

**Water Supply Reserve Fund
Water Activity Summary Sheet
July 17, 2019
Agenda Item 8(b)**

Applicant & Grantee: Arapahoe Water and Wastewater Authority
Water Activity Name: Chambers Reservoir Rehabilitation Project: Phase One
Water Activity Purpose: Municipal Implementation
County: Douglas
Drainage Basin: Cherry Creek
Water Source: Cherry Creek
Amount Requested: \$85,000 Metro Account
Matching Funds: Applicant Match (cash & in-kind) = \$3,280,512 (cash)

- 3859% of the Basin Account request (meets 25% min)
- 97% of the total project cost of \$3,365,512

Staff Recommendation:

Staff recommends approval of up to \$85,000 from the Metro Account to help fund the project titled: Chambers Reservoir Rehabilitation Project: Phase One.

Water Activity Summary: This project supports the Arapahoe County Water and Wastewater Authority (ACWWA) in a two-phase project to make Chambers Reservoir a viable, effective component of ACWWA’s comprehensive water supply system. ACWWA is a water and sanitary service provider with a service area that is roughly ten square miles and comprised of 3,500 residences and businesses in Arapahoe and northern Douglas County. Chambers Reservoir is currently unable to serve ACWWA’s customers due to construction defects in the reservoir’s clay liner.

As part of the ACWWA Flow Project, Chambers Reservoir is critical to ACWWA’s non-potable irrigation system. The reservoir is fed with raw Cherry Creek alluvial water and is meant to act as both a buffer to meet peak-day demands in the summer months, and as a settling zone for the high concentrations of iron and manganese that are prevalent in the Cherry Creek alluvium. ACWWA currently provides enough raw water to irrigate 50 acres of land. At buildout, with Chambers Reservoir operating properly, ACWWA will be able to provide enough raw water to irrigate 185 acres of land. Phase one of the project is dedicated to the earthwork necessary to repair the failed side slopes of the reservoir in preparation for it to be outfitted with a synthetic liner during Phase 2. WSRF grant funding will be used specifically for the earthwork of Phase One.

Discussion: As described in the Metro Roundtable chair’s recommendation letter, this project was unanimously supported and recommended for approval by the roundtable on June 13, 2019. This project will meet several goals in the South Platte/Metro Basin Implementation Plan to 1) “Assure strong drought protection programs”, 2) “Maximize the Implementation of IPPs”, and 3) “Maximize Use and Effectiveness of Native South Platte Supplies”. The completion of the Rehabilitation Project will get ACWWA closer to their goal of 100% renewable water supplies and allow ACWWA’s non-

tributary groundwater to be a dedicated drought reserve. This project will restore 1400 acre-feet of storage.

Issues/Additional Needs: None

Eligibility Requirements: The application meets requirements of all eligibility components.

Evaluation Criteria: Staff has determined this activity satisfies the Evaluation Criteria.

Funding Summary / Matching Funds:

<u>Funding Source</u>	<u>Cash</u>	<u>In-Kind</u>	<u>Total</u>
Arapahoe County Water and Wastewater Authority	\$3,280,512	\$0	\$3,280,512
WSRF Metro Account	\$85,000	n/a	\$85,000
Totals	\$3,365,512	\$0	\$3,365,512

CWCB Project Manager: Megan Holcomb

June 13, 2019

Megan Holcomb
megan.holcomb@state.co.us
Colorado Water Conservation Board
1313 Sherman Street, Room 718
Denver, CO 80203
Phone: 303-866-3441, ext. 3222

RE: Support for Phase 1 of the Chambers Reservoir Rehabilitation Project Water Supply Reserve Fund Grant Application

Dear Ms. Holcomb,

On behalf of the Metro Basin Roundtable, I am pleased to write in support of the Colorado Water Conservation Board (CWCB) Water Supply Reserve Fund Grant application submitted by Arapahoe County Water and Wastewater Authority (ACWWA) for Phase 1 of the Chambers Reservoir Rehabilitation Project. ACWWA first presented the project to the Metro Roundtable on April 11, and on June 13, the Roundtable officially voted in support of the WSRF grant request.

ACWWA has been proactive in addressing the sustainability of its water supply system over the past decade. ACWWA has made significant investments in securing renewable water rights, developing infrastructure, and optimizing its operations to decrease its reliance on nonrenewable Denver Basin groundwater. In addition to bringing more renewable supplies into its portfolio to serve its potable system, ACWWA is expanding its raw water irrigation system to more efficiently meet peak demands during the summer. This proposed project is a critical supply component of ACWWA's raw water irrigation system. Completion of the project will bring ACWWA closer to its goal of 100% renewable water supplies, ensuring that Denver Basin groundwater serves as a drought reserve.

The proposed project addresses multiple objectives and elements from the Metro Basin Implementation Plan, as well as the Colorado Water Plan. By supporting Phase 1 of the Chambers Reservoir Rehabilitation Project, the CWCB and Metro Basin Roundtable will be aiding in the implementation of one of the basin's Identified Projects and Processes (IPPs). Additionally, the reservoir will allow ACWWA to maximize the use and effectiveness of native South Platte supplies and reserve the Denver Basin groundwater as a dedicated drought supply.

We encourage the CWCB to support the Chambers Reservoir Rehabilitation Project – Phase 1 WSRF funding request, and we look forward to working with ACWWA to implement this project and move towards the completion of this Metro Basin IPP.

Sincerely,



Barbara Biggs

Chair, Metro Basin Roundtable



Last Update: July 31, 2018

Colorado Water Conservation Board
Water Supply Reserve Fund
Grant Application

Instructions

All WSRF grant applications shall conform to the current [2016 WSRF Criteria and Guidelines](#).

To receive funding from the WSRF, a proposed water activity must be approved by a Roundtable(s) **AND** the Colorado Water Conservation Board (CWCB). The process for Roundtable consideration and recommendation is outlined in the 2016 WSRF Criteria and Guidelines. The CWCB meets bimonthly according to the schedule on page 2 of this application.

If you have questions, please contact the current CWCB staff Roundtable liaison:

<p>Arkansas</p> <p>Ben Wade ben.wade@state.co.us 303-866-3441 x3238</p>	<p>Gunnison North Platte South Platte Yampa/White</p> <p>Craig Godbout craig.godbout@state.co.us 303-866-3441 x3210</p>	<p>Colorado Metro Rio Grande Southwest</p> <p>Megan Holcomb megan.holcomb@state.co.us 303-866-3441 x3222</p>
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WSRF Submittal Checklist (Required)

X	I acknowledge this request was recommended for CWCB approval by the sponsoring roundtable.
X	I acknowledge I have read and understand the 2016 WSRF Criteria and Guidelines .
X	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract . ⁽¹⁾
Application Documents	
X	Exhibit A: Statement of Work ⁽²⁾ (<i>Word – see Template</i>)
X	Exhibit B: Budget & Schedule ⁽²⁾ (<i>Excel Spreadsheet – see Template</i>)
X	Letters of Matching and/or Pending 3 rd Party Commitments ⁽²⁾
X	Map ⁽²⁾
X	Photos/Drawings/Reports
X	Letters of Support PENDING WILL BE DELIVERED JUNE 14
Contracting Documents ⁽³⁾	
X	Detailed/Itemized Budget ⁽³⁾ (<i>Excel Spreadsheet – see Template</i>)
	Certificate of Insurance ⁽⁴⁾ (<i>General, Auto, & Workers' Comp.</i>)
	Certificate of Good Standing ⁽⁴⁾
	W-9 Form ⁽⁴⁾
	Independent Contractor Form ⁽⁴⁾ (<i>If applicant is individual, not company/organization</i>)
	Electronic Funds Transfer (ETF) Form ⁽⁴⁾

(1) Click "Grant Agreements". For reference only/do not fill out or submit/required for contracting

(2) Required with application if applicable.

(3) Additional documentation providing a Detailed/Itemized Budget maybe required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

(4) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.



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Schedule		
CWCB Meeting	Application Submittal Dates	Type of Request
January	December 1	Basin Account; BIP
March	February 1	Basin/Statewide Account; BIP
May	April 1	Basin Account; BIP
July	June 1	Basin Account; BIP
September	August 1	Basin/Statewide Account; BIP
November	October 1	Basin Account/BIP

Desired Timeline	
Desired CWCB Hearing Month:	July
Desired Notice to Proceed Date:	July 31, 2019

Water Activity Summary	
Name of Applicant	Arapahoe Water and Wastewater Authority
Name of Water Activity	Chambers Reservoir Rehabilitation Project – Phase 1
Approving Roundtable(s)	Basin Account Request(s) ⁽¹⁾
Metro Basin Roundtable	\$85,000
Basin Account Request Subtotal	\$85,000
Statewide Account Request ⁽¹⁾	\$
Total WSRF Funds Requested (Basin & Statewide)	\$85,000
Total Project Costs	\$3,365,512

(1) Please indicate the amount recommended for approval by the Roundtable(s)



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Grantee and Applicant Information	
Name of Grantee(s)	Arapahoe County Water and Wastewater Authority
Mailing Address	13031 E Caley Ave, Centennial, CO 80111
FEIN	84-1103794
Grantee's Organization Contact ⁽¹⁾	Steve Witter
Position/Title	General Manager
Email	switter@acwwa.com
Phone	720-645-1403
Grant Management Contact ⁽²⁾	Sandor Rebek
Position/Title	Water Resources Engineer
Email	srebek@acwwa.com
Phone	303-708-0117
Name of Applicant (if different than grantee)	
Mailing Address	
Position/Title	
Email	
Phone	

(1) Person with signatory authority

(2) Person responsible for creating reimbursement invoices (Invoice for Services) and corresponding with CWCB staff.

Description of Grantee
Provide a brief description of the grantee's organization (100 words or less).
Arapahoe County Water and Wastewater Authority, "ACWWA," is a water and sanitary service provider. Our service area is roughly ten square miles and is comprised of 3,500 residences and businesses in Arapahoe County and northern Douglas County. In 1988, ACWWA was established as a political subdivision of the state of CO, able to develop water resources, systems and facilities, wastewater treatment and disposal systems, and facilities for the residents of the Public Improvement District, the County, and others. It is our mission to provide sustainable water/wastewater services by optimizing our resources to ensure quality and value while protecting the environment.



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Type of Eligible Entity (check one)	
	Public (Government): municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
X	Public (Districts): authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises
	Private Incorporated: mutual ditch companies, homeowners associations, corporations
	Private Individuals, Partnerships, and Sole Proprietors: are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
	Non-governmental organizations: broadly, any organization that is not part of the government
	Covered Entity: as defined in Section 37-60-126 Colorado Revised Statutes

Type of Water Activity (check one)	
	Study
X	Implementation

Category of Water Activity (check all that apply)		
	Nonconsumptive (Environmental)	
	Nonconsumptive (Recreational)	
	Agricultural	
X	Municipal/Industrial	
	Needs Assessment	
	Education & Outreach	
	Other	Explain:

Location of Water Activity	
Please provide the general county and coordinates of the proposed activity below in decimal degrees . The Applicant shall also provide, in Exhibit C, a site map if applicable.	
County/Countries	Douglas County
Latitude	39.548285°
Longitude	-104.810875°



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Water Activity Overview

Please provide a summary of the proposed water activity (200 words or less). Include a description of the activity and what the WSRF funding will be used for specifically (e.g. studies, permitting, construction). Provide a description of the water supply source to be utilized or the water body affected by the activity. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, area of habitat improvements. If this project addresses multiple purposes or spans multiple basins, please explain. The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, and Schedule.

Chambers Reservoir is currently unable to serve ACWWA’s customers due to construction defects in the reservoir’s clay liner. Therefore, the Chambers Reservoir Rehabilitation Project is a two-phase project to make the reservoir a viable, effective component of ACWWA’s comprehensive water supply system. As part of the ACWWA Flow Project, Chambers Reservoir is critical to ACWWA’s non-potable irrigation system. The reservoir is fed with raw Cherry Creek alluvial water and is meant to act as both a buffer to meet peak-day demands in the summer months, and as a settling zone for the high concentrations of iron and manganese that are prevalent in the Cherry Creek alluvium. ACWWA currently provides enough raw water to irrigate 50 acres of land. At buildout, with Chambers Reservoir operating properly, ACWWA will be able to provide enough raw water to irrigate 185 acres of land. Phase 1 of the project is dedicated to the earthwork necessary to repair the failed side slopes of the reservoir in preparation for it to be outfitted with a synthetic liner during Phase 2. WSRF grant funding will be used specifically for the earthwork of Phase 1.

Measurable Results

To catalog measurable results achieved with WSRF funds please provide any of the following values.

	New Storage Created (acre-feet)	
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive	
1400	Existing Storage Preserved or Enhanced (acre-feet)	
	Length of Stream Restored or Protected (linear feet)	
	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
	Area of Restored or Preserved Habitat (acres)	
	Length of Pipe/Canal Built or Improved	
	Other	Explain:



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Water Activity Justification

Provide a description of how this water activity supports the goals of [Colorado's Water Plan](#), the most recent [Statewide Water Supply Initiative](#), and the respective [Roundtable Basin Implementation Plan and Education Action Plan](#) ⁽¹⁾. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).

For applications that include a request for funds from the Statewide Account, the proposed water activity shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan criteria for state support (CWP, Section 9.4, pp. 9-43 to 9-44;) (Also listed pp. 4-5 in [2016 WSRF Criteria and Guidelines](#)).

South Platte/Metro Roundtable BIP

- Assuring strong drought protection programs (Section 1.9.8, pp. 1-29) – The completion of the Rehabilitation Project will get ACWWA closer to our goal of 100% renewable water supplies. This will allow ACWWA's nontributary groundwater to be a dedicated drought reserve. Chambers Reservoir operating as part of the ACWWA Flow Project will help ACWWA meet our buildout demands with renewable supplies and preserve our Denver Basin groundwater for times of drought.
- Maximize the Implementation of IPPs (Section 5.5.1, pp. 5-24) – As previously stated, Chambers Reservoir is a component of the comprehensive ACWWA Flow Project. The Project is listed as an IPP of the Metro Basin and requires a properly functioning Chambers Reservoir to be fully realized. WSRF funding will contribute directly to the implementation of the ACWWA Flow IPP.
- Maximize Use and Effectiveness of Native South Platte Supplies (Section 5.5.3, pp. 5-25) – Chambers Reservoir maximizes ACWWA's Cherry Creek tributary water and offsets a portion of the potable system's peak demand during the summer months. This maximizes the effectiveness of our supplies in that we save on treatment costs and avoid using Denver Basin groundwater to meet irrigation demands.

Colorado Water Plan

- Demonstrate sustainability (Section 9.4, pp. 9-44) – The Rehabilitation Project will maximize the use of ACWWA's water resources by firming the yield of our Cherry Creek water supplies for our raw water irrigation system and by allowing us to take full advantage of the return flows from ACWWA's Lone Tree Creek Water Reuse Facility.

(1) Access Basin Implementation Plans or Education Action Plans from Basin drop down menu.



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Matching Requirements: Basin Account Requests

Basin (only) Account grant requests require a 25% match (cash and/or in-kind) from the Applicant or 3rd party and shall be accompanied by a **letter of commitment** as described in the 2016 WSRF Criteria and Guidelines (submitted on the contributing entity's letterhead). Attach additional sheet if necessary.

Contributing Entity	Amount and Form of Match (note cash or in-kind)
Arapahoe County Water and Wastewater Authority	\$3,280,512 (cash)
Total Match	\$3,280,512
If you requested a Waiver to the Basin Account matching requirements, indicate the percentage you wish waived.	

Matching Requirements: Statewide Account Requests

Statewide Account grant requests require a 50% match as described in the 2016 WSRF Criteria and Guidelines. A minimum of 10% match shall be from Basin Account funds (cash only). A minimum of 10% match shall be provided by the applicant or 3rd party (cash, in-kind, or combination). The remaining 30% of the required match may be provided from any other source (Basin, applicant, or 3rd party) and shall be accompanied by a **letter of commitment**. Attach additional sheet if necessary.

Contributing Entity	Amount and Form of Match (note cash or in-kind):
Total Match	\$
If you requested a Waiver to the Statewide Account matching, indicate % you wish waived. (Max 50% reduction of requirement).	



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Related Studies

Please provide a list of any related studies, including if the water activity is complimentary to or assists in the implementation of other CWCB programs.

N/A

Previous CWCB Grants

List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order

- 1) Arapahoe County Water and Wastewater Authority
- 2) Water Efficiency Plan
- 3) Metro
- 4) March 3, 2015
- 5) P.O. # POGG1 PDAA20150000000000000248

Tax Payer Bill of Rights

The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

N/A



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Colorado Water Conservation Board	
Water Supply Reserve Fund	
<u>Exhibit A - Statement of Work</u>	
Date:	May 17, 2019
Water Activity Name:	Chambers Reservoir Rehabilitation Project – Phase 1
Grant Recipient:	Arapahoe County Water and Wastewater Authority
Funding Source:	Metro Basin Roundtable
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>Chambers Reservoir is currently unable to serve ACWWA’s customers due to construction defects in the reservoir’s clay liner. Therefore, the Chambers Reservoir Rehabilitation Project is a two-phase project to make the reservoir a viable, effective component of ACWWA’s comprehensive water supply system. As part of the ACWWA Flow Project, Chambers Reservoir is critical to ACWWA’s non-potable irrigation system. The reservoir is fed with raw Cherry Creek alluvial water and is meant to act as both a buffer to meet peak-day demands in the summer months, and as a settling zone for the high concentrations of iron and manganese that are prevalent in the Cherry Creek alluvium. ACWWA currently provides enough raw water to irrigate 50 acres of land. At buildout, with Chambers Reservoir operating properly, ACWWA will be able to provide enough raw water to irrigate 185 acres of land. Phase 1 of the project is dedicated to the earthwork necessary to repair the failed side slopes of the reservoir in preparation for it to be outfitted with a synthetic liner during Phase 2. WSRF grant funding will be used specifically for the earthwork of Phase 1.</p>	
Objectives: (List the objectives of the project)	
<p>Overall project objective: Bring Chambers Reservoir to an operational standard to store and deliver water as originally proposed.</p> <p>Phase 1 earthwork objectives: Prepare the Reservoir to be outfitted with a synthetic liner which includes the mechanical scraping and regrading of slopes and the importing of materials to raise the bottom of the Reservoir to provide more separation from underlying groundwater.</p>	



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Tasks
Provide a detailed description of each task using the following format:
<u>Task 1 – Earthwork & Overall Construction Administration</u>
Description of Task:
<ol style="list-style-type: none"> 1) Scrap existing clay liner from the side slopes and compact this material in the bottom of the reservoir. 2) Regrade side slopes to prevent future slope failure. 3) Import roughly 107,000 cu. yd. of clay material to raise the bottom of the Reservoir above the groundwater level. 4) Install toe drain infrastructure to help manage perched groundwater. 5) Additional site grading to address new layout including proper drainage and access road modification.
Method/Procedure:
<ol style="list-style-type: none"> 1) ACWWA has brought on AECOM to design the Rehabilitation Project and oversee construction, with Fiore & Sons acting as the general construction contractor. 2) ACWWA will perform our due diligence and attend weekly construction meetings and have staff on-site regularly verifying that construction is being administered successfully and in accordance with any and all applicable standards and regulations. 3) Thorough inspection and certification of construction by AECOM and ACWWA.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
<ol style="list-style-type: none"> 1) Final Record Drawings 2) Notice of Final Completion and Project Punch-list
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
<ol style="list-style-type: none"> 1) Final Record Drawings 2) Notice of Final Completion and Project Punch-list 3) Necessary Progress Reports during Project 4) Final Report as outlined below



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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 excel format. A separate excel formatted Budget is required for engineering costs to include rate and unit costs.

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.

