



South Platte – Irrigation Water Return Flow Filter Strip  
POGG1 2019-2751

March 18, 2019

Big Thompson Conservation District  
Attn: Mr. Larry Lempka, District Manager  
P.O. Box 441  
Berthoud, CO 80513-0441

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 pursuant to the WSRF Grant Program (“Program”). This letter authorizes you to proceed with the Irrigation Water Return Flow Filter Strip Project (“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, Big Thompson Conservation District, agree by accepting the Grant Funds.

The WSRF Criteria & Guidelines can be located on our website for additional information. 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](mailto:Craig.Godbout@state.co.us). Please send the 6-month progress reports and invoices directly to the Project Manager and cc me at [Dori.vigil@state.co.us](mailto:Dori.vigil@state.co.us).

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](mailto:Dori.vigil@state.co.us) / [cwcb.state.co.com](http://cwcb.state.co.com)





**STATE OF COLORADO**  
Department of Natural Resources

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<b>ORDER</b>		<b>*****IMPORTANT*****</b>				
<b>Number:</b>	POGG1,PDAA,201900002751	The order number and line number must appear on all invoices, packing slips, cartons, and correspondence.				
<b>Date:</b>	3/18/19	<b>BILL TO</b>				
<b>Description:</b>	PDAA 2500 WSRF BIG THOMPSON_IRR WATER RETURN SP BASIN	COLORADO WATER BOARD CONSERVATION 1313 SHERMAN STREET, ROOM 718 DENVER, CO 80203				
<b>Effective Date:</b>	03/18/19	<b>SHIP TO</b> COLORADO WATER BOARD CONSERVATION 1313 SHERMAN STREET, ROOM 718 DENVER, CO 80203				
<b>Expiration Date:</b>	12/31/21					
<b>BUYER</b>		<b>SHIPPING INSTRUCTIONS</b>				
<b>Buyer:</b>		<b>Delivery/Install Date:</b> -				
<b>Email:</b>		<b>FOB:</b> FOB Dest, Freight Allowed				
<b>VENDOR</b>						
BIG THOMPSON CONSERVATION DISTRICT PO BOX 441 BERTHOUD, CO 80513-0441						
<b>Contact:</b>	.					
<b>Phone:</b>	.					
<b>VENDOR INSTRUCTIONS</b>						
<b>EXTENDED DESCRIPTION</b>						
<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	\$6,600.00	<input type="checkbox"/>
Description: PDAA 2500 WSRF BIG THOMPSON_IRR WATER RETURN SP BASIN						
Service From: 03/18/19		Service To: 12/31/21				
<b>TERMS AND CONDITIONS</b>						
<a href="https://www.colorado.gov/pacific/osc/small-dollar-grant-award-terms-conditions">https://www.colorado.gov/pacific/osc/small-dollar-grant-award-terms-conditions</a>						
<b>DOCUMENT TOTAL = \$6,600.00</b>						

Last Update: January 9, 2018

<b><u>Colorado Water Conservation Board</u></b>	
<b>Water Supply Reserve Fund</b>	
<b><u>Exhibit A - Statement of Work</u></b>	
<b>Date:</b>	<b>May1, 2018</b>
<b>Water Activity Name:</b>	<b>Filter Strip for Nutrients and Sediment Reduction</b>
<b>Grant Recipient:</b>	<b>Big Thompson Conservation District</b>
<b>Funding Source:</b>	
<p><b>Water Activity Overview:</b> (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> <p><b>The Big Thompson Conservation District (BTCD) along with Colorado State University (CSU) Water Quality Program (WQP) and Colorado Department of Public Health and Environment (CDOHE) a <i>Farmer Driven Evaluation of agricultural non-point source pollution control, Best Management Practices (BMP's) in an Impaired Watershed.</i> The organizations are implementing Filter Strips and utilizing edge of field monitoring along the Little Thompson River and St Vrain Creek to measure water quantity and quality entering the field where a filter strip has been planted to demonstrate the effectiveness and to actually identify the amount of nutrients, sediment and water that comes from several square miles above the river and enters into a growing grass filter. This data will assist with implementation of BMP's for future use.</b></p>	
<p><b>Objectives:</b> (List the objectives of the project)</p> <ol style="list-style-type: none"> <li>1) The main objective is to prove the efficiency of using filter strips as well as demonstrate the process to other State and Federal agencies as well as landowners.</li> <li>2) Quantifiable and qualitative analysis of return flows and the effectiveness of efforts through use of live, growing filter strips.</li> <li>3) Demonstration plot for site visits, with signage</li> <li>4) Detailed signage for self-guided tours/or identification of sites.</li> <li>5) Engage agricultural and industrial entities for the importance of using filter strips.</li> </ol> <p><b>South Platte Basin Implementation Plan Elements of the Grant Request:</b></p> <ol style="list-style-type: none"> <li>a) This will maximize a Process (IPP)</li> <li>b) Maximize use of existing South Platte water</li> <li>c) Protect &amp; enhance environmental and recreational attributes</li> <li>d) Utilize effective communications and outreach to support program</li> <li>e) Research new technologies and strategies to utilize low quality water supplies for irrigation</li> </ol>	

Last Update: January 9, 2018

Tasks
Provide a detailed description of each task using the following format:
<b><u>Task 1 – Plot Preparation, Planting and Establishing Base Lines</u></b>
<p>Description of Task:</p> <p>A. On the demonstration plot which has been leveled and reconstructed from the floods, plant the filter strip with 2 different varieties of grasses to show which varieties are the most beneficial.</p> <p>B. Measure and establish an irrigation ditch on the newly leveled field.</p> <p>C. Soil testing, mapping and measurements of fields.</p> <p>D. Installation of measuring weirs to measure inflow from 3 points the water that enters the field, and measure the water as it exits the field into the river, if any is measurable.</p> <p>E. Sample and test water on the inflow to determine nutrients, deposition and pathogens. Measure and test the water on the outflow of the field to determine changes while infiltrating the field strip.</p> <p>F. Involve CSU and CDPHE along with BTCD to demonstrate implementation of the project along with the Farm Cooperator.</p>
<p>Method/Procedure:</p> <p>Common farming practices to establish the new grass, enable the best scenario for the grass to become established and set up irrigation as not to erode and wash out new plants and the flow is directed to measuring devices.</p> <p>Install measuring weirs with sampling ports to measure the water.</p> <p>Create mapping of the soil profile to get a baseline for progress.</p> <p>Create a visual log of activities and results through use of photo, video and drone photography.</p> <p>Establish base lines for fertility, and analyze the changes over time.</p> <p>Quantify the effects of the filter strip relative to the reduction of materials in water returning from fields to streams.</p>
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
<p>Create a learning tool that is hands on and available to the public for viewing and requested access.</p> <p>Demonstrate with the use of BMP's how to keep waters clean and viable.</p> <p>Provide analytical proof to demonstrate how Regulation 85 can be relaxed due to stewardship of producers.</p> <p>Create a viable working area that is appealing and also cost effective and efficient.</p>
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
<p>Make all information available to CWCB.</p> <p>Provide quarterly, annual and final reports for dissemination.</p> <p>Create a video or other data means to relay the information to the public.</p> <p>Create educational materials as well as workshops and tours to demonstrate accomplishments.</p>

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Tasks
Provide a detailed description of each task using the following format:
<b><u>Task 2 - Monitoring, Evaluation and Data Collection</u></b>
<p>Description of Task:</p> <p>A. Measure the amount of water entering all areas of the project site to determine actual irrigation return flows, rain and snow runoff from a 5 square mile area entering the Little Thompson River.</p> <p>B. Test Water Samples for soil and chemical content entering the plot and exiting into river.</p> <p>C. Drone fly overs to get overhead data and pictures.</p> <p>D. Do Soil Testing at the end of the growing season to evaluate change in fertility levels.</p> <p>E. Compile data and do reporting.</p>
<p>Method/Procedure:</p> <p>Using weirs and water stilling quadrants for sampling and testing of water quantity and quality.</p> <p>Monitor with period video and photos to monitor progress.</p> <p>Use of Drones for overhead video.</p> <p>Shallow and deep soil profiling and testing to determine nutrient and soil moisture changes.</p>
<p>Grantee Deliverable: (Describe the deliverable the grantee expects from this task)</p> <p>Create a learning tool that is hands on and available to the public for viewing and requested access.</p> <p>Demonstrate with the use of BMP's how to improve water quality through growing crops.</p> <p>Provide analytical proof to demonstrate how Regulation 85 can be relaxed due to stewardship of producers.</p> <p>Create a viable working area that is appealing and also cost effective and efficient.</p>
<p>CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)</p> <p>Make all information available to CWCB.</p> <p>Provide quarterly, annual and final reports for dissemination.</p> <p>Create a video or other data means to relay the information to the public.</p> <p>Create educational materials as well as workshops and tours to demonstrate accomplishments.</p>

**Repeat for Task 3, Task 4, Task 5, etc.**

Tasks
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Tasks	
Provide a detailed description of each task using the following format:	
<b>Task 3 - Education and Outreach</b>	
Description of Task:	
<ul style="list-style-type: none"> <li>a) PR and Advertising - Tours</li> <li>b) Large Plot Sign</li> <li>c) Information Kiosk</li> <li>d) Pamphlets and Brochures</li> <li>e) Video Report</li> <li>f) Workshops</li> </ul>	
Method/Procedure:	
<p>Provide information as available from all the partners and update when data is provided to be presented in written and digital form to cooperation organizations.</p> <p>Write news articles for publication and announcement of program.</p> <p>Create and write materials for education purposes describing the need and process of the filter strip.</p> <p>Bid and install signage for advertisement and tour.</p> <p>Offer educational workshops relating the ongoing findings.</p> <p>Film and edit video from 30 second clips to up to 10 minute videos with interviews, implementation and processes for different target audiences.</p> <p>Create workshops to spread the word of the work and detail how to create BMP's and implement.</p>	
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)	
<p>Create a learning tools that are hands on and available to the public for viewing and requested access.</p> <p>Demonstrate with the use of BMP's how to keep waters clean and viable.</p> <p>Provide analytical proof to demonstrate how Regulation 85 can be relaxed due to stewardship of producers.</p> <p>Create a viable working area that is appealing and also cost effective and efficient.</p>	
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)	
Provide written report to CWCB describing in quantitative terms the results of these efforts.	
Tasks	
Provide a detailed description of each task using the following format:	
<b>Task 4 - Collection and Publishing of Data</b>	

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Tasks
<p><b>Description of Task:</b></p> <p>With the aid of CSU and CDPHE, the data will be collected and results of the changes to the farm and water quality shall be analyzed and published.          Reports shall be generated to provide a means for the data to be read and interpreted.          Report findings to EPA, CDPHE, CWCB and others with regard to effects toward Reg 85, and other mechanisms for development in future use.          Continue to test and monitor as long as possible and report the findings.</p>
<p><b>Method/Procedure:</b></p> <p>Publish data to as many regulatory agencies as possible along with partner agencies.          Work with the EPA to provide data on the results of farmer derived BMP's in showing the reduction of non-point source pollutants for return water flow into ditches, streams and rivers</p>
<p><b>Grantee Deliverable: (Describe the deliverable the grantee expects from this task)</b></p> <p>Disseminate all learning tools that is hands on and available to the public for viewing and requested access.          Demonstrate with the use of BMP's how to keep waters clean and viable.          Provide analytical proof to demonstrate how Regulation 85 can be relaxed due to stewardship of producers.          Create a viable working area that is appealing and also cost effective and efficient.</p> <p><b>CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)</b></p> <p>Make all information available to CWCB.          Provide quarterly, annual and final reports for dissemination.          Provide data and tools to requesting agencies and landowners          Disseminate materials.</p>

Budget and Schedule
<p><b>Exhibit B - Budget and Schedule:</b> This Statement of Work shall be accompanied by a combined <a href="#">Budget and Schedule</a> 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.</p>

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### Reporting Requirements

**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.

**Final Report:** At completion of the project, the grantee shall provide the CWCB a Final Report on the grantee's letterhead that:

- 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

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.

The CWCB will pay the last 10% of the entire 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.

### Performance Requirements

Performance measures for this contract shall include the following:

(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.

(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.

(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.

(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.



**COLORADO**Colorado Water  
Conservation Board

Department of Natural Resources

**Colorado Water Conservation Board****Water Supply Reserve Fund****EXHIBIT B - BUDGET AND SCHEDULE - Direct & Indirect (Administrative) Costs****Date: May 1, 2018****Water Activity Name: Filter Strip Demonstration****Grantee Name: Big Thompson Conservation District**

<b>Task No.</b> <sup>(1)</sup>	<b>Description</b>	<b>Start Date</b> <sup>(2)</sup>	<b>End Date</b>	<b>Matching Funds</b> (cash & in-kind) <sup>(3)</sup>	<b>WSRF Funds</b> (Basin & Statewide combined) <sup>(3)</sup>	<b>Total</b>
1	Plot Prep, Planting and Establish Baselines	03/18/19	12/31/2021	\$6,435	\$0	\$6,435
2	Monitoring, Evaluation, Data Collection	4/1/2019	12/31/2021	\$40,000	\$0	\$40,000
3	Education and Outreach	4/1/2019	12/31/2021	\$0	\$0	\$0
3.a	PR and Advertising - Tours	4/1/2019	12/31/2021	\$452	\$500	\$952
3. b	Large Plot Sign	4/1/2019	12/31/2021	\$1,250	\$2,650	\$3,900
3. c	Information Kiosk	4/1/2019	12/31/2021	\$50	\$150	\$200
3. d	Pamphlets and Brochures	4/1/2019	12/31/2021	\$230	\$230	\$460
3.e	Video Report	4/1/2019	12/31/2021	\$1,205	\$2,395	\$3,600
3. f	Workshops	4/1/2019	12/31/2021	\$1,875	\$675	\$2,550
4	Collection and Publishing of Data	12/1/2019	12/31/2021	\$25,000	\$0	\$25,000
<b>Total</b>				<b>\$76,497</b>	<b>\$6,600</b>	<b>\$83,097</b>

**(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)** Start Date for funding under \$100K - 45 Days from Board Approval; Start Date for funding over \$100K - 90 Days from Board Approval.

**(3)** Round values up to the nearest hundred dollars.

- Reimbursement eligibility commences upon the grantee's receipt of a Notice to Proceed (NTP)

- NTP will not be accepted as a start date. Project activities may commence as soon as the grantee enters contract and receives formal signed State Agreement.

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 been issued, the water activity and purchase order (PO) or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to the CWCB with 90 days of the expiration of the PO or contract may be denied consideration for future funding of any type from the CWCB.

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