

**Water Supply Reserve Fund
Water Activity Summary Sheet
March 11-12, 2020
Agenda Item 23(q)**

Applicant & Grantee: Mountain Studies Institute
Water Activity Name: 416-Fire Aquatic Monitoring Year 2
Water Activity Purpose: Multi-Purpose - Study
County: La Plata
Drainage Basin: Southwest
Water Source: Hermosa Creek, Animas River, and Junction Creek
Amount Requested: \$19,088 Southwest Basin Account
Matching Funds: Applicant Match & 3rd Parties = \$105,935
• 505% of the Basin Account request (meets 25% min)

Staff Recommendation:
Staff recommends approval of up to \$19,088 from the Southwest Basin Account to help fund the project: 416-Fire Aquatic Monitoring Year 2.

Water Activity Summary: WSRF Funds, if approved will assist the Mountain Studies Institute investigate impacts and recovery of water quality and aquatic life following the 416-Fire, they have formed a research team made up of scientists from the Mountain Studies Institute (MSI), Colorado School of Mines, and US Forest Service Rocky Mountain Research Station. While they have begun to see signs of recovery one year after the fire (e.g., recovering benthic communities, less elevated water quality contaminants), it is unknown how these impacts may persist into 2020 and how long it will take before water quality and aquatic life fully recover. It is notable that southwest Colorado experienced a weak monsoon season in 2019. With the possibility of a stronger monsoon season in 2020, there is a need to continue monitoring downstream of the 416-burn area to characterize further impacts to water quality and aquatic life. They are requesting funding to continue our research efforts to:

- Evaluate water quality impacts on Hermosa Creek and the Animas River from the 416-Fire in context of the use of these waters for irrigation, water supply, recreation, and aquatic life.
- Document the recovery of water quality and aquatic life following the 416-Fire to share with concerned public members and more broadly to further our understanding of the recovery of river health after a wildfire.
- Establish monitoring sites on Hermosa Creek and Junction Creek to serve as watershed comparisons of differing forest health, fire history, and forest health treatments.

Discussion: This effort will assist the Southwest Basin Roundtable meet the Goals and Measurable Outcomes H1, A2, A4, A5, C2, D1, E1, E2, F1 as described in their Basin Implementation Plan and the SWBRT Chair's Recommendation Letter.

Issues/Additional Needs: The applicant shall provide all outstanding letter of matching commitment prior to entering into a grant contract with the state, otherwise there are no issues or additional needs.

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

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

Funding Sources/Match	Cash	In-kind	Total	Status
Colorado School of Mines	\$4,792	\$27,861	\$32,653	Pending
USFS	\$0	\$11,330	\$11,330	Pending
RG Watershed Emergency Action Coor Team	\$0	\$21,000	\$21,000	Pending
Colorado Healthy Rivers Fund	\$19,802	\$0	\$19,802	Pending
Southwest Water Conservancy District	\$7,800	\$0	\$7,800	Pending
City of Durango	\$5,000	\$0	\$5,000	Pending
Community Emergency Relief Fund	\$2,000	\$0	\$2,000	Pending
Animas Water Company	\$500	\$0	\$500	Pending
CDPHE	\$0	\$5850	\$5,850	Pending
Sub-total	\$39,894	\$66,041	\$105,935	
WSRF Southwest Basin Account	\$19,088	\$0	\$19,088	Secured
Total Project Costs	\$125,023	\$0	\$125,023	

CWCB Project Manager: Craig Godbout

SOUTHWEST BASINS ROUNDTABLE

Michael Preston, Chair

c/o Dolores Water Conservancy District

P.O. Box 1150

Cortez, Colorado 81321

970-565-7562

January 17, 2020

Craig Godbout

Water Supply Management Section

Colorado Water Conservation Board

1580 Logan Street, Suite 600

Denver, Colorado 80203

SUBJECT: SWBRT Approval 416 Fire Aquatic Monitoring \$19,088 from the Basin Account

Dear Craig:

The Southwest Basin Roundtable (SWBRT) approved funding for the 416 Fire Aquatic Monitoring, Year 2 in the amount of \$19,088 from the Basin Fund at our January 15, 2020 Roundtable Meeting. Support was unanimous. A quorum of Roundtable members was present.

The Project conforms with the Colorado Water Plan Environmental and Recreational Projects Goals: H1: Education, Outreach and Innovation Goal to improve public awareness. The project also conforms with the Southwest BIP Goals A2: New IPPs that Protect quality of life by addressing multiple purposes; A4: Promote dialogue, foster cooperation in every basin and between basins; A5: Maintain watershed health that affect critical infrastructure and/or environmental and recreational areas; C2: Provide safe drinking water; D1: Maintain, enhance recreational and economic values; E1: Monitor and improve imperiled aquatic and riparian species; E2: Maintain, monitor, improve natural function of streams, support native species, adapt to changing conditions; and FI: Monitor, protect and improve water quality for all classified users.

The completed Grant Application will be forwarded directly to you by the applicant. Please contact the applicant directly or me at 970-739-4181, or mpreston@frontier.net, if you have questions or wish to discuss this application in more detail.

Sincerely,



Michael Preston

Southwest Basin Roundtable Chair



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:

Arkansas

Ben Wade
ben.wade@state.co.us
303-866-3441 x3238

Gunnison | North Platte | South Platte | Yampa/White

Craig Godbout
craig.godbout@state.co.us
303-866-3441 x3210

Colorado | Metro | Rio Grande | Southwest

Megan Holcomb
megan.holcomb@state.co.us
303-866-3441 x3222

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⁾
	Photos/Drawings/Reports
X	Exhibit C: Letters of Support
Contracting Documents ⁽³⁾	
X	Detailed/Itemized Budget ⁽³⁾ (<i>Excel Spreadsheet – see Template</i>)
X	Certificate of Insurance ⁽⁴⁾ (<i>General, Auto, & Workers' Comp.</i>)
X	Certificate of Good Standing ⁽⁴⁾
X	W-9 Form ⁽⁴⁾
	Independent Contractor Form ⁽⁴⁾ (<i>If applicant is individual, not company/organization</i>)
X	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.



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:	March 2020
Desired Notice to Proceed Date:	April 2020

Water Activity Summary		
Name of Applicant	Mountain Studies Institute on behalf of 416-Fire Aquatic Monitoring Research Group	
Name of Water Activity	416-Fire Aquatic Monitoring Year 2	
Approving Roundtable(s)		Basin Account Request(s) ⁽¹⁾
Southwest Basin Roundtable		
Basin Account Request Subtotal		\$19,088
Statewide Account Request ⁽¹⁾		\$
Total WSRF Funds Requested (Basin & Statewide)		\$19,088
Total Project Costs		\$125,023

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

Grantee and Applicant Information	
Name of Grantee(s)	Mountain Studies Institute
Mailing Address	679 E. 2 nd Ave Suite 8, Durango, C
FEIN	73-1644103
Grantee's Organization Contact ⁽¹⁾	Marcie Bidwell
Position/Title	Executive Director
Email	marcie@mountainstudies.org

Grantee and Applicant Information	
Phone	970-387-5161
Grant Management Contact ⁽²⁾	<u>Carolyn Moller</u>
Position/Title	Finance Director
Email	finance@mountainstudies.org
Phone	970-387-5161
Name of Applicant (if different than grantee)	Scott Roberts
Mailing Address	679 E 2 nd Ave, Durango, CO
Position/Title	Director of Water Programs
Email	scott@mountainstudies.org
Phone	970-387-5161

(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).	
<p>Mountain Studies Institute (MSI) is respectfully submitting this application on behalf of the 416-Fire Aquatic Monitoring Research Group, which formed to investigate impacts on water quality and aquatic life from the 2018 416-Fire in southwest Colorado. The research group consists of scientists from MSI, Colorado School of Mines, and the US Forest Service Rocky Mountain Research Station. MSI is an independent not-for-profit mountain research and education center established in 2002 with offices and lab space in Durango and Silverton, CO. MSI develops "science that people can use" to address local and regional environmental issues.</p>	
Type of Eligible Entity (check one)	
<input type="checkbox"/>	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.
<input type="checkbox"/>	Public (Districts): authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises
<input type="checkbox"/>	Private Incorporated: mutual ditch companies, homeowners associations, corporations
<input type="checkbox"/>	Private Individuals, Partnerships, and Sole Proprietors: are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
<input checked="" type="checkbox"/>	Non-governmental organizations: broadly, any organization that is not part of the government
<input type="checkbox"/>	Covered Entity: as defined in Section 37-60-126 Colorado Revised Statutes



Type of Water Activity (check one)	
<input checked="" type="checkbox"/>	Study
<input type="checkbox"/>	Implementation

Category of Water Activity (check all that apply)		
<input checked="" type="checkbox"/>	Nonconsumptive (Environmental)	
<input checked="" type="checkbox"/>	Nonconsumptive (Recreational)	
<input checked="" type="checkbox"/>	Agricultural	
<input checked="" type="checkbox"/>	Municipal/Industrial	
<input checked="" type="checkbox"/>	Needs Assessment	
<input checked="" type="checkbox"/>	Education & Outreach	
<input type="checkbox"/>	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	La Plata County
Latitude	37.4158
Longitude	-107.837

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.

Water Activity Overview

To investigate impacts and recovery of water quality and aquatic life following the 416-Fire, we formed a research team made up of scientists from the Mountain Studies Institute (MSI), Colorado School of Mines, and US Forest Service Rocky Mountain Research Station. While we have begun to see signs of recovery one year after the fire (e.g., recovering benthic communities, less elevated water quality contaminants), it is unknown how these impacts may persist into 2020 and how long it will take before water quality and aquatic life fully recover. It is notable that southwest Colorado experienced a weak monsoon season in 2019. With the possibility of a stronger monsoon season in 2020, there is a need to continue monitoring downstream of the 416-burn area to characterize further impacts to water quality and aquatic life. We are respectfully requesting funding to continue our research efforts to:

- Evaluate water quality impacts on Hermosa Creek and the Animas River from the 416-Fire in context of the use of these waters for irrigation, water supply, recreation, and aquatic life.
- Document the recovery of water quality and aquatic life following the 416-Fire to share with concerned public members and more broadly to further our understanding of the recovery of river health after a wildfire.
- Establish monitoring sites on Hermosa Creek and Junction Creek to serve as watershed comparisons of differing forest health, fire history, and forest health treatments.

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	
	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	
x	Other	Explain: Provide the communities of southwest Colorado with information regarding the impacts to water quality from the 416-Fire in context of water uses and further our understanding of the recovery of river health after wildfire

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](#)).

Water Activity Justification

The alignment with BIP goals & the Colorado Water Plan are identified in Tables 1.1 and 1.2 below, respectively.

Table 1.1: Alignment with SW Basin Implementation Plan

GOAL	MEASURABLE OUTCOME	PROJECT-RELATED MEASURABLE OUTCOME
A2: Support specific and unique new IPPs important to maintaining the quality of life in this region, and to address multiple purposes including municipal, industrial, environmental, recreational, agricultural, risk management, and compact compliance needs.	Supports, or assists, in achievement of outcomes 3,5, and 6	The proposed project will provide valuable information on how wildfire in southwest Colorado impacts water quality for users such as irrigators, livestock owners, recreationalists, and domestic water suppliers. This research will further our understanding of the recovery of river health after wildfire and will serve as information to guide future decision makers.
A4: Promote dialogue, foster cooperation and resolve conflict among water interests in every basin and between basins for the purpose of implementing solutions to Southwest Colorado's and Colorado's water supply challenge (<i>SWSI 2010</i>).	Supports, or assists, in achievement of outcome 3	Cooperation and conflict resolution is greatly bolstered by the availability of up-to-date, relevant information to all water interests. Our work will provide an independent source of information regarding the impacts to, and recovery of, water quality and aquatic life following wildfire.
A5: Maintain watershed health by protecting and/or restoring watersheds that could affect critical infrastructure and/or environmental and recreational values.	Supports, or assists, in achievement of outcomes 5 & 6	Our research will provide decision-makers with relevant information needed to justify whether treatment or mitigation strategies may be necessary to address water quality concerns following wildfire.
C2: Provide safe drinking water to Southwest Colorado's citizens and visitors		Our research will provide up-to-date, relevant, water quality information that is crucial to water suppliers evaluating changing water quality conditions following wildfire.



Water Activity Justification		
D1: Maintain, protect and enhance recreational values and economic values to local and statewide economies derived from recreational water uses, such as fishing, boating, hunting, wildlife watching, camping and hiking.	Supports, or assists, in achievement of outcome 3	We will document the recovery of Animas River aquatic life and associated water quality, which will be a valuable message to convey to resident and visiting recreationists that our local economies depend on.
E1: Encourage and support restoration, recovery, and sustainability of endangered, threatened, and imperiled aquatic and riparian dependent species and plant communities.	Supports, or assists, in achievement of outcomes 1-5	Our research will provide information about the impacts and recovery of river health following wildfire, which will be relevant for the management of endangered, threatened, and imperiled species.
E2: Protect, maintain, monitor and improve the condition and natural function of streams, lakes, wetlands, and riparian areas to promote self-sustaining fisheries, and to support native species and functional habitat in the long term, and adapt to changing conditions.	Supports, or assists, in achievement of outcomes 1-5.	We will directly monitor streams to address how river health is affected by wildfire and how recovery occurs. Our monitoring will document how aquatic life may or may not adapt to changing conditions such as wildfire.
F1: Monitor, protect and improve water quality for all classified users	Supports, or assists, in achievement of outcome 1 & 2	Immediately following the 416-Fire, we detected water quality conditions that surpassed water quality standards in 2018 and 2019. It is unknown how long these water quality impacts from the 416-Fire may persist. For regulatory purposes, the state of Colorado generally considers rivers to recover from wildfire impacts after five years. This study will provide additional evidence as to whether the five-year recovery time period is a reasonable assumption.

Water Activity Justification

Table 1.2: Project Alignment with Colorado Water Plan

GOAL	PROJECT-RELATED MEASURABLE OUTCOME
H1: Education, Outreach, and Innovation: Colorado's Water Plan sets a measurable objective to significantly improve the level of public awareness and engagement regarding water issues statewide by 2020, as determined by water awareness surveys. Colorado's Water Plan also sets a measurable objective to engage Coloradans statewide on at least five key water challenges (identified by CWCB) that should be addressed by 2030.	<p>One of the goals of the proposed project is to increase the level of public awareness regarding the impacts of wildfire on water quality and the health of aquatic life. Our work will provide valuable information to the public about how wildfire in southwest Colorado impacts water quality for users such as irrigators, livestock owners, recreationalists, and domestic water suppliers. More broadly, this research will further our understanding of the recovery of river health after wildfire. We will convey findings to the public through reports, public meetings, direct information to ditch users, Animas Valley Grange, and social media.</p>

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



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)
Colorado School of Mines	Total of \$32,653 (\$4,792 cash + \$27,861 in-kind)
USFS Rocky Mountain Research Station	\$11,330 in-kind
Rio Grande Watershed Emergency Action Coordination Team	\$21,000 in-kind
Colorado Healthy Rivers Fund	\$19,802 cash
Southwestern Water Conservation District	\$7,800 cash
City of Durango	\$5,000 cash
Community Emergency Relief Fund	\$2,000 cash
Animas Water Company	\$500 cash
Colorado Department of Public Health and Environment	\$5,850 in-kind
Total Match	\$105,935
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):
N/A	
Total Match	
If you requested a Waiver to the Statewide Account matching, indicate % you wish waived. (Max 50% reduction of requirement).	

Matching Requirements: Statewide Account Requests

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.

We have leveraged our initial efforts to evaluate impacts and recovery of water quality and aquatic life following the 416-fire (as will be detailed in a forthcoming technical report in spring of 2020) to:

Expand our 416 Aquatic Monitoring Group research through:

- examination of whether metals are bioaccumulating in benthic tissue downstream of the 416 burn area
- assessment of benthic community composition and physical habitat across a gradient of burn severity within the 416 burn area
- pilot study of how periphyton differs between burned and un-burned watersheds

Collaborate with partners who have launched related studies focused on the 416-fire:

- Colorado School of Mines is examining if indicators of forest recovery can be used as surrogate signals for aquatic ecosystem recovery
- Colorado State University is assessing water quality impacts to ephemeral and 1st order tributaries within Hermosa Creek

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

CWCP IPCP 2016: **1) Applicant:** Mountain Studies Institute (MSI), **2) Water Activity Name:** Invasive Phreatophyte Control Program: Animas River Invasive Species Removal Program Phase I, **3) Approving RT:** Southwest Basin Roundtable, **4) SWBRT date:** November 13, 2015; **CWCB date:** April 2016; **5) Contract number:** CTGG1 PDAA 2016-1860, **6) Completion date:** April 2018

WSRF 2017: **1) Applicant:** Mountain Studies Institute (MSI); **2) Project Name:** Animas River Community Forum in the Southwest Basin, Phase II; **3) Approving RT:** Southwest Basin Round Table; **4) CWCB Date:** July 2017; **5) Contract number:** CTGG1 2018-201, POGG1 PDAA 201800000201, **6) Completion Date:** April 2018

WSRF 2017: **1) Applicant:** Mountain Studies Institute (MSI); **2) Project Name:** Animas River Community Forum, Phase II; **3) Approving RT:** Southwest Basin Round Table; **4) CWCB Date:** April 2016; **5) Contract number:** POGG1 2016-794, POGG1 PDAA 20160000000000000794, **6) Completion Date:** September 2017

Colorado Water Plan 2018: **1) Applicant:** Mountain Studies Institute (MSI); **2) Project Name:** Animas River Removal and Replacement of Invasive Phreatophytes, Phase II; **3) Approving RT:** Southwest Basin Round Table; **4) CWCB Date:** May 2018; **5) Contract number:** POGG1, PDAA, 201900002100, **6) Completion Date:** August 2023

Colorado Water Plan- Innovation Fund 2018: **1) Applicant:** Mountain Studies Institute (MSI); **2) Project Name:** Silverton Science & Innovation Center (SSINC); **3) Approving RT:** Southwest Basin Round Table; **4) CWCB Date:** Nov 2018; **5) Contract number:** POGG1, PDAA, 201900002743, **6) Completion Date:** 2020

WRP and WSRF 2018: **1) Applicant:** Mountain Studies Institute (MSI); **2) Project Name:** Watershed Grant Upper San Juan Stream Management Planning, Phase I; **3) Approving RT:** Southwest Basin



Previous CWCB Grants

Round Table; **4) CWCB Date:** 4/27/18; **5) Contract number:** POGG1, PDAA, 201800000886; **6) Completion Date:** 1/31/20

WSRF 2019: 1) Applicant: Mountain Studies Institute (MSI); **2) Project Name:** *Forests to Faucets (F2F): My Water Comes from the San Juan Mountains Teacher Training Workshop Series*; **3) Approving RT:** Southwest Basin Round Table; **4) CWCB Date:** 4/4/19; **5) Contract number:** POGG1,PDAA,201900002804, **6) Completion Date:** 01/31/22

WSRF 2019: 1) Applicant: Mountain Studies Institute (MSI) on behalf of 416-Fire Aquatic Monitoring Research Group; **2) Project Name:** *416-Fire Aquatic Monitoring*; **3) Approving RT:** Southwest Basin Round Table; **4) CWCB Date:** 4/4/19; **5) Contract number:** POGG1, PDAA, 201900002894; **6) Completion Date:** 5/1/22

WSRF 2019: 1) Applicant: Mountain Studies Institute (MSI); **2) Project Name:** Upper San Juan Watershed Enhancement Partnership (WEP) Multiple Use Project; **3) Approving RT:** Southwest Basin Round Table; **4) CWCB Date:** 10/10/19; **5) Contract number:** POGG1, PDAA 202000002332; **6) Completion Date:** 6/30/22

WRP 2020: 1) Applicant: Mountain Studies Institute (MSI); **2) Project Name:** Upper San Juan Basin Integrated Water Management Plan, Phase II; **3) Approving RT:** Southwest Basin Round Table; **4) CWCB Date:** March 2020; **5) Contract number:** Pending; **6) Completion Date:** April 2021

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



Last Update: January 9, 2018

Colorado Water Conservation Board	
Water Supply Reserve Fund	
<u>Exhibit A - Statement of Work</u>	
Date:	1/1/2020
Water Activity Name:	416-Fire Aquatic Monitoring-Year 2
Grant Recipient:	Mountain Studies Institute on behalf of 416-Fire Aquatic Monitoring Research Group
Funding Source:	Water Supply Reserve Fund
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>During the summer of 2018, the 416 Fire burned 54,000 acres, primarily in the Hermosa Creek drainage north of Durango, CO. The fire and smoke negatively impacted livelihoods, homeowners, irrigators, and tourism. Subsequent runoff events and debris flows created community concern about the resulting impacts on water quality and aquatic life.</p> <p>To investigate these impacts, we formed a research team made up of scientists from the Mountain Studies Institute, Colorado School of Mines, and USFS Rocky Mountain Research Station. While we have begun to see signs of recovery one year after the fire (e.g., recovering benthic communities, less elevated water quality contaminants), it is unknown how impacts may persist into 2020. Notably, southwest Colorado experienced a weak monsoon season in 2019. With the possibility of a stronger monsoon season in 2020, there is a need to continue monitoring downstream of the 416-burn area to characterize further impacts to water quality and aquatic life. Continued data collection in 2020 will allow MSI to readily convey updates of post-fire water quality and aquatic life and inform decision-makers including La Plata County Emergency Management, Animas Consolidated Ditch, Colorado Parks and Wildlife, San Juan National Forest, and drinking water suppliers.</p>	
Objectives: (List the objectives of the project)	
<p>We are respectfully requesting funding to accomplish the following objectives:</p> <ul style="list-style-type: none">• Evaluate water quality impacts to Hermosa Creek and the Animas River from the 416-Fire in context of the use of these waters for irrigation, water supply, recreation, and aquatic life.• Document the recovery of water quality and aquatic life following the 416-Fire to share with concerned public members and more broadly to further our understanding of the recovery of river health after wildfire. We are fortunate to have an abundance of pre-fire water quality and benthic macroinvertebrate data that will provide a strong foundation for assessing impacts and recovery from the fire. For regulatory purposes, the state of Colorado generally considers rivers to recover from wildfire impacts after five years. This study will provide additional evidence as to whether the five-year recovery time period is a reasonable assumption.	

Last Update: January 9, 2018

- Establish monitoring sites on Hermosa Creek and Junction Creek to serve as watershed comparisons of differing forest health, fire history, and forest health treatments.

Specifically, we propose to:

- Task 1: Collect regular and opportunistic storm event water quality samples and evaluate for metals, suspended sediment, dissolved organic carbon, and nutrients (see *attached table 1 and map 1 for sampling locations*).
- Task 2: Deploy and maintain instrumentation to continuously collect water quality parameters in Hermosa Creek and Junction Creek including pH, conductivity, temperature, and turbidity. Additionally, deploy and maintain pressure transducers in Hermosa Creek and Junction Creek so that continuous discharge can be monitored.
- Task 3: Collect and enumerate benthic macroinvertebrate samples (see *attached table 1 and map 1 for sampling locations*).
- Task 4: Analyze data and convey findings to the public through reports, public meetings, direct information to ditch users, and social media.

Water quality samples will be collected from five locations, instrumentation will be installed at two locations, and benthic macroinvertebrate samples will be collected from eight locations (Table 1, Map 1).

Table 1: Sampling locations

Site	Description	Water Quality	Instrumentation	Benthic macroinvertebrates
1	Hermosa Creek – above Animas ditch	X	X	X
2	East Fork Hermosa Creek – above Sig Cr			X
3	Junction Creek – Colorado Trail trailhead	X	X	X
4	Animas River – Baker's Bridge	X		X
5	Animas River – James Ranch			X
6	Animas River – Trimble Lane	X		
7	Animas River – 32 nd Street			X
8	Animas River – Rotary Park	X		
9	Animas River – above Lightner Creek			X
10	Animas River – Purple Cliffs			X



Last Update: January 9, 2018

Tasks
<u>Task 1 - Water Quality Sampling</u>
Description of Task:
Evaluate water quality impacts on Hermosa Creek and the Animas River from the 416-Fire in context of the use of these waters for irrigation, water supply, recreation, and aquatic life.
Method/Procedure:
We will collect regular monthly samples at five locations from March through October across hydrologic regimes, including baseflow, peak spring runoff, and the rising and falling limbs of spring runoff. We will also collect opportunistic water quality samples to characterize conditions during storm events and debris flows. For metals and sediment analysis, we will utilize Colorado School of Mines lab. For nutrients, we will utilize Rocky Mountain Research Station lab and Green Analytical lab.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
Water quality results in context of historical observations and water quality standards.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
This information will be coupled with continuous water parameter measurements collected through instrumentation to provide a comprehensive understanding of the water quality conditions during debris flow and flood events. Data will be made available to Colorado state and local agencies.

Tasks
<u>Task 2 - Water Quality Instrumentation</u>
Description of Task:
Deploy and maintain instrumentation to continuously collect water quality parameters in Hermosa Creek and Junction Creek, including pH, conductivity, temperature, and turbidity. Additionally, we will deploy and maintain pressure transducers in Hermosa Creek and Junction Creek so that continuous discharge can be monitored.
Method/Procedure:
Deploy <i>HydroLab MS5</i> multi-probe instruments in April 2020 to capture peak spring runoff and continue collecting measurements through October 2020. Instruments will be deployed by scientists with the Colorado School of Mines, who have experience deploying these instruments in the Rio Grande watershed to assess wildfire impacts. Continuous measurements of pH, conductivity, temperature, and turbidity will allow us to better characterize the water quality conditions during debris flow and flood events.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
Continuous measurements of pH, conductivity, temperature, and turbidity will allow us to better characterize the water quality conditions during debris flow and flood events.



Last Update: January 9, 2018

Tasks
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
This information will be coupled with water quality chemistry results to provide a comprehensive understanding of the water quality conditions during debris flow and flood events. Data will be made available to Colorado state and local agencies.

Tasks
<u>Task 3 - Benthic Macroinvertebrates</u>
Description of Task:
Collect and enumerate benthic macroinvertebrate samples to compare to pre-fire observations.
Method/Procedure:
We will collect benthic macroinvertebrates community samples from eight locations. Sites will be distributed upstream of the burn area, within the burn area, and downstream of the burn area. At six locations, we will also collect benthic macroinvertebrate tissue samples for analysis of metals in tissue. We will process and identify benthic community samples in Mountain Studies Institute aquatics lab. ACZ Lab will analyze tissue samples. Our methodology for collecting and enumerating benthic macroinvertebrates will closely follow pre-fire methodologies employed by Mountain Studies Institute so that post-fire observations are directly comparable to post-fire observations.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
Up-to-date information to share with the public regarding the impacts to and recovery of benthic macroinvertebrate communities, as an indication of overall river health, following the 416-Fire.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
A better understanding of the recovery of river health after wildfire. For regulatory purposes, the state of Colorado generally considers rivers to recover from wildfire impacts after five years. This study will provide additional evidence as to whether the five-year recovery time period is a reasonable assumption. Data will be made available to Colorado state and local agencies.

Tasks
<u>Task 4 – Analysis, Reporting, and Outreach</u>
Description of Task:
Analyze data and convey findings to the public through reports, public meetings, direct information to ditch users, community networks (e.g., Animas Valley Grange), and social media platforms.
Method/Procedure:

Last Update: January 9, 2018

Tasks
We will compare post-fire water quality and aquatic life data to pre-fire observations visually in graphs as well as with statistical analysis.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
We will produce a technical report and an executive summary in easily digestible language intended for the public. We will convey results to the public through public meetings, social media, and direct communication to organizations such as ditch operators.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
Technical report and executive summary, press release of information, and public presentation.

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.
Please see multiple tabs in Exhibit B excel spreadsheet for direct costs, breakdown of matching funds, and schedule.

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: <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.

Last Update: January 9, 2018

Reporting Requirements
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: July 31, 2018



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: 1/1/2020

Water Activity Name: 416-Fire Aquatic Monitoring Year 2

Grantee Name: Mountain Studies Institute on behalf of 416-Fire Aquatic Monitoring Research Group

Task No. ⁽¹⁾	Description	Start Date ⁽²⁾	End Date	Matching Funds (cash & in-kind) ⁽³⁾	WSRF Funds (Basin & Statewide combined) ⁽³⁾	Total
<u>1</u>	Water Quality Sampling	5/1/2020	11/30/2020	\$29,079	\$12,608	\$41,687
3	Water Quality Instrumentation	5/1/2020	11/30/2020	\$42,160	\$2,400	\$44,560
2	Benthic Macroinvertebrates	9/1/2020	1/31/2020	\$21,896	\$1,080	\$22,976
4	Analysis, Reporting, and Outreach	11/1/2020	4/30/2020	\$12,800	\$3,000	\$15,800
Total				\$105,935	\$19,088	\$125,023

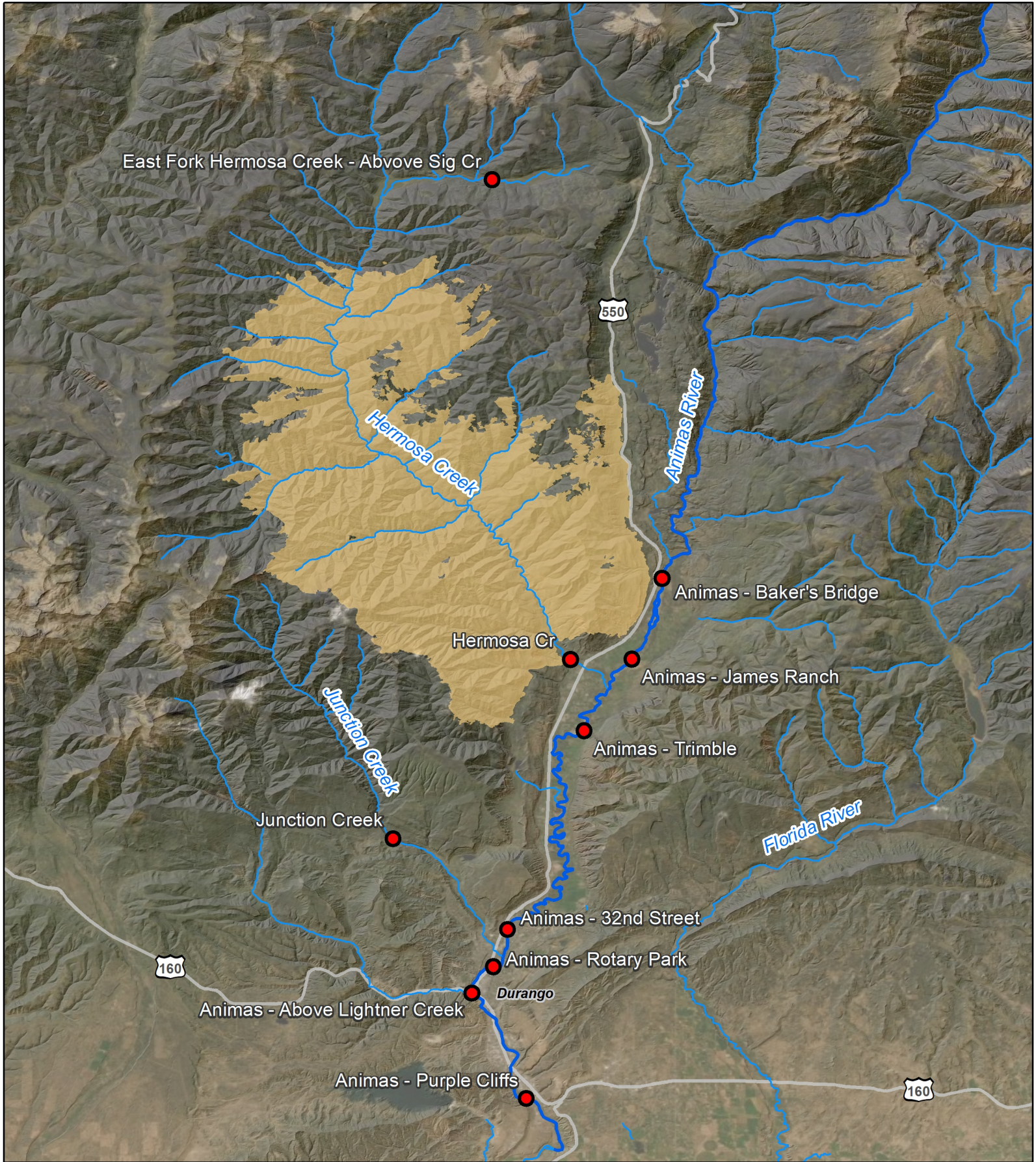
The single task that include costs for Grant Administration must provide a labor breakdown (see Indirect Costs tab below) where the total WSRF Grant contribution towards that task does not exceed 15% of the total WSRF Grant amount.

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 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

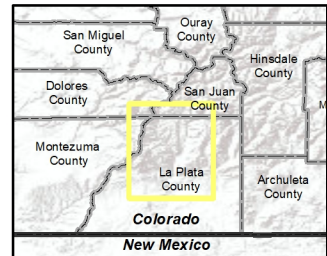


Post-416 Fire Monitoring Locations

Water Quality (WQ)
Instrumentation
Benthic Macroinvertebrates (BMI)



- Monitoring locations
- 416 Fire perimeter



Animas River Community Forum

November 6, 2019

SOUTHWEST BASIN ROUNDTABLE

Edward Tolen, First Vice Chair
c/o La Plata Archuleta Water District
P.O. Box 1377
Ignacio, Colorado 81137
970-563-0320

Subject: Mountain Studies Institute's 416 Fire Aquatic Monitoring

Dear Southwest Basin Roundtable,

On behalf of the Animas River Community Forum (ARCF) Partners, I am pleased to provide this letter of support for Mountain Studies Institute (MSI) and the 416 Fire Aquatic Monitoring Research Team. Scientists from Mountain Studies Institute, Colorado School of Mines, and USFS Rocky Mountain Research Station formed the Research Team to investigate impacts to water quality and aquatic life from the 2018 416 Fire in southwestern Colorado.

MSI's water quality and benthic macroinvertebrate monitoring in 2018 and 2019 captured the immediate impacts of the 416 Fire to help track the recovery of the watershed. With the possibility of a stronger monsoon season in 2020, there is a critical need to continue monitoring downstream of the burn area in order to characterize persistent impacts to water quality and aquatic life.

The Animas River Community Forum Partners rely on these monitoring results to keep stakeholders up-to-date on the health of the river and aware of what emergency response or restoration actions may be necessary for water users. We support continued funding of MSI's and the Research Team's aquatic monitoring, which would provide regular updates of post-fire water quality and aquatic life and expanded outreach opportunities for our community in 2020.

We strongly encourage Southwest Basin Roundtable to fund this proposal. Thank you for your time and consideration of this important work that will help our community better understand how to recover and become resilient to wildfires.

Sincerely,



Amanda Kuenzi
Coordinator, Animas River Community Forum
animasriverforum@gmail.com
970-387-5161
www.animasrivercommunity.org



Five Rivers Chapter

November 6, 2019

SOUTHWEST BASIN ROUNDTABLE

Edward Tolen, First Vice Chair
c/o La Plata Archuleta Water District
P.O. Box 1377
Ignacio, Colorado 81137
970-563-0320

Subject: Mountain Studies Institute's 416 Fire Aquatic Monitoring

Dear Southwest Basin Roundtable,

On behalf of the Five Rivers Chapter of Trout Unlimited, I am pleased to provide this letter of support for Mountain Studies Institute (MSI) and the 416 Fire Aquatic Monitoring Research Team. Scientists from Mountain Studies Institute, Colorado School of Mines, and USFS Rocky Mountain Research Station formed the Research Team to investigate impacts to water quality and aquatic life from the 2018 416 Fire in southwestern Colorado.

MSI's water quality and benthic macroinvertebrate monitoring in 2018 and 2019 captured the immediate impacts of the 416 Fire to help track the recovery of the watershed. With the possibility of a stronger monsoon season in 2020 (it couldn't get any weaker than 2019), there is a critical need to continue monitoring downstream of the burn area in order to characterize persistent impacts to water quality and aquatic life.

Five Rivers TU relies on these monitoring results to inform on the state of the fishery as well as to keep stakeholders up-to-date on the health of the river and aware of what emergency response or restoration actions may be necessary. We support continued funding of MSI's and the Research Team's aquatic monitoring, which would provide regular updates of post-fire water quality and aquatic life as well as expand outreach opportunities for our community in 2020.

We strongly encourage Southwest Basin Roundtable to fund this proposal. Thank you for your time and consideration of this important work that will help our community better understand how to recover and become resilient to wildfires.

Sincerely,

Buck Skillen, President – Five Rivers Trout Unlimited
Durango, CO 81301
Bskillen759@gmail.com



December 11, 2019

SOUTHWEST BASIN ROUNDTABLE
Edward Tolen, First Vice Chair
c/o La Plata Archuleta Water District
P.O. Box 1377
Ignacio, Colorado 81137
970-563-0320

Subject: Mountain Studies Institute's 416 Fire Aquatic Monitoring

Dear Southwest Basin Roundtable,

On behalf of the Colorado School of Mines (Mines), I am pleased to provide this letter of support for Mountain Studies Institute (MSI) and the 416 Fire Aquatic Monitoring Research Team. Scientists from Mountain Studies Institute, Colorado School of Mines, and USFS Rocky Mountain Research Station formed the Research Team to investigate impacts to water quality and aquatic life from the 2018 416-Fire in southwestern Colorado.

Mines and MSI have conducted the water quality and benthic macroinvertebrate monitoring in 2018 and 2019 observing the immediate impacts of the 416 Fire to help track the recovery of the watershed. Every year of additional monitoring will allow us to follow how quickly a fire-impacted watershed and the aquatic community recover from fire. Every additional year provides more knowledge to be shared with the community.

Mines has partnered with MSI to advance knowledge in the fire community and the greater scientific community. These results are novel in that we are monitoring how an area already impacted by mining can recover from a landscape scale disturbance. This is a unique study in Colorado. It provides vital monitoring in a region where more fires are expected. Monitoring how heavy metals are mobilized after fire and how they impact aquatic ecosystems is also unique to the scientific community studying fires. We support continued funding of MSI's and the Research Team's aquatic monitoring, which would provide regular updates of post-fire water quality and aquatic life as well as expand outreach opportunities for our community in 2020.

We strongly encourage Southwest Basin Roundtable to fund this proposal. Thank you for your time and consideration of this important work that will help our community better understand how to recover and become resilient to wildfires.

Sincerely,
Ashley Rust, PhD
Post Doctoral Researcher
Colorado School of Mines
arust@mymail.mines.edu

Animas Consolidated Ditch Co.

November 7, 2019

Southwest Basin Roundtable
Edward Tolen, First Vice Chair
c/o La Plata Archuleta Water District
P.O. Box 1377
Ignacio, Colorado 81137
970-563-0320

Subject: Mountain Studies Institute's 416 Fire Aquatic Monitoring

Dear Southwest Basin Roundtable,

On behalf of the Animas Consolidated Ditch Company, I am pleased to provide this letter of support for Mountain Studies Institute (MSI) and the 416 Fire Aquatic Monitoring Research Team. Scientists from Mountain Studies Institute, Colorado School of Mines, and USFS Rocky Mountain Research Station formed the Research Team to investigate impacts on water quality and aquatic life from the 2018 416-Fire in southwestern Colorado.

MSI's water quality and benthic macroinvertebrate monitoring in 2018 and 2019 captured the immediate impacts of the 416 Fire to help track the recovery of the watershed. With the possibility of a stronger monsoon season in 2020, there is a critical need to continue monitoring downstream of the burn area in order to characterize persistent impacts on water quality and aquatic life.

The Animas Consolidated Ditch Co. relies on these monitoring results to make day to day decisions on whether or not to run water in our systems. Sediment load is an extreme challenge for us. As our ditch meanders through its 13-mile course, there are sections that are very slow-moving. These reaches allow the sediment to drop out of the water column. Over time, this sediment restricts flow and necessitates expensive and disruptive cleaning events. Overall water quality data helps keep our shareholders up-to-date on the health of the river (subsequently our ditch) and aware of what emergency response or restoration actions may be necessary for water users. The benthic macroinvertebrate community is our canary in the mineshaft. Data collection and study of them is one of the best things we can be doing to know and be able to react to any negative effects found due to the 416 fire and subsequent runoff events. We support continued funding of MSI's and the Research Team's aquatic monitoring, which would provide regular updates of post-fire water quality and aquatic life as well as expand outreach opportunities for our community in 2020.

We strongly encourage Southwest Basin Roundtable to fund this proposal. Thank you for your time and consideration of this important work that will help our community better understand how to recover and become resilient to wildfires.

Sincerely,

Dan James
Board President
Animas Consolidated Ditch Co.
970-799-0782



December 13, 2019

SOUTHWEST BASIN ROUNDTABLE

Edward Tolen, First Vice Chair
c/o La Plata Archuleta Water District
P.O. Box 1377
Ignacio, Colorado 81137
970-563-0320

Subject: Mountain Studies Institute's 416 Fire Aquatic Monitoring

Dear Southwest Basin Roundtable,

On behalf of the City of Durango, I am pleased to provide this letter of support for Mountain Studies Institute (MSI) and the 416 Fire Aquatic Monitoring Research Team. Scientists from Mountain Studies Institute, Colorado School of Mines, and USFS Rocky Mountain Research Station formed the Research Team to investigate impacts to water quality and aquatic life from the 2018 416-Fire in southwestern Colorado.

MSI's water quality and benthic macroinvertebrate monitoring in 2018 and 2019 were able to capture the immediate impacts of the 416 Fire and have tracked the recovery of the Animas watershed. As we are told, there is a possibility of a stronger monsoon season in 2020, which will cause a significant need to continue with timely and detailed monitoring downstream of the burn area. MSI's efforts in the previous two years and hopefully in the coming year will allow for the characterization of impacts to water quality and aquatic life in the Animas River, which is the heart of our City.

The City of Durango, and particularly the Utilities Department use these monitoring results in our efforts to provide clean drinking water to the citizens and visitors in our community. The Animas is one of our sources of supply, and the data we receive allows us to make educated operational decisions to advance our efforts. We support continued funding of MSI's and the Research Team's aquatic monitoring, which would provide regular updates of post-fire water quality and aquatic life as well as expand outreach opportunities for our community in 2020.

We strongly encourage Southwest Basin Roundtable to fund this proposal. Thank you for your time and consideration of this important work that will help our community better understand how to become resilient to wildfires and their lasting impacts in our watershed.

Sincerely,



Jarrod Biggs
Assistant Utilities Director
City of Durango



November 14, 2019

To Whom it May Concern:

Re: On-Going Support for a Water Quality Monitoring Study during post-disaster 416 fire Conditions

The Rio Grande Watershed Emergency Action Coordination Team (RWEACT) heartily supports funding applications for post-disaster, multi-year monitoring from the 416 fire within the affected counties of San Juan and La Plata. We currently are under an agreement for equipment loan of water quality monitoring probes that monitor nine different characteristics (both manually and remotely).

Through partnership with the Rio Grande Headwaters Restoration Foundation and Colorado School of Mines, RWEACT has provided funding for the continued monitoring of conditions following our own event of the West Fork Complex fire during 2014-2018 during grants we implemented in that timeframe. This data has been valuable during our environmental and economic recovery efforts and continues to help us develop project information for planning and implementation.

Colorado School of Mines (CSM) has been able to determine trends as the Upper Rio Grande watershed recovers. Findings have been published. This regional effort – with similar recovery efforts in the Animas and Hermosa drainages – provides all of our organizations and decision-makers with more complete data. We support these monitoring efforts.

RWEACT was established in July 2013 in response to the West Fork Complex Fire. RWEACT brings together local, state and federal agencies, organizations and individuals in a coordinated approach to address fire-caused hazards, early notification, and future resiliency of our natural and economic communities. Working closely with the Rio Grande National Forest, the Colorado Water Conservation Board, the counties of Hinsdale, Mineral, and Rio Grande, and more than 70 additional partners, RWEACT has implemented 200 projects and endeavors. We have increased the geographical representation of our Board of Directors now to also include Saguache, Alamosa, and Costilla counties. We began working with the Divide Ranger District where the West Fork Complex fire occurred and are now able to expand forest-wide to support appropriate projects.

The West Fork Complex Fire increased collaboration between counties and other local governments. Current work of RWEACT includes an Upper Rio Grande Watershed Assessment, participation in efforts to bring regional Radar to the area, improved Emergency Communications, post-disaster economic recovery, and stewardship activities.

RWEACT's mission to promote partnerships and actions that provide for public safety and resiliency of communities and watersheds of the Rio Grande Basin in Colorado. With an emphasis on Watershed Stewardship and the ability to leverage, RWEACT is expanding our geographical focus within the organization. More information about our organization can be found at www.rweact.org Thank you for your consideration.

Respectfully,

/s/ Kristine M. Borchers

Kristine Borchers
Program Manager, RWEACT
kristineborchers@yahoo.com
970-596-9071
