Water Supply Reserve Fund
Water Activity Summary Sheet
September 16-17, 2020
Agenda Item 19(l)

Applicant & Grantee:	Fort Lewis College
Water Activity Name:	Dolores River Adaptive Management Project
Water Activity Purpose:	Environmental & Recreational/Education & Outreach-Study
County:	Montezuma, Dolores, San Miguel, Montrose & Mesa
Drainage Basin:	Southwest
Water Source:	Dolores River
Amount Requested:	$25,000 Southwest Basin Account $140,617 Statewide Account $165,617 Total Request
Matching Funds:	Basin Account Match = $25,000 • 562% of statewide request (meets 10% min) Applicant & 3rd Party Match (cash & in-kind) = $71,275 • 51% of the statewide request (meets 10% min) Total Match (Basin request & Applicant Match) = $96,275 • 68% of the statewide request (meets 50% min)

Staff Recommendation:

Staff recommends approval of up to $25,000 from the Southwest Basin Account and up to $140,617 from the Statewide Account to help fund the project: Dolores River Adaptive Management Project.

Water Activity Summary: WSRF Funds, if approved will assist the Four Corners Water Center at Fort Lewis College to develop a geomorphic monitoring and data analysis protocol for the Dolores River downstream from McPhee Dam that is sustainable in the long-term and has a responsive component that can be activated rapidly when hydrologic conditions are favorable. The second component is to perform the four years of monitoring and report the results. The third component of the proposal is to create a sustainable and accessible online repository for past and future data collected on the Dolores River.

Discussion: This effort will assist the Southwest Basin Roundtable achieve several goals as called for in the Southwest Basin Implementation Plan, such as: Goal A4, Goal A5, Goal E2, while also assisting Colorado achieve the environmental and recreational goals of "Understand, protect, maintain, and improve conditions of streams, lakes, wetlands and riparian areas to promote self-sustaining fisheries and functional riparian and wetland habitats to promote long term sustainability and resiliency", as called for on page 6-157 of Colorado's Water Plan.

Issues/Additional Needs: The applicant shall submit all outstanding letters 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**
RiversEdge West	$2,000	$4,478	$6,478	Secured
The Nature Conservancy	$10,000	$0	$10,000	Secured
Colorado Parks and Wildlife	$9,231	$0	$9,231	Pending
BLM	$0	$1,696	$1,696	Secured
Dolores Water Conservancy District	$10,000	$0	$10,000	Pending
USBOR	$0	$2,334	$2,334	Secured
Conservation Legacy	$0	$416	$416	Secured
Catena Foundation	$31,120	$0	$31,120	Pending
Sub-total	$62,351	$8,924	$71,275	
WSRF Southwest Basin Account	$25,000	$0	$25,000	Secured
Sub-total	$87,351	$8,924	$96,275	
WSRF Statewide Account	$140,617	n/a	$140,617	
Total Project Costs	**$227,968**	**$8,942**	**$236,892**	

CWCB Project Manager: Chris Sturm

SOUTHWEST BASINS ROUNDTABLE

July 24, 2020

Mr. Craig Godbout
Water Supply Planning Section
Colorado Water Conservation Board
1580 Logan Street, Suite 600
Denver, Colorado 80203

RE: Four Corners Water Center at Fort Lewis College
WSRF Grant Request

Dear Mr. Godbout,

The Southwest Basins Roundtable approved funding of $25,000 from the Southwest Basins Roundtable account for the Four Corners Water Center at Fort Lewis College's Dolores River Adaptive Management Support Project. In addition, we are recommending that the Colorado Water Conservation Board approve their request for $140,617 from the Statewide account. This application was considered fully and approved by the Southwest Basins Roundtable at the July 23, 2020 meeting. There was a quorum of members present at the meeting.

This project provides support to the Dolores River Native Fish Monitoring & Recommendation Team. It will provide geomorphic monitoring and data analysis for the Dolores River downstream of McPhee Reservoir, provide four years of field data collection and develop a sustainable online repository for data collected.

The proposed project falls under IPP 2-MB and supports 20-DM of the Southwest Basins Implementation Plan. It also meets a Measurable Goal or Outcome of the Southwest Basins BIP to Meet Environmental Water Needs.

The completed Grant Application will be forwarded directly to you by the applicant. Please contact the applicant directly or me at 970-563-0320, etolen@laplawd.org, if you have questions or wish to discuss this application in more detail.

Sincerely,

Edward Tolen
Southwest Basins Roundtable Chair

C/O La Plata Archuleta Water District
PO Box 1377
Ignacio, Colorado 81137

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 recommended for approval 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 WSRF Grant Program Manager (for all Roundtables):

Craig Godbout
craig.godbout@state.co.us
303-866-3441 x3210 (office)
303-547-8061 (cell)

WSRF Submittal Checklist (Required)	
	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) *(Word – see Template)*
X	Exhibit B: Budget & Schedule (2) *(Excel Spreadsheet – see Template)*
X	Letters of Matching and/or Pending 3rd Party Commitments (2)
X	Map (2)
	Photos/Drawings/Reports
X	Letters of Support
Contracting Documents (3)	
	Detailed/Itemized Budget (3) *(Excel Spreadsheet – see Template)*
	Certificate of Insurance (4) *(General, Auto, & Workers' Comp.)*
	Certificate of Good Standing (4)
	W-9 Form (4)
	Independent Contractor Form (4) *(If applicant is individual, not company/organization)*
	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.

Last Update: July 31, 2018

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:	September 16-17, 2020
Desired Notice to Proceed Date:	October 1, 2020

Water Activity Summary	
Name of Applicant	Four Corners Water Center at Fort Lewis College
Name of Water Activity	Dolores River Adaptive Management Support

Approving Roundtable(s)	Basin Account Request(s)(1)
Southwest	$25,000
Basin Account Request Subtotal	$25,000
Statewide Account Request (1)	$140,617
Total WSRF Funds Requested (Basin & Statewide)	$165,617
Total Project Costs	$236,892

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

Last Update: July 31, 2018

Grantee and Applicant Information	
Name of Grantee(s)	Four Corners Water Center at Fort Lewis College
Mailing Address	1000 Rim Drive, Durango, CO 81301
FEIN	
Grantee's Organization Contact (1)	Michael Brown
Position/Title	Director of Sponsored Programs
Email	Msbrown@fortlewis.edu
Phone	970-247-7695
Grant Management Contact (2)	Gigi Richard
Position/Title	Director of Four Corners Water Center
Email	garichard@fortlewis.edu
Phone	970-247-6561
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).
Fort Lewis College is a public four-year college in Durango, Colorado. Because of its unique origins as a military fort turned Indian boarding school turned state public school, Fort Lewis College also follows a 1911 mandate to provide a tuition-free education for qualified Native Americans. The Four Corners Water Center at Fort Lewis College is committed to cultivating the next generation of water leaders and creating opportunities for collaborations between the regional water leaders and the campus community. The water center was created in July 2019.

Last Update: July 31, 2018

Type of Eligible Entity (check one)	
X	**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.
	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)	
X	Study
	Implementation

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

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/Counties	Montezuma, Dolores, San Miguel, Montrose, Mesa
Latitude	39
Longitude	-109

Last Update: July 31, 2018

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.
The proposed project has three key components, all of which support the activities of the Dolores River Native Fish Monitoring and Recommendations (M&R) team as well as management decisions regarding the Dolores River. The first component is to develop a geomorphic monitoring and data analysis protocol for the Dolores River downstream from McPhee Dam that is sustainable in the long-term and has a responsive component that can be activated rapidly when hydrologic conditions are favorable. The second component is to perform the four years of monitoring and report the results. The third component of the proposal is to create a sustainable and accessible online repository for past and future data collected on the Dolores River. Funding will be used to: • bring together a team of technical experts to develop the monitoring and data analysis protocol, including identification of sites, monitoring procedures, timing and frequency of data collection, and data processing, storage and analysis, • perform four years of geomorphic and vegetation monitoring by Fort Lewis College and Colorado Mesa University faculty and students and youth conservation corps strike teams and communicate monitoring results via reports and presentations, and • develop an accessible web data portal for historic and future monitoring data.

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 (linear feet)	
X	Other	Explain: Monitoring and data analysis protocol, four years of field data collection, processing, analysis and reporting, and website to host past and future data.

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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).
Geomorphic monitoring along the Dolores River and hosting the resulting data in an accessible and useful format supports major goals of the M&R Team. The M&R Team is a collaborative group focused on the overall health of the lower Dolores River below McPhee Dam consisting of water managers, non-profit organizations, academic institutions, federal agencies, state biologists, agricultural interests, counties and municipalities. This project will increase understanding of and provide data related to geomorphic response to flow regimes while engaging students and young people in stewardship activities. The breadth of water uses represented in the M&R Team reflects the dedication to collaborative activities in the Colorado Water Plan. This proposed project addresses the following Colorado Water Plan Environmental and Recreation Goals: • "Understand, protect, maintain, and improve conditions of streams, lakes, wetlands and riparian areas to promote self-sustaining fisheries and functional riparian and wetland habitats to promote long term sustainability and resiliency." [p.6-157] The proposed project addresses the following Southwest Basin Roundtable Implementation Plan Goals and Measurable Outcomes: • Goal 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 challenges • Goal A5: Maintain watershed health by protecting and/or restoring watersheds that could affect critical infrastructure and/or environmental and recreational areas. • Measurable Outcome A3: "Support and participate in 10 IPPs (such as processes) that promote dialogue, foster cooperation and resolve conflict." • Measurable Outcome D1: "Implement 10* IPPs to benefit recreational values and the economic value they provide." • Goal 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." • Measurable Outcome E1: "Implement 15* IPPs to directly restore, recover or sustain endangered, threatened, and sensitive aquatic and riparian dependent species and plant communities."

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

Last Update: July 31, 2018

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)
Total Match	$
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):
RiversEdge West	$ 2,000 (cash for supplies) and $ 4,478 (cash for capacity)
The Nature Conservancy	$10,000 (cash)
Colorado Parks and Wildlife	$ 9,231 (cash)
Bureau of Land Management	$ 1,696 (in-kind)
Dolores Water Conservancy District	$10,000 (cash)
US Bureau of Reclamation	$ 2,334 (in-kind)
Conservation Legacy	$ 416 (in-kind)
Catena Foundation (request pending)	$31,120 (cash)
Total Match	$71,275
If you requested a Waiver to the Statewide Account matching, indicate % you wish waived. (Max 50% reduction of requirement).	

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.

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Related Studies

The Dolores River Monitoring and Recommendations (M&R) Team has been working on the Dolores River below McPhee Dam since 2014. An archive of their studies can be found at: http://doloresriver.org/. Notable documents include the 2011, *A Way Forward* Report, 2014 Lower Dolores Implementation, Monitoring and Evaluation Plan, and 2017 Ecological Monitoring Report.

The Dolores River Restoration Partnership (DRRP) also utilizes the 2010 Dolores River Riparian Action Plan, 2015 DRRP Transition Plan for Monitoring and Maintenance and annual rapid monitoring reports. CWCB has assisted in the cost for implementation and monitoring work associated with the DRRP.

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

The Four Corners Water Center at Fort Lewis College has received a subaward through Colorado State University's Colorado Water Insititute Faculty Research grants funded by CWCB:

- Title of Project: Streamflow estimation in Colorado ungauged basins
- Principal Investigator at CSU: Dr. Stephanie Kampf
- Co-PI at FLC: Dr. Gigi Richard
- Period of grant: 7/1/19 - 6/30/20
- Purchase Order Number: POGG1,PDAA,202000000039

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.

None.

Last Update: March 17, 2020

https://cwcb.colorado.gov/

Colorado Water Conservation Board	
Water Supply Reserve Fund	
Exhibit A - Statement of Work	
Date:	**July 15, 2020**
Water Activity Name:	**Dolores River Adaptive Management Support**
Grant Recipient:	**Four Corners Water Center at Fort Lewis College**
Funding Source:	**Southwest Basin Roundtable WSRF**

Water Activity Overview: (Please provide brief description of the proposed water activity (no more than 200 words). Include a description of the overall water activity and specifically what the WSRF funding will be used for. (PLEASE DEFINE ALL ACRONYMS).

The proposed project has three main outcomes, all of which support the management decisions and flow recommendations of the Dolores River Native Fish Monitoring and Recommendations Team (M&R Team). The project will result in:

1. a geomorphic monitoring and data analysis protocol for the Dolores River downstream from McPhee Dam that is sustainable in the long-term and has a responsive component that can be activated rapidly when hydrologic conditions are favorable (Task 1),
2. implementation of four years of geomorphic and vegetation field data collection and associated data processing, analysis and reporting (Tasks 2 and 3), and
3. a sustainable and accessible online repository for past and future data collected on the Dolores River (Task 4).

To accomplish these outcomes, funding will be used to:

- Compile a team of technical experts to develop the monitoring and data analysis protocol, including site identification, monitoring procedures, cadence of data collection, and processing, and analysis (Task 1),
- Perform four years geomorphic and vegetation monitoring by faculty and students from Fort Lewis College and Colorado Mesa University, and youth conservation corps followed by data processing, analysis and reporting (Task 2 and 3), and
- develop an accessible and useful web data portal for historic and future monitoring data, studies and reports (Task 4).

Objectives: (List the objectives of the project. (PLEASE DEFINE ACRONYMS).

Since construction of McPhee Dam and full implementation of the Dolores Project, the Dolores River channel downstream from the dam (Figure 1) has exhibited a variety of responses to the altered streamflow and sediment supply, including simplification, aggradation and narrowing. In 2014, the Dolores River Native Fish Monitoring and Recommendations Team (M&R Team) was formed to focus on the habitat for the three sensitive warm-water native species (flannelmouth sucker, roundtail chub, bluehead sucker). The proposal to develop a monitoring program on the Dolores River below McPhee Dam is driven by questions identified by the M&R Team to support their decisions and recommendations about habitat maintenance below the dam.

Better understanding how the channel responds to altered water and sediment conditions will help inform the M&R Team and the operations team as they make annual flow management and release decisions. In February 2020, the M&R team specifically called out the need to devise a standardized geomorphology study approach that can be implemented during and outside of spill years to test different release management opportunities and to monitor changes in the river below McPhee dam. A well-designed annual monitoring program combined with adaptive monitoring in response to hydrologic conditions will provide information to inform annual flow recommendations to maintain habitat for the three native fish species.

In February 2020, the M&R Team established an overarching monitoring goal: to understand how the Dolores River below McPhee Dam is adjusting to a "new normal" condition in response to the changed hydrology and sediment regime since construction of the dam and since full operation of the Dolores Project began. The M&R Team also identified the following issues that monitoring could help resolve:

- the effectiveness of flow management and release strategies designed to mobilize sediment and reduce bank armoring,
- better understanding the abundance and role of sidebar channels and midchannel features,
- better understanding the potential effectiveness of strategies like active management of vegetation, structures in the river and management of water, and
- mapping vegetation, bank armoring, and effects of operational strategies.

In March 2020, a subcommittee of the M&R Team gathered at a one-day retreat with a variety of technical experts to discuss strategies to address the monitoring questions identified by the M&R Team.

The proposed project to develop a monitoring protocol and implementation plan is in direct response to the recommendations and discussion that emerged from the March 2020 retreat. The proposed monitoring will also inform planning and design of physical projects (e.g., vegetation removal, mechanical floodplain lowering) for future enhancement of channel complexity. The proposed project is designed to achieve the following three objectives via the tasks outlined below:

- Design and implement the first four years of a regular long-term geomorphic and vegetation monitoring program on the Dolores River below McPhee dam to document (Tasks 1 and 2):
  - continued channel response to dam-controlled hydrology and sediment regime
  - channel response to future restoration efforts by monitoring before and after
  - changes in physical habitat for native fish
  - impact of riparian vegetation on channel morphology
- Design a responsive monitoring program that can be implemented quickly in response to hydrologic conditions (e.g., high snowpack and forecast runoff) and reservoir management (e.g., certain level of planned spill) (Task 1).

- An established responsive monitoring program with clear protocols for timing of implementation and 'who does what work where' supports the M&R team by removing the pressure on the team to mobilize rapidly when a spill is imminent.
- The responsive monitoring strategy will include: triggers for responsive monitoring (e.g., runoff forecast level), what to measure, who will perform monitoring, and how to fund program.

- Share results of past and future monitoring efforts in a consistent, useful and efficient manner to inform adaptive flow management through:
  - annual monitoring reports and presentations (Task 3), and
  - an accessible single online data repository (Task 4).

Figure 1 – Map of Dolores River watershed with location of study reach.

Last Update: March 17, 2020

https://cwcb.colorado.gov/

Tasks

Provide a detailed description of each task using the following format: (PLEASE DEFINE ACRONYMS)

Task 1 - Develop Monitoring and Data Analysis Protocols

Description of Task:

Leaders from the Dolores River Native Fish Monitoring and Recommendations Team (M&R Team) will work with Fort Lewis College (FLC) and RiversEdge West (REW) to organize a team of technical experts from academia, non-profits, and government agencies to contribute to the development of a sustainable plan for geomorphic and vegetation data collection, processing, storage and analysis. The team of experts will meet virtually over the course of a year to accomplish the subtasks listed below. The leadership team will be responsible for the final monitoring protocol report. In addition, sustainable funding for implementation of the program over the long-term will be explored.

The monitoring and data protocol will be coordinated with Colorado Parks and Wildlife (CPW) ongoing fish monitoring efforts and with past monitoring by the M&R Team. Pre- and post-release geomorphic monitoring was conducted in 2017 at five sites to determine effects of the 2017 managed release on site geomorphology and sediment movement. Additional repeat survey sections have been conducted by CPW at historic fish sampling stations. Past survey efforts included cross-section surveys and Wolman pebble counts, as well as installing erosion stakes, painted patches, and sediment traps. Future geomorphic monitoring will build on existing data and be designed to supplement historic fish monitoring stations and/or inform the effectiveness of active management strategies.

Method/Procedure:

The following subtasks will be coordinated by members of the M&R Team, Fort Lewis College (FLC), and RiversEdge West:

1.1 Organize a team of technical experts to contribute to the protocol, including (leadership team in bold):

- **Celene Hawkins, The Nature Conservancy**
- **Ryan Unterreiner, Colorado Parks and Wildlife**
- **Gigi Richard, Four Corners Water Center at FLC**
- **Rica Fulton, RiversEdge West**
- Cynthia Dott, FLC
- Gary Gianinny, FLC
- Jon Harvey, FLC
- Alan Kasprak, FLC
- Joel Sholtes, Colorado Mesa University
- Emily Kasyon, Conservation Legacy
- Jedd Sondergard, Bureau of Land Management
- David Graf, Colorado Parks and Wildlife
- Shannon Hatch, US Bureau of Reclamation
- Robert Stump, US Bureau of Reclamation

Tasks
1.2 The meeting facilitator, Strategic by Nature, will work with the leadership team to organize two meetings of the technical team over the winter/spring 2020-2021, one field site visit in May/June 2021, and a final meeting in July/July 2021. The goal of the meetings will be to: • Identify specific hypotheses to be tested and questions to be answered with the monitoring data (geomorphic, aquatic or riparian habitat, and/or restoration related), • Develop monitoring protocol for long-term annual monitoring including site selection of at least five sites below McPhee Dam to the Colorado state line (Figure 1). The protocol will include standardized methods for data collection, processing, storage and analysis, frequency, and staffing needs, • Develop responsive monitoring protocol with the same considerations as annual monitoring, • Develop data storage location and practices for consistent data formats, and • Develop standard methods for analyzing and reporting data. 1.3 Jon Harvey, FLC, and FLC students will perform a historic aerial photo analysis to assist the technical team in identifying monitoring sites (by April 2021). 1.4 The leadership team will prepare the final monitoring protocol report by August 2021.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
The leadership team with the assistance of the technical team and the meeting facilitator will produce a report explaining the protocols and procedures developed by the team, including: • Long-term monitoring and responsive monitoring protocols, including locations of study sites and data collection methods, frequency and staffing, • Protocol for responsive monitoring including a clear trigger for mobilizing the responsive monitoring (e.g., hydrologic conditions, reservoir levels), and • Plan for data storage, processing and analysis methods. Strategic by Nature will provide meeting facilitation for three 2-hour virtual meetings and one field trip or four virtual meetings.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
The CWCB deliverable will be the protocol materials and report as described above.

Tasks
Provide a detailed description of each task using the following format: (PLEASE DEFINE ACRONYMS)
Task 2 – Perform Four Years of Monitoring
Description of Task:

Tasks

The purpose of this task is to perform four years of geomorphic and vegetation monitoring based on the monitoring protocol developed in Task 1. Monitoring is scheduled to occur annually for four years beginning in September 2021 and concluding by August 2025.

Method/Procedure:

Faculty and students from Fort Lewis College (FLC) and Colorado Mesa University (CMU) supported by teams from the Southwest Conservation Corps (SCC) will perform the geomorphic and vegetation monitoring in collaboration with the project's leadership team. The specific components of the monitoring protocol will be developed in Task 1 and might include field-based activities like measurements of characteristic channel dimensions, bank height, bar types and distributions, and riparian vegetation composition/density. Activities may also include the field-based collection of drone/UAV imagery for subsequent interpretation of channel morphology, including measurements of sinuosity, identification of cutoffs, and mapping of fine sediment and vegetation dynamics. Monitoring will include at least one multi-day fieldwork session per year from the FLC and CMU teams and two weeks per year from the SCC youth corps team. Following fieldwork, data will be reduced and prepared for addition to the database, comparison with previous years, and communication with project leaders and other stakeholders.

Subtasks:

2.1 Training – RiversEdge West and Conservation Legacy with the support of FLC and CMU faculty will train Southwest Conservation Corps Strike Teams based on the procedures outlined in the protocol outlined in Task 1.

2.2 Data collection - each summer/fall of years 2-5 of the grant period, faculty, students and youth conservation corps teams will conduct field data collection to implement the protocol developed in Task 1

- Southwest Conservation Corps Strike Teams - Two weeks of field data collection per year
- FLC and CMU Faculty and Student data collection, processing and analysis
    - ~3 days per year for four teams of faculty and students

2.3 Data Management - Four Corners Water Center working with FLC and CMU faculty and students will ensure that the data are stored in an accessible location and in a consistent, format to be integrated into the database (Task 4)

Grantee Deliverable: (Describe the deliverable the grantee expects from this task)

Tasks
The grantee expects students and youth conservation corps to receive training from Conservation Legacy and RiversEdge West staff and FLC and CMU faculty. The monitoring teams will implement geomorphic and vegetation monitoring on the Dolores River and process and store the data according to the protocol developed in Task 1. Geomorphological data will inform the M&R Team to adaptively manage Dolores River flows, assist CPW in managing fish habitat for the three sensitive warm-water native species (flannelmouth sucker, roundtail chub, bluehead sucker) and trout, and better understand the influence of vegetation on channel morphology.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
The deliverable after each year's monitoring effort will be the data stored in an accessible location in a consistent format as outlined by the protocol developed in Task 1.

Tasks
Provide a detailed description of each task using the following format: (PLEASE DEFINE ACRONYMS)
Task 3 – Report and Share Monitoring Results
Description of Task:
The purpose of Task 3 is to ensure that the data collected in Task 2 are regularly shared in a useful manner with both the M&R Team and the Dolores Project operations team to support their annual decision-making and with the general public to contribute to their understanding of river monitoring. Task 3 includes: • production of six-month progress reports, • production of annual reports synthesizing the results of the monitoring, • presentations to the M&R Team at their annual meetings, and • communication to the general public via press releases, blog posts and GIS story maps.
Method/Procedure:
The Four Corners Water Center (FCWC) at Fort Lewis College (FLC) will take the lead on Task 3 with the support of FLC faculty and students and members of the technical monitoring team. Task 3 is comprised of three subtasks: 3.1 Progress reports will be provided to the CWCB every six months. 3.2 Digital annual monitoring reports will include a description of the geomorphic monitoring procedure, maps, data analysis, lessons learned, and pictures and will be produced in Years 2 through 5 of the grant period. The annual reports will be made available to the M&R Team and to the public by the website (see Task 4). The monitoring team will also present the annual monitoring results at the M&R Team's annual meetings. These reports and presentations will synthesize the data collected into a format that supports the M&R Team in their adaptive management decisions.

Tasks
3.3 FLC students will be involved in reporting the effort to the general public via news stories, blog posts, GIS story maps and presentations at the student symposium and at local water meetings. Each year, FLC faculty and students will share results of the monitoring with the public via articles, blog posts and GIS story maps that could also be used as educational tools for K-12 classes. In Year 1, they will develop a foundational Dolores River GIS story map that will be added to and built upon with new data in the subsequent years.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
The deliverables for Task 3 will be: • Six-month progress reports, • Digital annual monitoring report in Years 2-5, and • GIS story map and other stories for public consumption summarizing the monitoring effort and resulting data.
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
The deliverables for Task 3 will be as listed above.

Tasks
Provide a detailed description of each task using the following format: (PLEASE DEFINE ACRONYMS)
Task 4 – Develop website and online data repository
Description of Task:
The purpose of Task 4 is to create a useful and sustainable website to house the data from past Dolores River Native Fish Monitoring and Recommendations Team (M&R Team) studies and to accommodate the data that will be collected by future monitoring efforts (Task 2 and other efforts). Currently, a large body of data, research, reports and other information on the changing ecological and geomorphological condition of the Dolores River exists. However, this information is currently stored in different formats and in different locations, creating a barrier to its exploration, retrieval and use. As new data collection efforts (Task 2) come online, a more structured long-term approach to data and metadata management is required. The major outcome of Task 4 will be a single online data repository for past and future Dolores River data, policy and operational documents, and other surveys and studies.
Method/Procedure: Lotic Hydrological (Lotic) will work with Fort Lewis College to install and manage a Metacat server in support of data and metadata management for the Dolores River. This solution will allow for efficient archival and query of data and information procured by the affiliates of the M&R Team. Data sets

Tasks
accommodated by the system will include GIS files, CSV files, spreadsheet files, photos, reports, maps, and other relevant data. Critically, this solution will enable and enforce creation of metadata records conformant to one of several ecological published metadata standards (e.g., EML). The data management system will include a web-based graphical user interface to simplify data exploration or archival. This web-accessible system will be developed and installed on a Fort Lewis College server to ensure long term maintenance and support. The fully developed system will include HTML metadata entry forms and web pages and/or digital documentation that provides instructions for future use of the system for data archival and retrieval. Once the system is up and running, Lotic will work in close coordination with data generators and data managers to develop metadata templates for historical data sets and archive those data sets in the Metacat server. The fully populated Metacat server will allow researchers, resource managers, and members of the public to easily query raw datasets, derived products, reports, and other deliverables by topic, date, or location.
Development of the database will occur in coordination with the monitoring and data analysis protocol development in Task 1 and will inform how the data management will be performed in Task 2. Task 4 will be completed via the following sub-tasks: 4.1 Data Organization - The Four Corners Water Center (FCWC) at Fort Lewis College (FLC) will coordinate with the technical team (see Task 1) and M&R Team to gather datasets to be included in the new online data repository. 4.2 Stakeholder requirements elicitation - Lotic will communicate directly with project partners to understand planned data collection activities (field work), archiving needs, and anticipated reporting uses. Stakeholder needs will drive the structure and user interface design for data storage, cataloging, and retrieval. 4.3 Construct metadata catalog and repository – Lotic will coordinate with Fort Lewis College IT department to secure server space and web hosting arrangements, establish long term maintenance protocols for the repository, and build a public-facing user interface for the M&R team. 4.4 Stakeholder training – Lotic will work provide training to project partners on usage of the Metacat server (M&R Team) and server maintenance of the back end (FLC staff and students). 4.5 Data Visualization - Lotic Hydrological work with the technical team to plan for graphical visualization tools to make key datasets easy to interpret in a visual manner. The technical team, in consultation with the M&R Team, will identify the key datasets are most important for critical decisions and should be included in the visualization. A protocol for data formatting so that future data can easily be included in these tools will also be included. 4.6 Populate database - In years 2-5 of the grant, FCWC will work with FLC students to input each year's monitoring data into the website. The FCWC and FLC's IT department will provide the institutional support for the new website and FLC students will be involved maintenance of the database. FLC already hosts the archived Dolores River Dialogue website and has the capacity with support of the water center and student employees to maintain an online data repository over the long term. FLC has already purchased the domain names: D*oloresRiver.org* and *FourCornersWater.org*. The back-end of the site will be designed so that FLC students can help maintain the site and so that data collected in Task 2 can be easily input into the database.

Tasks
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)

Lotic Hydrological will deliver:
• Metacat online data catalog of Dolores River data,
  • Prototype database by April 2021
  • Final database by July 2021
• Procedure and training for continued maintenance of and import of new data into the data catalog (by July 2021), and
• A plan for development and integration of data into a set of graphical visualization tools for key datasets (by July 2021).
 	
In Years 2-5, FLC students will work with FCWC to input new monitoring data into the database as it is collected.

CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
The deliverable for this task will be the *doloresriver.org* website and associated Metacat server with a web-based graphical user interface to simplify data exploration or archival. The website will be hosted on the FLC server and will be maintained and updated throughout the grant period.

Task 5 – Grant Administration
Description of Task:
Fort Lewis College will charge indirect costs to cover institutional support of the grant.
Method/Procedure:
15% indirect costs will be charged on WSRF direct costs.
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
N/A
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
FLC Office of Sponsored Programs will administer the grant and meet all relevant deadlines.

Last Update: March 17, 2020

https://cwcb.colorado.gov/

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.

Last Update: March 17, 2020

https://cwcb.colorado.gov/

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:

Water Activity Name:

Grantee Name:

Task No.[1]	Description	Start Date[2]	End Date	Matching Funds (cash & in-kind)[3]	WSRF Funds (Basin & Statewide combined)[3]	Total
1	Protocol Development	Oct 2020	Aug 2021	$ 22,381	$ 4,867	$27,248
	Meetings of technical team, travel to study sites, aerial imagery analysis for site selection, final protocol report development, and meeting facilitation					
2	Monitoring - 4 years	Sept 2021	Aug 2025	$3,730	$111,881	$115,611
	Field data collection and data processing and management by FLC and CMU faculty/student teams, 2-weeks/year of Youth Conservation Corps Strike Teams, travel mileage and meals, and supplies					
3	Reporting	Oct 2020	Aug 2025	$6,543	$21,539	$28,082
	Preparation of 6-month progress reports, annual monitoring reports and publicly oriented stories, GIS story maps and posts.					
4	Website/database development	Oct 2020	Aug 2025	$38,620	$5,729	$44,349
	Creation and maintenance of online data repostory and website.					
5	Grant Administration				$21,602	$21,602
	15% indirect costs applied to WSRF direct request.					
			Total	$71,275	$165,617	$236,892

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

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

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

The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of the CWCB staff project manager. Once the Final Report has been accepted, the final payment has been issued, the water activity and purchase order (PO) or contract will be closed without any futher 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.

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

The Nature Conservancy
Colorado

The Nature Conservancy in Colorado
1109 Oak Drive
Durango, CO 81301

tel (970) 375-0183

nature.org/colorado

Chris Sturm
Stream Restoration Coordinator
Colorado Water Conservation Board
(303) 866-3441 ext. 3209
chris.sturm@state.co.us
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Sturm,

On behalf of The Nature Conservancy, I am writing to support Four Corners Water Center at Fort Lewis College's grant proposal to the Colorado Water Conservation Board's Water Supply and Reserve Fund. The *Dolores River Adaptive Management Support Project* stems from goals developed by the collaborative Dolores River Native Fish Monitoring and Recommendation (M&R) Team, which is co-led by The Nature Conservancy, and will support the development and implementation of geomorphic monitoring along the Lower Dolores River.

This project encompasses a wide array of stakeholders that will develop a geomorphic monitoring protocol specific to the Dolores River by the Fall of 2021 that considers annual baseline monitoring methods as well as a component that can be activated when flows allow. The subsequent data will inform future adaptive management strategies for the lower Dolores River including native fish, vegetation, and overall ecological health. Furthermore, the geomorphic monitoring will be executed by students from Fort Lewis College and Colorado Mesa University and three-person crews from Southwest Conservation Corps that are able to respond quickly to changing flow conditions. Additionally, this proposal includes the development of a website and database to house monitoring data as well as other Dolores River related research and data.

Understanding the geomorphic and hydrologic interactions along the lower Dolores River will assist the M&R Team to make informed recommendations, provide education and stewardship opportunities to young people, and provide a platform for housing and viewing data related to the Dolores River. This work is critical to The Nature Conservancy's long-term investment in collaborative management on the Dolores River.

The Nature Conservancy will provide $10,000 in cash match to this project, and we strongly encourage the Southwest Basin Roundtable to fully support the project.

Sincerely,

Celene Hawkins
Western Colorado Water Project Director
The Nature Conservancy

RiversEdge West
RESTORE + CONNECT + INNOVATE

July 10, 2020

Chris Sturm
Stream Restoration Coordinator
Colorado Water Conservation Board
(303) 866-3441 ext. 3209
chris.sturm@state.co.us
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Sturm,

On behalf of RiversEdge West and the Dolores River Restoration Partnership (DRRP), I am writing to enthusiastically support The Four Corners Water Center at Fort Lewis College's proposal to the Colorado Water Conservation Board's Water Supply and Reserve Fund. The *Dolores River Adaptive Management Support Project* is centered around goals developed by the collaborative Dolores River Native Fish Monitoring and Recommendation (M&R) Team and will support the development and implementation of geomorphic monitoring along the Lower Dolores River.

This project includes diverse and highly skilled participants that will develop a geomorphic monitoring protocol specific to the Dolores River by the Fall of 2021 that considers annual baseline monitoring methods as well as a component that can be activated when flows allow. The subsequent data will inform future adaptive management strategies for the lower Dolores River including native fish, vegetation, and overall ecological health. Furthermore, the geomorphic monitoring will be executed by students from Fort Lewis College and Colorado Mesa University and three-person crews from Southwest Conservation Corps that are able to respond quickly to changing flow conditions. Additionally, this proposal includes the development of a website and database to house monitoring data as well as other Dolores River related research and data.

Understanding the geomorphic and hydrologic interactions along the lower Dolores River will assist the M&R Team make informed recommendations, provide education and stewardship opportunities to young people, and provide a platform for housing and viewing data related to the Dolores River.

Geomorphic monitoring compliments the DRRP's ecological, social, and management goals by enhancing vegetation monitoring currently being conducted by the DRRP and broadening the training of young adults working along the Dolores River and informing management decisions. RiversEdge West will commit $6,478 to this project; $2,000 for supplies and $4,478 in-kind time for the Restoration Coordinator to participate in the protocol development, train and manage the "strike team" and help with reporting and outreach.

Sincerely,

Rica Fulton
Restoration Coordinator
RiversEdge West
rfulton@riversedgewest.org
970-799-3316

United States Department of the Interior

BUREAU OF RECLAMATION
Durango Field Division
185 Suttle Street, Suite 2
Durango, CO 81303-7911

IN REPLY REFER TO:

WCD-RStump
2.2.1.06

VIA ELECTRONIC MAIL ONLY

Mr. Chris Sturm
Stream Restoration Coordinator
Colorado Water Conservation Board
Attn: Ms. Gigi Richard (garichard@fortlewis.edu)
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Sturm:

On behalf of the Bureau of Reclamation, I am writing to support The Four Corners Water Center at Fort Lewis College's grant proposal to the Colorado Water Conservation Board's Water Supply and Reserve Fund. *Dolores River Adaptive Management Support Project* stems from goals developed by the collaborative Dolores River Native Fish Monitoring and Recommendation (M&R) Team and will support the development and implementation of geomorphic monitoring along the Lower Dolores River.

This project encompasses a wide array of stakeholders that will develop a geomorphic monitoring protocol specific to the Dolores River by the Fall of 2021 that considers annual baseline monitoring methods as well as a component that can be activated when flows allow. The subsequent data will inform future adaptive management strategies for the lower Dolores River including native fish, vegetation, and overall ecological health. Furthermore, the geomorphic monitoring will be executed by students from Fort Lewis College and Colorado Mesa University and three-person crews from Southwest Conservation Corps that are able to respond quickly to changing flow conditions. Additionally, this proposal includes the development of a website and database to house monitoring data as well as other Dolores River related research and data.

Understanding the geomorphic and hydrologic interactions along the lower Dolores River will assist the M&R Team to make informed recommendations, provide education and stewardship opportunities to young people, and provide a platform for housing and viewing data related to the Dolores River.

Reclamation is an active participant with other state and federal agencies to promulgate the persistence of roundtail chub, bluehead sucker, flannelmouth sucker and other native fish species

populations in the Dolores River below McPhee Dam through active adaptive management and monitoring. Reclamation is an active participant of the M&R Team and would benefit from geomorphic monitoring and data housing to help inform its decisions for flow management strategies below McPhee Dam.

Reclamation can commit $2,334 of in-kind dollars for staff support to this project.

Sincerely,

Ed Warner
Area Manager

Chris Sturm
Stream Restoration Coordinator
Colorado Water Conservation Board
(303) 866-3441 ext. 3209
chris.sturm@state.co.us
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Sturm,

On behalf of Conservation Legacy's Southwest Conservation Corps I am writing to support The Four Corners Water Center at Fort Lewis College's grant proposal to the Colorado Water Conservation Board's Water Supply and Reserve Fund. *Dolores River Adaptive Management Support Project* stems from goals developed by the collaborative Dolores River Native Fish Monitoring and Recommendation (M&R) Team and will support the development and implementation of geomorphic monitoring along the Lower Dolores River.

This project encompasses a wide array of stakeholders that will develop a geomorphic monitoring protocol specific to the Dolores River by the Fall of 2021 that considers annual baseline monitoring methods as well as a component that can be activated when flows allow. The subsequent data will inform future adaptive management strategies for the lower Dolores River including native fish, vegetation, and overall ecological health. Furthermore, the geomorphic monitoring will be executed by students from Fort Lewis College and Colorado Mesa University and three-person crews from Southwest Conservation Corps that are able to respond quickly to changing flow conditions. Additionally, this proposal includes the development of a website and database to house monitoring data as well as other Dolores River related research and data.

Understanding the geomorphic and hydrologic interactions along the lower Dolores River will assist the M&R Team make informed recommendations, provide education and stewardship opportunities to young people, and provide a platform for housing and viewing data related to the Dolores River.

The Southwest Conservation Corps has been an integral part of the Dolores River Restoration Partnership (DRRP) since its inception and is invested in restoring the riparian habitat along the Dolores River. The goals of the M&R team directly align with the DRRP restoration and adaptative management objectives, making this great opportunity for collaboration. This project aligns with SCC's mission is to *empower individuals to positively impact their lives, their communities, and the environment* by enabling participants to gain valuable skills in geomorphic monitoring while providing work that greatly benefits the communities and ecosystems of Southwest Colorado.

The Southwest Conservation Corps Watershed Programs Manager is able to commit $416 of in-kind to this project for monitoring protocol development and training.

Regards,

Emily Kasyon

Watershed Programs Manager - Southwest Conservation Corps

ekasyon@conservationlegacy.org 970-903-0389

Chris Sturm
Stream Restoration Coordinator
Colorado Water Conservation Board
(303) 866-3441 ext. 3209
chris.sturm@state.co.us
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Sturm,

On behalf of the Bureau of Land Management, I am writing to support The Four Corners Water Center at Fort Lewis College's grant proposal to the Colorado Water Conservation Board's Water Supply and Reserve Fund. *Dolores River Adaptive Management Support Project* stems from goals developed by the collaborative Dolores River Native Fish Monitoring and Recommendation (M&R) Team and will support the development and implementation of geomorphic monitoring along the Lower Dolores River.

This project encompasses a wide array of stakeholders that will develop a geomorphic monitoring protocol specific to the Dolores River by the Fall of 2021 that considers annual baseline monitoring methods as well as a component that can be activated when flows allow. The subsequent data will inform future adaptive management strategies for the lower Dolores River including native fish, vegetation, and overall ecological health. Furthermore, the geomorphic monitoring will be executed by students from Fort Lewis College and Colorado Mesa University and three-person crews from Southwest Conservation Corps that are able to respond quickly to changing flow conditions. Additionally, this proposal includes the development of a website and database to house monitoring data as well as other Dolores River related research and data.

Understanding the geomorphic and hydrologic interactions along the lower Dolores River will assist the M&R Team make informed recommendations, provide education and stewardship opportunities to young people, and provide a platform for housing and viewing data related to the Dolores River.

The BLM manages segments of the Dolores as a suitable Wild and Scenic River and is responsible for protecting the Outstandingly Remarkable Values until the segments are either designated as Wild and Scenic or released from suitability.

My organization is able to commit $1696 (in-kind) to this project.

Regards,

Jedd Sondergard

Bureau of Land Management

Hydrologist, Uncompahgre Field Office

SAN JUAN CITIZENS ALLIANCE

1309 East Third Avenue
PO Box 2461
Durango, CO 81302
970.259.3583

sanjuancitizens.org

July 12, 2020

Chris Sturm
Stream Restoration Coordinator
Colorado Water Conservation Board
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Sturm,

As a Program Manager for San Juan Citizens Alliance (SJCA) I am expressing our organizational support The Four Corners Water Center at Fort Lewis College's grant proposal to the Colorado Water Conservation Board's Water Supply and Reserve Fund. *Dolores River Adaptive Management Support Project* stems from goals developed by the collaborative Dolores River Native Fish Monitoring and Recommendation (M&R) Team and will support the development and implementation of geomorphic monitoring along the Lower Dolores River.

This project encompasses a wide array of stakeholders that will develop a geomorphic monitoring protocol specific to the Dolores River by the Fall of 2021 that considers annual baseline monitoring methods as well as a component that can be activated when flows allow. The subsequent data will inform future adaptive management strategies for the lower Dolores River including native fish, vegetation, and overall ecological health. Furthermore, the geomorphic monitoring will be executed by students from Fort Lewis College and Colorado Mesa University and three-person crews from Southwest Conservation Corps that are able to respond quickly to changing flow conditions. Additionally, this proposal includes the development of a website and database to house monitoring data as well as other Dolores River related research and data. Understanding the geomorphic and hydrologic interactions along the lower Dolores River will assist the M&R Team make informed recommendations, provide education and stewardship opportunities to young people, and provide a platform for housing and viewing data related to the Dolores River.

San Juan Citizens Alliance has been involved, and has often taken the lead, in organizing public processes related to furthering the comprehensive management needs of the waters of the Dolores River including McPhee Reservoir which includes the pursuit of research that allows all interested parties to proceed forward with science-based decisions. SJCA will continue our involvement in the years ahead to support such activities including outreach to our 1,000+ members along with our continued involvement on the M&R Team.

Sincerely,

Jimbo Buickerood, Program Manager
Lands and Forest Protection Program
jimbo@sanjuancitizens.org
970 560-1111 Cell

COLORADO
Parks and Wildlife
Department of Natural Resources

Southwest Region Office
415 Turner Drive
Durango, CO 81303
P 970.375.6710 | F 970.375.6705

July 13, 2020

Chris Sturm
Stream Restoration Coordinator
Colorado Water Conservation Board
(303) 866-3441 ext. 3209
chris.sturm@state.co.us
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Sturm,

I am writing to support The Four Corners Water Center at Fort Lewis College's grant proposal to the Colorado Water Conservation Board's Water Supply and Reserve Fund. The Dolores River Adaptive Management Support Project stems from goals developed by the collaborative Dolores River Native Fish Monitoring and Recommendation (M&R) Team and will support the development and implementation of geomorphic monitoring along the Lower Dolores River.

CPW is charged with the management of aquatic and terrestrial wildlife species for Colorado's citizens and visitors. The Dolores River provides a popular trout fishery and important habitat for warm water native fish. Dolores River habitat viability remains critical for the persistence of both sportfish and native fish in the river below McPhee Reservoir, and building a sustainable geomorphic monitoring program through Fort Lewis College and the Four Corners Water Center will aid CPW in fishery management in the future. CPW also supports use of outdoor labs such as the Dolores to help educate and motivate future generations of natural resource stewards.

CPW has been participating in dialogues and implementing Dolores Project mitigation on the Dolores River since McPhee Reservoir was completed in 1986. This project includes additional stakeholders that will develop a geomorphic monitoring protocol specific to the Dolores River by the Fall of 2021. Implementation of the protocol will, over time, inform future adaptive management strategies for the lower Dolores River that should improve overall ecological health. Data management and presentation of findings via a website and database portal to house monitoring data as well as other Dolores River related research and data has been much discussed over the years but never realized. This is an important addition to this project.

Understanding the geomorphic and hydrologic interactions along the lower Dolores River will assist the M&R Team's collective understanding of habitat in and along the river, and will

continue to inform the recommendations this group provides to water managers. CPW also supports the development of a platform for housing and viewing data generated by the Project, and especially appreciates the educational and stewardship opportunities for young people that is imbedded in its design.

Best Regards,

Cory Chick

SW Region Manager