:
Task 3 - Grant Administration
Description of Task:
All necessary tasks to oversee the budget, track spending, prepare documentation for reimbursements, and communication with CWCB staff will be carried out by MLC's executive director and operations manager.
Method/Procedure:
MLC has a substantial track record of managing and reporting 21 years of successful grant administration. MLC utilizes financial software (quickbooks) and external excel documents for tracking expenses. The executive director and operations manager oversee all budget management and grant tracking as well as all follow-up reporting.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
Grantee will administer tasks necessary for timely reimbursement of funds to keep project on track and running smoothly.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
Grantee will provide CWCB with all necessary documentation to track expenditures, request reimbursements, and report on grant outcomes. These documents will include, but are not limited to: receipts, invoices, salary narratives, expense worksheets, contractor bids, and any other documents deemed necessary by CWCB. Grantee will provide documentation that is complete, clear, organized and timely. Final reports will be submitted to CWCB outlining the project deliverables, lessons learned, and successes.

Budget and Schedule
Exhibit B - Budget and Schedule: This Statement of Work shall be accompanied by a combined Budget and Schedule that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in <u>excel format</u> . A separate <u>excel formatted</u> Budget is required for engineering costs to include rate and unit costs.

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Reporting Requirements
<p>Progress Reports: The grantee shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status 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. The CWCB may withhold reimbursement until satisfactory progress reports have been submitted.</p>
<p>Final Report: At completion of the project, the grantee shall provide the CWCB a Final Report on the grantee's letterhead that:</p> <ul style="list-style-type: none"> • Summarizes the project and how the project was completed. • Describes any obstacles encountered, and how these obstacles were overcome. • Confirms that all matching commitments have been fulfilled. • Includes photographs, summaries of meetings and engineering reports/designs.
Payments
<p>Payment will be made based on actual expenditures, must include invoices for all work completed and must be on grantee's letterhead. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.</p> <p>The CWCB will pay the last 10% of the <u>entire</u> 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.</p>
Performance Requirements
<p>Performance measures for this contract shall include the following:</p> <p>(a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum in-kind contributions (if applicable) per the budget in Exhibit B. Per Grant Guidelines, the CWCB will pay out the last 10% of the budget when the final deliverable is completed to the satisfaction of CWCB staff. Once the final deliverable has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.</p> <p>(b) Accountability: Per the Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per the Grant Guidelines, Progress Reports must be submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment.</p> <p>(c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.</p> <p>(d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.</p>

Last Update: December 17, 2019



COLORADO

Colorado Water
Conservation Board

Department of Natural Resources

Colorado Water Conservation Board

Water Supply Reserve Fund

EXHIBIT B - Sum Budget

Date: 4-2-2020

Water Activity Name: Innovative Agricultural Management and Colorado's Next Generation of Water Leaders

Grantee Name: Montezuma Land Conservancy

Task No. ⁽¹⁾	Description	Start Date ⁽²⁾	End Date	Matching Funds (cash & in-kind) ⁽³⁾ Gates Family Foundation and Great Outdoors Colorado (GOCO)	WSRF Funds (Basin & Statewide combined) ⁽³⁾	Total
1	Irrigation and Soil Research Monitoring	April 15, 2020	October 31, 2021	\$ -	\$ 9,412.00	\$ 9,412.00
2	Citizen Science: Youth Exploration and Engagement	April 15, 2020	October 31, 2021	\$ 69,251.00	\$ 12,780.00	\$ 82,031.00
3	Grant Administration	April 15, 2020	October 31, 2021	\$ -	\$ 2,000.00	\$ 2,000.00
Total				\$ 69,251.00	\$ 24,192.00	\$ 93,443.00

(1) The single task that include costs for Grant Administration must provide a labor breakdown (see Indirect Costs tab below) where the total WSRF Grant contribution towards that task does not exceed 15% of the total WSRF Grant amount.

(2) Round values up to the nearest hundred dollars.

• Additional documentation providing a Detailed/Itemized Budget may be required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of the CWCB staff project manager. Once the Final Report has been accepted, the final payment has

• Additionally, the applicant shall provide a progress report every 6 months, beginning from the date of contract execution

Innovative Agricultural Management and Colorado's Next Generation of Water Leaders Area Map

