

Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
May 21-22, 2014
Agenda Item 23(g)

Applicant: Montezuma County

Water Activity Name: McElmo Creek Flume Rehabilitation

Water Activity Purpose: Education

County: La Plata

Drainage Basin: Southwest

Water Source: n/a

Amount Requested: \$20,000

Source of Funds: Southwest Basin Account

Matching Funds: \$145,340 total cash match by applicant and third parties: 88% of total study costs of \$165,340 (refer to *Funding Overview/Match Summary* below).

Staff Recommendation
Staff recommends approval of up to \$20,000 from the Southwest Basin Account to assist in the funding of the study titled: McElmo Creek Flume Rehabilitation.

Water Activity Summary: WSRA funds, if approved, will be expended to rehabilitate the McElmo Creek Flume which will become an interpretive stop along the San Juan Skyway and Trail of the Ancients National Scenic Byways. In 2012, the Trail of the Ancients was awarded a National Scenic Byways grant to build a formal pullout with interpretive panels to tell the story of the Montezuma Valley Irrigation system (MVI), of which the McElmo Creek Flume was an integral component. In 2011, the McElmo Creel Flume was listed on Colorado Preservation Inc.'s Endangered Places List, and in 2012 the McElmo Creek Flume was listed on the National Register of Historic Places. This flume is the last surviving flume of the original 104 flumes on the MVI system, and was originally constructed in 1890s in order to bring water to Montezuma Valley which allowed large scale farming and ranching to develop, and also allowed the town site of Cortez to be established. While the system underwent extensive modifications, the flume went out of service permanently in 1992 with the construction of McPhee Reservoir which delivered water via underground laterals. Subsequently the flume has experienced extensive damage due to heavy rainfall, and high winds and has fallen into disrepair. Rehabilitation of the McElmo Creek Flume, in concert with other interpretive stops along the Trail of the Ancients that include discussions regarding the Ancestral Puebloan water history, will be an excellent venue for educating the local and travelling public about the 19th and 20th century water history in Southwestern Colorado.

Discussion:

No additional discussion is required.

Issues/Additional Needs:

No issues or additional needs have been identified.

Funding Overview/Matching Funds

	<u>Cash</u>	<u>In-kind</u>	<u>Total</u>
WSRA Southwest Basin Account	\$20,000	n/a	\$20,000
Montezuma County	\$2,500	\$0	\$2,500
Southwestern Water Conservation District	\$15,000	\$0	\$15,000
Ballantine Family Fund	\$4,000	\$0	\$4,000
Colorado State Historical Fund	\$123,840	\$0	\$123,840
Totals	\$165,340	\$0	\$165,340

Staff Recommendation:

Staff recommends approval of up to \$20,000 from the Southwest Basin Account to assist in the funding of the study: McElmo Creek Flume Rehabilitation.

All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and will help promote the development of a common technical platform. In accordance with the revised WSRA Criteria and Guidelines, staff would like to highlight additional reporting and final deliverable requirements. The specific requirements are provided below.

Reporting and Final Deliverable: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the scope of work including a description of any major issues that have occurred and any corrective action taken to address these issues. At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

Engineering: All engineering work (as defined in the Engineers Practice Act (§12-25-102(10) C.R.S.)) performed under this grant shall be performed by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.

SOUTHWEST BASINS ROUNDTABLE

Michael Preston, Chair

c/o Dolores Water Conservancy District

P.O. Box 1150

Cortez, Colorado 81321

970-565-7562

March 18, 2014

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

SUBJECT: Rehabilitate McElmo Flume - \$20,000 from Basin Account

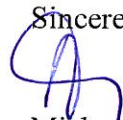
Dear Mr. Godbout:

The Southwest Basin Roundtable is pleased to recommend funding of \$20,000 from the Southwest Basin Account to help rehabilitate the McElmo Flume. The application was considered in detail and approved at the March 12, 2014 meeting of the Southwest Basin Roundtable. There was a quorum of Roundtable members present.

The proposed project is a Southwest Basin Roundtable IPP. The McElmo Flume is the last of over a hundred wooden flumes that were part of the water delivery system to the Town of Cortez and the Montezuma Valley Irrigation Company. This important remnant of local agricultural history is located near the Montezuma County Fairgrounds on Highway 160 where the San Juan Skyway and Trail of the Ancients overlap. The restoration of the flume is being done in conjunction with the development of an historic highway pullout. The Flume Restoration received \$124,000 from the State Historical Fund and the requested funding will provide the necessary match along with match provided by Montezuma County Southwest Water Conservation District and Ballantine Family Foundation. This project fits well with the Roundtable strategy of increasing water education.

The completed Grant Application will be forwarded directly to you by the applicant. Please contact the applicant directly or me at 970-565-7562, mpreston@frontier.net, if you have questions or wish to discuss this application in more detail.

Sincerely,



Michael Preston
Southwest Basin Roundtable Chair

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

TRAFFIC AND SAFETY UNIT REGION 5

3803 N. Main Avenue, Suite 100
Durango, CO 81301
(970) 385-8360
Fax (970) 385-8361



State Historic Fund
History Colorado Center
1200 Broadway
Denver, CO 80203

To whom it may concern:

The Colorado Department of Transportation has worked with the local proponents of this proposed historic kiosk and flume stabilization project. CDOT is in full support of this project because locals and tourists alike will be able to learn much about the area's history and culture. All too many of our state's historical features are lost every year and we are encouraged and very willing to work with the dedicated proponents to realize the construction of this feature. And the storage and transport of water plays such a key role in the development of this region.

CDOT feels this historical feature will definitely broaden the travelers' experience in this part of the state and increase their positive experiences taken from Region 5, which is already rich in archaeological features.

In summer tourist months, our staff anticipates as many as 200 vehicles a day stopping at this kiosk pullout. Its location may also be noted at the Sleeping Ute rest area 3 miles to the east, for increased visitation from westbound traffic.

The kiosk facility has initial approval to be built in the CDOT right of way at this location. CDOT Maintenance has offered some assistance with site preparations.

Thank you,

Sincerely,

(signed) Rick Routh, PE

Colorado Dept of Transportation – R5 Traffic Dept
3803 North Main Ave Ste 100
Durango, CO 81301
970 385-3629



Montezuma Valley Irrigation Company
PO Box 1056
Cortez, CO 81321

State Historic Fund
History Colorado Center
1200 Broadway
Denver, CO 80203

September 27, 2013

To Whom It May Concern,

In the late 1880's, an irrigation system was being designed for the Montezuma Valley. During those years, moving dirt was all done by men and horses to build crossings for drainage areas to deliver irrigation water through wooden flumes. Montezuma Valley Irrigation Company acquired this irrigation system in 1920. The system consisted of 104 flumes that had to be maintained to serve the company's stockholders. These flumes were a very important part of the water delivery network of canals in the Montezuma Valley. The Number 6 Flume was one of these structures. This flume carried the water of the Highline Canal across McElmo Creek to serve farm land all the way to the reservation boundary south of Cortez.

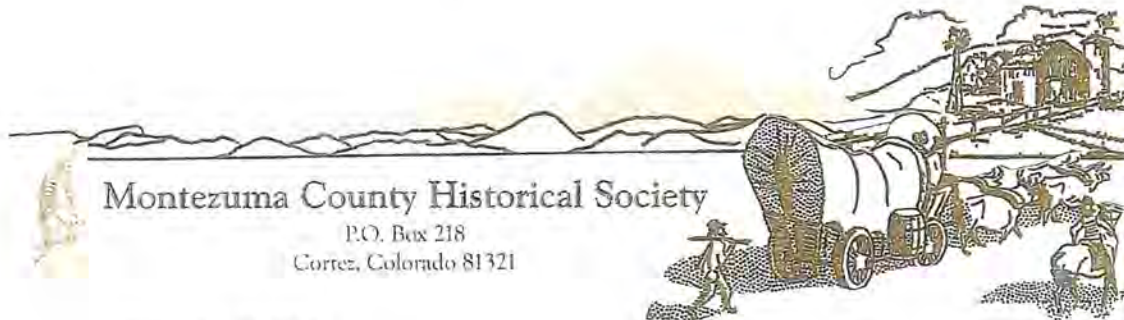
Through time, water brought out of the Dolores River and delivered by the 104 flumes canal system is the reason the Montezuma Valley and the town of Cortez has been able to grow and become what exists of the area today. The Number 6 Flume is our last remaining wooden structure from the 1920 era. Because of the scarcity of our irrigation flume delivery system, it is important to rehabilitate and preserve the structure for future generations to appreciate the valley's history and irrigation delivery progression in the last 93 years. I am in support of the funding for the rehab project of the McElmo Creek Flume.

Sincerely,

Les Nunn
General Manager
Montezuma Valley Irrigation Company

Letters of Support for
McElmo Creek Flume SHF Grant

September 2013



September 23, 2013

State Historic Fund
History Colorado Center
1200 Broadway
Denver CO 80203

SUBJECT: Rehabilitation of the McElmo Creek Flume Grant Request

The Montezuma County Historical Society has long recognized how our early irrigation water delivery system supported the growth and development of the Montezuma Valley from the 1880s well into the 20th century. Its flumes brought the water that our farmers and ranchers depended upon for their very livelihood.

The McElmo Creek Flume itself supplied water for the Ute Mountain Ute town of Towaoc, helping fulfill the United States' treaty commitments. As the last remaining segment of the hundreds of flumes that once served our residents, we strongly support the plan for its preservation as part of an historical interpretive stop along Highway 160 just east of Cortez.

As part of its rehabilitation, we are asking the SHF to provide a grant for stabilizing the south bank, piers and braces under the wooden flume; repairing the concrete on the steel; and repairing the corrosion on the beams and braces. When these tasks are completed, the stage is then set for the future repair of the wooden trough that will demonstrate to the public how the flume system worked.

We look forward to a successful outcome in historic preservation of the McElmo Creek Flume and thank you for previous assistance on this important project.

Sincerely,

David C. Everett
David C. Everett, Chairman
Montezuma County Historical Society

*SOUTHWESTERN WATER CONSERVATION DISTRICT
841 EAST 2ND AVE.
DURANGO, COLORADO 81301
Ph 970-247-1302*

September 23, 2013

State Historic Fund
History Colorado Center
1200 Broadway
Denver, CO 80203

RE: Rehabilitation of the McElmo Creek Flume

To whom it may concern:

The Southwestern Water Conservation District (SWCD or District) is a quasi public agency covering all or parts of nine counties in Southwest Colorado, including Montezuma. The purpose of SWCD is to aid in the conservation, protection and development of Southwest Colorado's waters. The District considers recognition of our irrigation heritage as one of its missions.

In that regard SWCD has become aware of the plight of the McElmo Flume. The District understands that at one point in the history of irrigation in Montezuma County there were over 100 such flumes in use.

The McElmo Flume was designated one of Colorado's Most Endangered Places in 2011. It is a most fitting recognition for reasons beyond just being endangered.

That Flume represents the heritage of the culture that developed with the advent of water being trans-basin diverted from the Dolores River into the Montezuma Valley during the mid 1880s, one hundred and thirty years ago.

Further the Flume is located adjacent to Hwy 160, two miles east of Cortez. There could not be a better location to tell the story of this area's heritage.

SWCD also understands that the State Historical Fund is considering granting funds to restore the Flume. The District wholeheartedly supports such an effort and urges the SHF to commit to same. Further the District will, in the near future, also consider a contribution toward this deserving effort.

Respectfully,

John Porter, President

Donald W. Schwindt

20242 County Road A
Cortez, CO 81321
September 26, 2013

To:
Montezuma County Board of Commissioners
Colorado State Historic Fund

I want to express my strong support for the grant request to the State Historic Fund for the Rehabilitation of the McElmo Creek Flume. This is for a needed first step in a larger project that could be very valuable to our community and state. This flume can help illustrate the use of a scarce resource, water, in Colorado, and how that scarcity has shaped our state's history. This is an excellent location to provide more details of that story.

Montezuma Valley had little to no perennial sources of water. Historic development only occurred with the delivery of water through a significant ditch system that included a number of these wooden flumes. The water came from a neighboring basin, the Dolores river valley. Many other communities in our state needed similar water infrastructure to survive and grow. The stark reality of the limitations of the water resource was recognized prior to statehood, so that what has become known as the Prior Appropriation Doctrine was imbedded in Colorado's constitution. That doctrine had several key principles, including: 1) first in time, first in right, 2) use shall never be denied, and 3) water needs to be moved from where it is to where it is needed. This flume project is a wonderful place to help tell that story.

After the Dolores Project construction provided new infrastructure that replaced this flume, which was operated by Montezuma Valley Irrigation Company, the Dolores Water Conservancy District provided staff and other resources to help maintain the flume for a number of years in anticipation of restoration. Now that a more firm plan for restoration is becoming a reality, the present board needs to renew its discussion of what level of support it may be able to provide. I serve on that board. I intend to share my enthusiasm for the project with other entities that are discussing ways that they may be able to support the project. Today's citizens of this state need to have a more complete understanding of the history of water use in their communities as they participate in the political discussions about water use today.

I hope that we can get this grant funded and continue to have discussions about the larger project so that our community can realize the maximum benefit from this restoration opportunity.

Sincerely,
Donald W. Schwindt
970-565-3592
970-739-9748 cell
dysch@frontier.net



September 20, 2013

The State Historical Fund
History Colorado Center
1200 Broadway
Denver, CO 80203

Mr. Nichols,

On behalf of Colorado Preservation, Inc. we give our full support to Montezuma County and the rehabilitation of the McElmo Creek Flume.

The McElmo Creek Flume was listed as one of Colorado's Most Endangered Places in 2011, and today is the only flume that remains of the 104 that were constructed to irrigate crops via water diverted from the Dolores River in Montezuma County. The Flume serves as a reminder of the spectacular engineering feat that was instrumental in developing southwestern Colorado. Unfortunately, the Flume is in serious disrepair, damaged by flash floods in 2006 and heavy winds in 2010. The Flume will likely collapse unless action is taken to rehabilitate the structure.

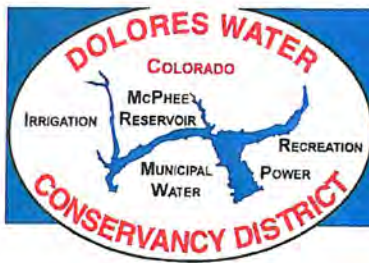
The history of Colorado is inextricably linked with the availability of water for mining, agriculture, and community development. The McElmo Creek Flume represents an irreplaceable resource in aiding the history of water and settlement in the Montezuma Valley. The rehabilitation of the Flume will consist of 3 components that will focus on stabilizing and repairing the support system. This work must first be completed before the wooden trough superstructure can be rehabilitated.

The citizens of Montezuma County, with the County as the lead, have shown great interest and determination towards showcasing the Flume's unique history to the greater public through this entire project. Supporting this grant request would give them a great boost towards their preservation efforts and provide them the much needed help to this underserved area. I would just talk about the people here!

We strongly urge you to support this grant application for rehabilitation of the McElmo Flume. The Flume is an incredibly important resource indicative to the unique history of Colorado.

Sincerely,

Jane Daniels
Executive Director
Colorado Preservation, Inc.



Dolores Water Conservancy District

60 S. Cactus St. • P.O. Box 1150 • Cortez, CO 81321
Phone: 970-565-7562 • Fax: 970-565-0870 • Email: dwcd@frontier.net

September 26, 2013

Colorado State Historic Fund
1200 Broadway
Denver, CO 80201
C/o Montezuma County Board of Commissioners

To whom it may concern,

The City of Cortez was originally platted by the water company that brought irrigation water into the Montezuma Valley. This pioneering effort resulted in the construction of a large number of very unique flumes. The fact that the McElmo Flume is the last remaining flume and is located on a State Highway corridor on the outskirts of Cortez makes its stabilization and interpretation a top priority in the preservation of our local heritage. It will also provide a wonderful opportunity to share our history with the hundreds of thousands of visitors that pass through Cortez every year.

I manage the Dolores Project which has expanded and modernized irrigation delivery systems in the Montezuma Valley, all of which was made possible by the pioneering efforts that developed water rights which laid the foundation for expanded agricultural productivity including the Ute Mountain Tribe Farm and Ranch Enterprise. The best way to salute these pioneers is to protect this important vestige of their ingenuity.

I join my Board of Directors in support of funding that will support the interpretation and stabilization of the McElmo Flume.

Sincerely,

Michael Preston, General Manager
Dolores Water Conservancy District



COLORADO WATER CONSERVATION BOARD



WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Today's Date: March 18, 2014

Rehabilitate the McElmo Creek Flume

Name of Water Activity/Project

Montezuma County

Name of Applicant

Southwest Basin
Roundtable

Amount from Statewide Account:

\$0

Amount from Basin Account(s):

\$20,000

Total WSRA Funds Requested:

\$20,000

Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

FEIN 84-6000786

Application Content

Application Instructions	page 2
Part I – Description of the Applicant	page 3
Part II – Description of the Water Activity	page 5
Part III – Threshold and Evaluation Criteria	page 7
Part IV – Required Supporting Material	
Water Rights, Availability, and Sustainability	page 10
Related Studies	page 10
Signature Page	page 12

Required Exhibits

- A. Statement of Work, Budget, and Schedule
- B. Project Map
- C. As Needed (i.e. letters of support, photos, maps, etc.)

Appendices – Reference Material

- 1. Program Information
- 2. Insurance Requirements
- 3. WSRA Standard Contract Information (Required for Projects Over \$100,000)
- 4. W-9 Form (Required for All Projects Prior to Contracting)

Water Supply Reserve Account – Application Form

Revised October 2013

Instructions

To receive funding from the Water Supply Reserve Account (WSRA), a proposed water activity must be approved by the local Basin Roundtable **AND** the Colorado Water Conservation Board (CWCBC). The process for Basin Roundtable consideration and approval is outlined in materials in Appendix 1.

Once approved by the local Basin Roundtable, the applicant should submit this application **with a detailed statement of work including budget and schedule as Exhibit A** to CWCBC staff by the application deadline.

WSRA applications are due with the roundtable letter of support 60 calendar days prior to the bi-monthly Board meeting at which it will be considered. Board meetings are held in January, March, May, July, September, and November. Meeting details, including scheduled dates, agendas, etc. are posted on the CWCBC website at: <http://cwcb.state.co.us> Applications to the WSRA Basin Account are considered at every board meeting, while applications to the WSRA Statewide Account are only considered at the March and September board meetings.

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf>

The application, statement of work, budget, and schedule **must be submitted in electronic format** (Microsoft Word or text-enabled PDF are preferred) and can be emailed or mailed on a disk to:

Craig Godbout - WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
Craig.godbout@state.co.us

If you have questions or need additional assistance, please contact Craig Godbout at: 303-866-3441 x3210 or craig.godbout@state.co.us.

Water Supply Reserve Account – Application Form

Revised October 2013

Part I. - Description of the Applicant (Project Sponsor or Owner);

1.	Applicant Name(s):	Montezuma County		
	Mailing address:	109 West Main St. Room 302, Cortez, CO 81321		
	FEIN #:	84-6000786		
	Primary Contact:	James Dietrich	Position/Title:	Community Services
	Email:	jdietrich@montezuma.co.us		
	Phone Numbers:	Cell: 970-570-9494	Office:	970-565-4702
	Alternate Contact:	Melissa Brunner	Position/Title:	County Administrator
	Email:	mbrunner@co.montezuma.co.us		
	Phone Numbers:	Cell:	Office:	970-565-4154

2. Eligible entities for WSRA funds include the following. What type of entity is the Applicant?

- ☒ Public (Government) – municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities and the local entity should be the grant recipient. 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 defined as any organization that is not part of the government.

Water Supply Reserve Account – Application Form

Revised October 2013

3. Provide a brief description of your organization

Montezuma County is an administrative subdivision of the State of Colorado serving a resident population of approximately 25,000 people. Montezuma County has extensive experience administering grants from many different funding agencies with many different funding levels and technical complexities. Montezuma County annually receives multiple federal and state grants and has an exemplary record in administering those grants on time and without complications.

Montezuma County has maintained an outstanding record working with the State of Colorado, in particular with DOLA and GOCO. The Montezuma County Fairgrounds Complex, for example (which is where the Flume is located) was constructed largely through DOLA and GOCO grants which helped to construct the indoor and outdoor arena, grandstands and trail network.

The Lewis/Arriola Community Center site plan was also funded in part by GOCO and administered by Montezuma County. This project included development of a baseball field, parking area, picnic facilities, rest rooms, a walking path, playgrounds and other assorted recreational amenities

Montezuma County also has an established record with State Historical Fund grants. In 2012, Montezuma County worked with the team of Ron Anthony of Anthony & Associates, Inc., Doug Porter of Conservation Associates Inc., Michael Nulty from the Center of Preservation Research at the University of Colorado, and Linda A. Towle, Historic Preservation Consultant, on the Archaeological Assessment of the McElmo Creek Flume. This was funded by SHF grant #2012-AS-006, and was completed on time and within budget.

In 2013, Montezuma County was awarded a second SHF grant (#2013-M2-020) to conduct a foundation assessment of the Flume and produce construction documents. The addition of Carlo Citto of Atkinson-Noland & Associates, Inc. to the team of Anthony, Porter & Towle provided the engineering expertise to minimize interventions while maximizing retention of historic fabric and maintaining the integrity of the Flume. This grant resulted in repair recommendations to the steel and concrete substructure of the Flume, and construction documents for both the substructure and wooden flume repairs. This project was completed on time and within budget.

The County's Community Service Director, James Dietrich, has served as the administrator for the 2 previous SHF grants for the Flume in 2012 and 2013, and will be the administrator for this next grant.

4. If the Contracting Entity is different then the Applicant (Project Sponsor or Owner) please describe the Contracting Entity here.

Not Applicable.

5. Successful applicants will have to execute a contract with the CWCB prior to beginning work on the portion of the project funded by the WSRA grant. In order to expedite the contracting process the CWCB has established a standard contract with provisions the applicant must adhere to. A link to this standard contract

Water Supply Reserve Account – Application Form

Revised October 2013

is included in Appendix 3. Please review this contract and check the appropriate box.

☒ The Applicant will be able to contract with the CWCB using the Standard Contract

☐ The Applicant has reviewed the standard contract and has some questions/issues/concerns. Please be aware that any deviation from the standard contract could result in a significant delay between grant approval and the funds being available.

6. 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.

Montezuma County receives very little grant money annually. This grant request is relatively small and would not exceed our annual cap.

Part II. - Description of the Water Activity/Project

1. What is the primary purpose of this grant application? (Please check only one)

☐ Nonconsumptive (Environmental or Recreational)

☐ Agricultural

☐ Municipal/Industrial

☐ Needs Assessment

☒ Education

☐ Other Explain:

2. If you feel this project addresses multiple purposes please explain.

Not Applicable.

3. Is this project primarily a study or implementation of a water activity/project? (Please check only one)

☐ Study

☒ Implementation

4. To catalog measurable results achieved with WSRA funds can you provide any of the following numbers?

Other: This project will not affect any water supplies.

Water Supply Reserve Account – Application Form

Revised October 2013

4. To help us map WSR projects please include a map (Exhibit B) and provide the general coordinates below:

Latitude: 37d 20' 53.5"N

Longitude: 108d30' 10.75"W

5. Please provide an overview/summary of the proposed water activity (no more than one page). Include a description of the overall water activity and specifically what the WSR funding will be used for. A full **Statement of Work** with a detailed budget and schedule is required as **Exhibit A** of this application.

This water education project will provide a new opportunity for the public to learn about the water history of Montezuma Valley and the development of the Montezuma Valley Irrigation Company's (MVI) extensive system of laterals and flumes by funding the rehabilitation of the McElmo Creek Flume.

The McElmo Creek Flume is the LAST SURVIVING flume of the original 104 flumes on the Montezuma Valley Irrigation system. The original wooden flume system was begun in the late 1890s and was completed in the 1920s when the Montezuma Valley Irrigation Company finished 150 miles of canals and 104 wooden flumes. This irrigation system brought water to the Montezuma Valley which allowed large-scale farming and ranching to develop, and also allowed the townsite of Cortez to become the City it is today.

The McElmo Creek Flume was Flume No. 6 on the Highline Lateral, and delivered water to the Ute Mountain Ute Tribe's reservoir north of Towaoc. The original flume was replaced in 1921 with a Creo-Wood Flume from the Continental Pipe Manufacturing Company. In 1955, the flume's timber trestles were replaced with reinforced concrete piers, steel I-beam stringers, and diagonal steel braces.

The McElmo Flume remained operational until 1992 when the McPhee Reservoir was constructed and underground laterals were built to replace the canals and flumes. In 2006, runoff from a heavy rainstorm collapsed a portion of the Flume. MVI engineers rerouted the ditch carrying water from a culvert under Highway 160 in August of 2007 to prevent additional damage to the Flume. In the winter of 2010, high winds dislodged boards in the southern end of the Flume, where the bank has eroded away and the braces for the Flume are no longer supported.

In 2011, the McElmo Creek Flume was listed on Colorado Preservation Inc.'s Endangered Places List (see brochure in Exhibit C), and in 2012, it was listed on the National Register of Historic Places.

The Flume is located east of the City of Cortez on land owned by Montezuma County. It is adjacent to an informal CDOT pullout on highway 160, which is part of the San Juan Skyway and Trail of the Ancients National Scenic Byways. In 2012, the Trail of the Ancients Scenic Byway (TOTA) was awarded a National Scenic Byways Grant to build a formal pullout with interpretive panels to tell the story of MVI, the McElmo Creek Flume, and historic water use in the Montezuma Valley (plans for this stop are in Exhibit C). Other stops along the Byway discuss Ancestral Puebloan water history so this new stop on TOTA will be an excellent venue for educating the local and traveling public about the 19th and 20th century water history of our area.

Montezuma County has received a grant from the Colorado State Historical Fund (SHF) to implement the repairs the McElmo Creek Flume recommended in 2 earlier grants. This grant, for \$123,840, will fund the repairs to the steel & concrete substructure which must be completed before the repair of the wooden trough superstructure.

Water Supply Reserve Account – Application Form

Revised October 2013

This rehabilitation of the Flume is necessary so that it can be interpreted to the visiting public at the new stop on the Trail of the Ancients Scenic Byway.

This SHF grant requires matching funds of \$41,280. This request to WSRA is for the remaining \$19,780 needed to match the SHF grant. Matching funds have already been secured from Montezuma County (\$2,500), the Southwest Water Conservancy District (\$15,000), and the Ballantine Family Fund (\$4,000).

Part III. – Threshold and Evaluation Criteria

1. Describe how the water activity meets these **Threshold Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

- a) The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.¹

There are no water rights involved in this project.

- b) The water activity underwent an evaluation and approval process and was approved by the Basin Roundtable (BRT) and the application includes a description of the results of the BRT's evaluation and approval of the activity. At a minimum, the description must include the level of agreement reached by the roundtable, including any minority opinion(s) if there was not general agreement for the activity. The description must also include reasons why general agreement was not reached (if it was not), including who opposed the activity and why they opposed it. Note- If this information is included in the letter from the roundtable chair simply reference that letter.

A letter of approval will be sent by the Southwest Roundtable Chair.

- c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.² The Basin

¹ 37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the state constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. (2) The General Assembly affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This article shall not be implemented in any way that would diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This article shall not be construed to supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights. The General Assembly affirms that this article does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

² 37-75-104 (2)(c). Using data and information from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the on-going Statewide Water Supply Initiative, develop a basin-wide consumptive and nonconsumptive water supply needs assessment, conduct an analysis of available unappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those unappropriated waters where appropriate. Basin Roundtables shall actively seek the input and advice of affected local governments, water providers, and other interested stakeholders and persons in establishing its needs assessment, and shall propose projects or methods for

Water Supply Reserve Account – Application Form

Revised October 2013

Roundtable Chairs shall include in their approval letters for particular WSRA grant applications a description of how the water activity will assist in meeting the water supply needs identified in the basin roundtable's consumptive and/or non-consumptive needs assessments.

A letter of approval will be sent by the Southwest Roundtable Chair.

- d) **Matching Requirement:** For requests from the **Statewide Fund**, the applicants will be required to demonstrate a 25 percent (or greater) match of the total grant request from the other sources, including but not limited to Basin Funds. A minimum match of 5% of the total grant amount shall be from Basin funds. A minimum match of 5% of the total grant amount must come from the applicant or 3rd party sources. Sources of matching funds include but are not limited to Basin Funds, in-kind services, funding from other sources, and/or direct cash match. Past expenditures directly related to the project may be considered as matching funds if the expenditures occurred within 9 months of the date the application was submitted to the CWCB. Please describe the source(s) of matching funds. (NOTE: These matching funds should also be reflected in your Detailed Budget in **Exhibit A** of this application)

Montezuma County has received a grant from the Colorado State Historical Fund (SHF) to implement the repairs the McElmo Creek Flume recommended in 2 earlier grants. This grant, for **\$123,840**, will fund the repairs to the steel & concrete substructure which must be completed before the repair of the wooden trough superstructure. This will rehabilitate this National Register listed property so that it can be interpreted to the visiting public at a new stop on the Trail of the Ancients Scenic Byway.

This SHF grant requires matching funds of **\$41,280** for a total project cost of **\$165,120**. Matching funds have already been secured from:

Montezuma County	\$ 2,500
Southwest Water Conservancy District	\$15,000
Ballantine Family Fund	<u>\$ 4,000</u>
Total Matching Funds:	\$21,500

The applicant, Montezuma County, has committed more than 5% of the requested funds.

A Detailed Budget for this work is presented in Exhibit A.

2. For Applications that include a request for funds from the **Statewide Account**, describe how the water activity/project meets all applicable **Evaluation Criteria**. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines and repeated below.) Projects will be assessed on how well they meet the Evaluation Criteria. **Please attach additional pages as necessary.**

Evaluation Criteria – the following criteria will be utilized to further evaluate the merits of the water activity proposed for funding from the Statewide Account. In evaluation of proposed water activities, preference will be given to projects that meet one or more criteria from each of the three “tiers” or categories. Each “tier” is grouped in level of importance. For instance, projects that meet Tier 1 criteria will outweigh projects that only

meeting those needs. Recommendations from this assessment shall be forwarded to the Interbasin Compact Committee and other basin roundtables for analysis and consideration after the General Assembly has approved the Interbasin Compact Charter.

Water Supply Reserve Account – Application Form

Revised October 2013

meet Tier 3 criteria. WSRA grant requests for projects that may qualify for loans through the CWCB loan program will receive preference in the Statewide Evaluation Criteria if the grant request is part of a CWCB loan/WSRA grant package. For these CWCB loan/WSRA grant packages, the applicant must have a CWCB loan/WSRA grant ratio of 1:1 or higher. Preference will be given to those with a higher loan/grant ratio.

Tier 1: Promoting Collaboration/Cooperation and Meeting Water Management Goals and Identified Water Needs

- a. The water activity addresses multiple needs or issues, including consumptive and/or non-consumptive needs, or the needs and issues of multiple interests or multiple basins. This can be demonstrated by obtaining letters of support from other basin roundtables (in addition to an approval letter from the sponsoring basin).
- b. The number and types of entities represented in the application and the degree to which the activity will promote cooperation and collaboration among traditional consumptive water interests and/or non-consumptive interests, and if applicable, the degree to which the water activity is effective in addressing intrabasin or interbasin needs or issues.
- c. The water activity helps implement projects and processes identified as helping meet Colorado's future water needs, and/or addresses the gap areas between available water supply and future need as identified in SWSI or a roundtable's basin-wide water needs assessment.

Tier 2: Facilitating Water Activity Implementation

- d. Funding from this Account will reduce the uncertainty that the water activity will be implemented. For this criterion the applicant should discuss how receiving funding from the Account will make a significant difference in the implementation of the water activity (i.e., how will receiving funding enable the water activity to move forward or the inability obtaining funding elsewhere).
- e. The amount of matching funds provided by the applicant via direct contributions, demonstrable in-kind contributions, and/or other sources demonstrates a significant & appropriate commitment to the project.

Tier 3: The Water Activity Addresses Other Issues of Statewide Value and Maximizes Benefits

- f. The water activity helps sustain agriculture & open space, or meets environmental or recreational needs.
- g. The water activity assists in the administration of compact-entitled waters or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.
- h. The water activity assists in the recovery of threatened and endangered wildlife species or Colorado State species of concern.
- i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.
- j. The water activity is complimentary to or assists in the implementation of other CWCB programs.

Water Supply Reserve Account – Application Form

Revised October 2013

Evaluation Criteria. Please attach additional pages as necessary.

Tier 1:

- b. This non-consumptive water education project will promote cooperation and collaboration between several organizations and the public. The rehabilitation of the McElmo Creek Flume will allow it to be the focal point of a new stop on the Trail of the Ancients Scenic Byway (TOTA). The Flume is located on land owned by Montezuma County who is partnering with CDOT, the owner of the land on which the new TOTA stop will be constructed. TOTA has received funding from the National Scenic Byways Program to fund the construction of this new stop. And the beneficiary of these partnerships will be the visiting public.

Although interpreting the water history in southwest Colorado is not specifically identified in the Southwest Basin Roundtable Public Outreach Action Plan of 2012, this new stop will have waysides and exhibits explaining the history of irrigation in the 19th and 20th centuries in Montezuma County. This can address the issues of drought (past and present) and climate change, which are goals in the Action Plan. Water history is not identified in the Colorado Basin Roundtable Education Action Plan of 2010, but this new TOTA stop will be visited by thousands of people traveling through the southwest region of the state.

Tier 2:

- e. A significant portion (88%) of the funding needed to rehabilitate the foundation of the McElmo Creek Flume has already been secured. Montezuma County has received a grant from the Colorado State Historical Fund for \$123,840 to repair the foundation. Additional funding will be provided by Montezuma County (\$2,500), the Ballantine Family Fund (\$4,000) and the Southwest Water Conservancy District (\$15,000). This clearly demonstrates a significant commitment to preserving the water history of Montezuma County, especially with the strong support from the Southwest Water Conservancy District.

This grant request is for the remaining \$19,780 needed to begin the repairs to the foundation of the McElmo Creek Flume. Without these repairs, the Flume will continue to deteriorate and it is only a matter of time before it will collapse. Then an important part of our local and state water history will be lost forever.

Tier 3:

- f. This water education project will help sustain recreational needs, and indirectly, agricultural efforts in Montezuma County. The County is capitalizing on the recreational demand in the local area by expanding access to public lands and improving its trail systems.

This new TOTA stop is part of a network of trails and there are several recreational opportunities within a ½ mile of the proposed new stop which can be easily accessed by foot or by bicycle. The interpretative site will link directly to two existing trail parks, and will be an essential focal point for an expanding trail system which will include a proposed trail that will extend 23 miles from the Town of Mancos to the Town of Cortez, and incorporates foot and bicycle access to the Mesa Verde National Park entrance.

The location of this new stop is essential for providing access from the Montezuma County Fairgrounds Trail Park located on the south side of Highway 160 to the Phil's World Trail Park on the north side as it has an access tunnel below Highway 160 providing users with an access option that avoids highway traffic,

Water Supply Reserve Account – Application Form

Revised October 2013

Also adjacent to Phil's World and the proposed project location is the Four Corners Rifle and Pistol Club Range where multiple competitive events take place annually including the Cowboy Action Shoots which draw many spectators and re-enactors. The proposed new interpretative stop/trail head is also located at the Montezuma County Fairgrounds where rodeos, home and garden shows, auto racing and many other activities take place throughout the year.

This water education program and the rehabilitation of the McElmo Creek Flume do not directly support agricultural development or the existing agriculture economy. However, the recent growth of agro-tourism in Montezuma County will be enhanced by visitors learning about the water history at the new stop on the Trail of the Ancients. This interest will be reinforced by information on local opportunities advertised at the Welcome Center, such as visits to local farms and ranches, guest ranch and farm stays, and the local farmers market and u-pick locations. This activity will directly support the local agricultural economy.

- i. This water education project is requesting only \$20,000 from the Southwest Basin Roundtable. This is a relatively small amount of money, and is only 12% of the total cost for the rehabilitation of the foundation of the McElmo Creek Flume.

For this modest amount of money, thousands of people will drive by and visit this new interpretive stop on a weekly basis. They will be commuting, travel to Mancos and Durango, or visiting the area. This location lies between Cortez and the entrance to Mesa Verde National Park, which attracted a half million visitors during 2013. This is a large audience who will be educated about Montezuma Valley water history for a small investment. This stop is a permanent addition to the Trail of the Ancients, and so this investment will continue to educate the public for decades to come.

- j. This water education program addresses the public education component in both the Southwest Basin Roundtable Public Outreach Action Plan of 2012 and the Colorado Basin Roundtable Education Action Plan of 2010. Although not specifically identified in either plan, this new stop on TOTA will reach a much larger audience than any existing water education program in southwestern Colorado. The Anasazi Heritage Center does interpret the history of the Dolores Water Project and the construction of McPhee Reservoir, which replaced the MVI irrigation system in the 1980s. This new stop on TOTA will fill in the 19th and 20th century gap between the story at the Heritage Center and the information on Ancestral Puebloan water use strategies at Mesa Verde and other archaeological sites in the area.

Water Supply Reserve Account – Application Form

Revised October 2013

Part IV. – Required Supporting Material

1. Water Rights, Availability, and Sustainability – This information is needed to assess the viability of the water project or activity. Please provide a description of the water supply source to be utilized, or the water body to be affected by, the water activity. This should include a description of applicable water rights, and water rights issues, and the name/location of water bodies affected by the water activity.

This project involves no consumptive use of water and will have no impact on water rights.

2. Please provide a brief narrative of any related studies or permitting issues.

Montezuma County will apply for a 404 permit from the Army Corps of Engineers.

Two architectural assessments were completed of the McElmo Creek Flume in 2012 and 2013. These projects generated the list of repairs needed and the engineering drawings needed to undertake the work. No further studies are needed.

3. Statement of Work, Detailed Budget, and Project Schedule

The statement of work will form the basis for the contract between the Applicant and the State of Colorado. In short, the Applicant is agreeing to undertake the work for the compensation outlined in the statement of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. **Please note that costs incurred prior to execution of a contract or purchase order are not subject to reimbursement.** All WSRA funds are disbursed on a reimbursement basis after review invoices and appropriate backup material.

Please provide a detailed statement of work using the template in Exhibit A. Additional sections or modifications may be included as necessary. Please define all acronyms and include page numbers.

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion 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.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must

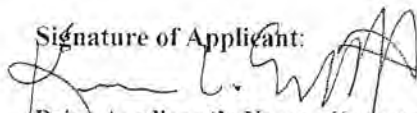
Water Supply Reserve Account – Application Form

Revised October 2013

include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCBC in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

The above statements are true to the best of my knowledge:

Signature of Applicant:



Print Applicant's Name: Keenan G. Ertel

Project Title: Chairman, Montezuma County Board of Commissioners

Return an electronic version (hardcopy may also be submitted) of this application to:

Craig Godbout – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
craig.godbout@state.co.us

Exhibit A
Statement of Work

WATER ACTIVITY NAME - Rehabilitate the McElmo Creek Flume

GRANT RECIPIENT – Montezuma County

FUNDING SOURCE - Southwestern Colorado Basin Roundtable

INTRODUCTION AND BACKGROUND

Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal)

This water education project will implement the repairs to the steel and concrete foundation of the McElmo Creek Flume. This is the last of the 104 flumes originally built on the Montezuma Valley Irrigation system in the 1890s. The rehabilitation of this National Register property is necessary so that it can be interpreted to the visiting public at a new formal pullout on the Trail of the Ancients Scenic Byway on Highway 160. Waysides at this new stop will tell the story of the 19th and 20th century water history in Montezuma County. Without the construction of this irrigation system which allowed ranching and farming to prosper, Montezuma County and the City of Cortez would not have developed. This water history is not interpreted for the public anywhere else in the County. This major highway across southern Colorado is traveled by hundreds of people daily, including the half million people who visit Mesa Verde National Park every year. The rehabilitation of the McElmo Creek Flume is an integral part of this new stop so that the actual Flume can be viewed and its function understood by the public.

OBJECTIVES

List the objectives of the project

The objective of this project is to rehabilitate the concrete and steel supports of the Flume. The Flume has been out of use since 1992 and has deteriorated rapidly due to water and wind events. The southern end of the Flume is currently unsupported since the bank of McElmo Creek has eroded from beneath it, and the concrete and steel are failing in other parts of the foundation. These repairs must be done to insure the survival of the Flume for the foreseeable future. It is the key piece to be interpreted in the new stop on the Trail of the Ancients.

TASKS

Provide a detailed description of each task using the following format

TASK 1 – Shoring and Masking to Protect McElmo Creek Flume

Description of Task

To avoid the cost and difficulty of removing and storing the wooden superstructure of the McElmo Creek Flume while conducting the foundation, steel and concrete repairs, shoring and masking is required to prevent damage to the fragile wooden flume elements.

Method/Procedure

Masking will consist of the use of tarps, sheet metal shields, and other means for protecting woodwork during the processes of removing decayed concrete, cleaning the steel of rust and scale, and applying primer. The use of movable, flexible barriers will permit temporary wrapping of wood elements where overspray might otherwise damage them, and will assist in the collection and removal of dust and debris produced by the cleaning process.

Deliverable

Shoring and wood member protection will be installed so that the wooden trough of the McElmo Creek Flume will not be damaged by the repairs to the concrete and steel foundation.

TASK 2 – Foundation Repair

Description of Task

The existing piers and diagonal braces at the south end of the Flume will be supported with a new foundation system.

Method/Procedure

The existing bedrock will be exposed and evaluated. If sound rock is found, a new spread footing will be cast on top of it. Should the bedrock be not stable, micropiles or helical piers will be used to support the new footing (subject to approval by the owner's representative).

A concrete column or wall will extend from the footing to the base of the piers. A concrete cap will be used to provide support to both the piers and diagonal braces. Although no drawings, photos or photographs existed showing the original appearance of the flume at this location, it is likely that the existing piers were founded directly on bedrock. Since the bedrock has been eroded by recent severe weather events, any repair will alter the appearance of the flume. The lack of support is of structural concern and foundation repairs are required to prevent catastrophic failure of the structure.

Erosion protection will also be provided at the base of the new footing. A rip-rap structure of a wire-enclosed rock gabion system is proposed as the erosion protection measure.

Deliverable

A new foundation and column or wall will be installed to support the southern end of the Flume. The new foundation will be resting on bedrock or micropiles to provide vertical support for the superstructure and prevent a catastrophic failure of this portion of the flume.

TASK 3 – Concrete Repair

Description of Task

Deteriorated, damaged, or defective concrete will be removed until sound material is reached. Care will be taken in the removal process to not damage the embedded steel. Final construction drawings and specifications will address the requirement for new materials to match the old in composition, design, color and texture.

Method/Procedure

All exposed steel surfaces will be thoroughly cleaned of all loose concrete, rust, and other contaminants. Cleaning and repairs will be done in accordance with the Secretary of the Interior's Standards with emphasis on using gentler methods (scraping and wire brushing) unless more abrasive cleaning is needed. For areas with minor corrosion, wire brushing or other hand methods should be suitable. For areas with more severe corrosion, abrasive cleaning methods may be necessary.

The steel to be cleaned under this section (Concrete Repair) will be encased in new concrete. For this reason, the steel needs to be cleaned throughout to minimize the risk of future corrosion. The effectiveness of the cleaning method will be assessed on site by the owner's representative.

Surfaces of sound concrete will be prepared to receive the repair material by removing thin layers of surface concrete. Similar methods to those described will be used unless abrasive cleaning is necessary.

A repair material compatible with the existing concrete substrate will be used to restore the original cross section. Conventional concrete composed of Portland cement, aggregates, and water is proposed for the repair.

Deliverable

The existing deteriorated concrete will be replaced with new in kind materials. Corrosion byproducts will be removed from all reinforcing steel to provide a long-term repair. New concrete will encase the reinforcing and restore the original cross sections of these members.

TASK 4 – Steel Corrosion Repair

Description of Task

As with cleaning and repair of the steel described in the Concrete Repair section above, the Secretary of the Interior's Standards recommendations regarding scraping, wire brushing, and using softer grit for cleaning will be used. The repairs addressed in this section apply to the two exposed steel beams, also called girders, supporting the wooden superstructure. If scraping, wire brushing, or soft grit does not adequately remove the corrosion, more abrasive cleaning may be necessary for this structural steel. The cleaning method used will not result in substantial damage of the steel surface. The effectiveness of the cleaning method will be assessed on site by the owner's representative.

Method/Procedure

All exposed steel surfaces will be thoroughly cleaned of rust and other contaminants by scraping, wire brushing, and using softer grit. If scraping, wire brushing, or soft grit does not adequately remove the corrosion, more abrasive cleaning may be necessary for this structural steel.

Cleaned steel will be protected with appropriate coating. A zinc rich primer, e.g. Sherwin-Williams Corothane 1 or equivalent is recommended. ANA did not observe any evidence of paint applied to the surface of the steel elements. The protective coatings are not clear: the available, zinc-rich paints are typically gray, green or reddish. Topcoats of paint (non zinc-rich) can be added to arrive at a final color similar to that in historic photographs.

Diagonal brace-girder connections at the northern frames will be fully exposed and evaluated by a structural engineer to determine the extent of corrosion damage. Because of the corrosion between the angle and the girder bottom flange, the existing angle needs to be removed to allow cleaning and protection of the corroded surfaces as described above. Severely damaged connection elements will be replaced as directed by the owner's representative with new material that will match the old in composition, design, color, and texture.

The girder bearing pockets, which is where the steel beams are supported in the concrete abutments, will be filled with a suitable sealant (to be approved by the owner's representative) to prevent moisture and water from collecting inside the pocket.

Extensive corrosion damage was observed at all of the plates that provide support for the wooden stringers. Because the level of corrosion has compromised their structural capacity, all plates will be replaced. The new plates should be protected with appropriate coating. The new material will match the old in composition, design, color, and texture. As an alternative, a self-weathering steel (COR-TEN) could be used for the replacement plates. When exposed to weather, this material forms a stable layer at the surface with a rust-like appearance that functions as a protective layer for the steel.

Deliverable

The cleaned or replaced steel supports will be protected from future corrosion as practical. The replaced and stabilized elements will insure the future stability of the Flume.

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion 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.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

BUDGET

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, \$/unit of material for construction, etc.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below. Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

The budget below for the repair work is based on published construction cost data, using the construction documents produced by the 2013 concrete and steel assessment project at the McElmo Creek Flume.

Total Costs				
	Labor	Other Direct Costs	Matching Funds (If Applicable)	Total Project Costs
Task 1 – Shoring & Masking of Flume				\$15,000
Task 2 –Foundation Repairs				\$39,000
Task 3 – Concrete Repairs				\$44,000

Task 4 – Steel Repairs				\$30,000
General Conditions, O&P				\$6,100
Owner’s representative				\$19,500
Contingency (7.5%)				\$11,500
Total Costs:				\$165,120

SCHEDULE

Provide a project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP). This dating method allows flexibility in the event of potential delays from the procurement process. Sample schedules are provided below. Please note that these schedules are examples and will need to be adapted to fit each individual application.

Task	Start Date	Finish Date
1 Shoring & Masking of Flume	Upon NTP	NTP + 10 days
2 Foundation Repairs	NTP + 10 days	NTP + 40 days
3 Concrete Repairs	NTP + 40 days	NTP + 70 days
4 Steel Repairs	NTP + 70 days	NTP + 100 days
5		
6		
7		

NTP = Notice to Proceed

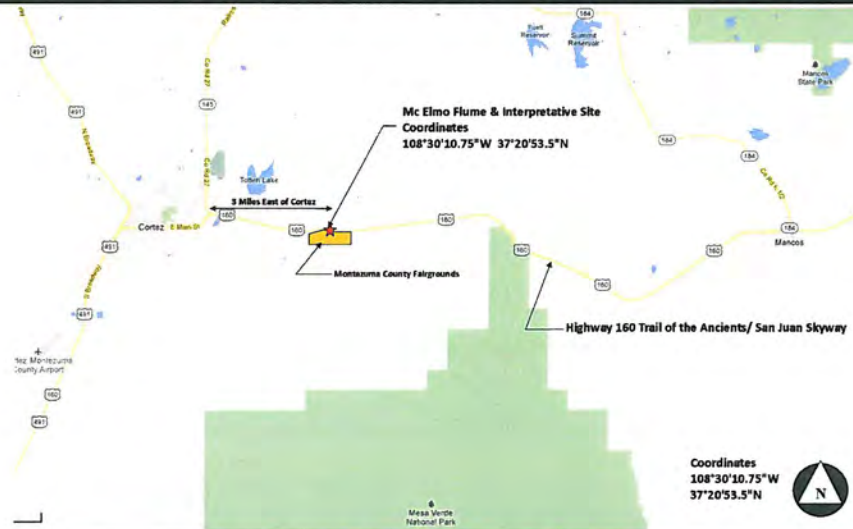
PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

EXHIBIT B

Rehabilitate the McElmo Creek Flume

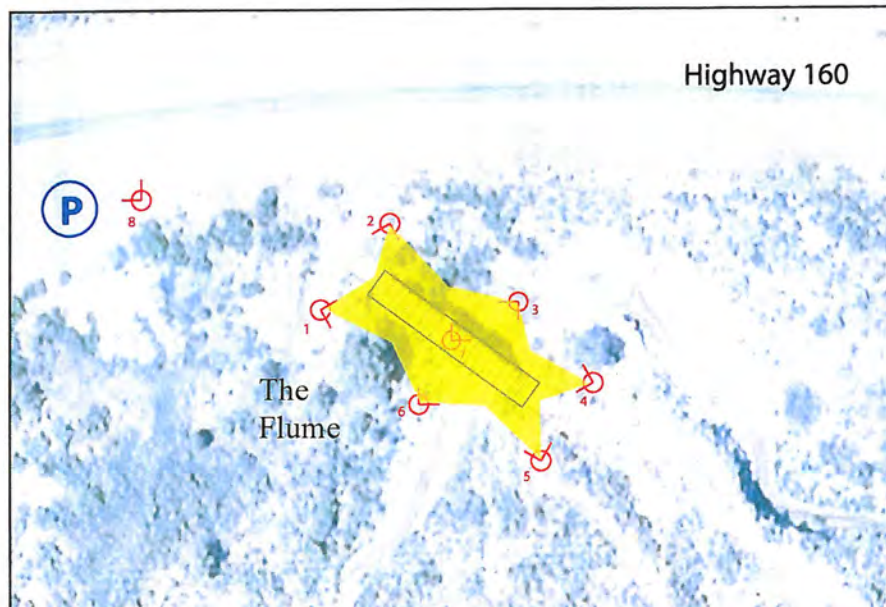
Trail of the Ancients/ San Juan Skyway Interpretative Site



Vicinity Map

Historic McElmo Flume Montezuma County Colorado

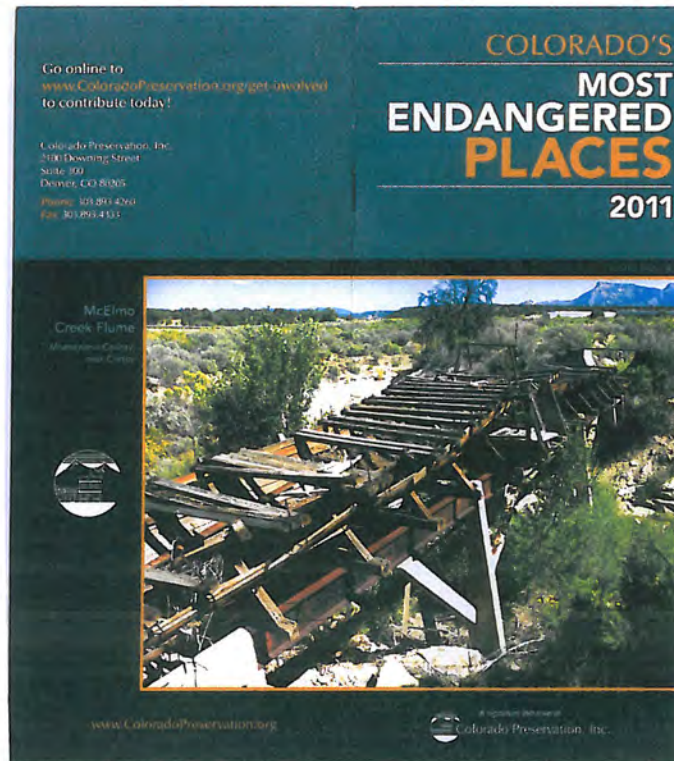
McElmo Flume Site Aerial



This map was produced for the LIDAR scanning of the Flume which was done in August, 2012.

EXHIBIT C

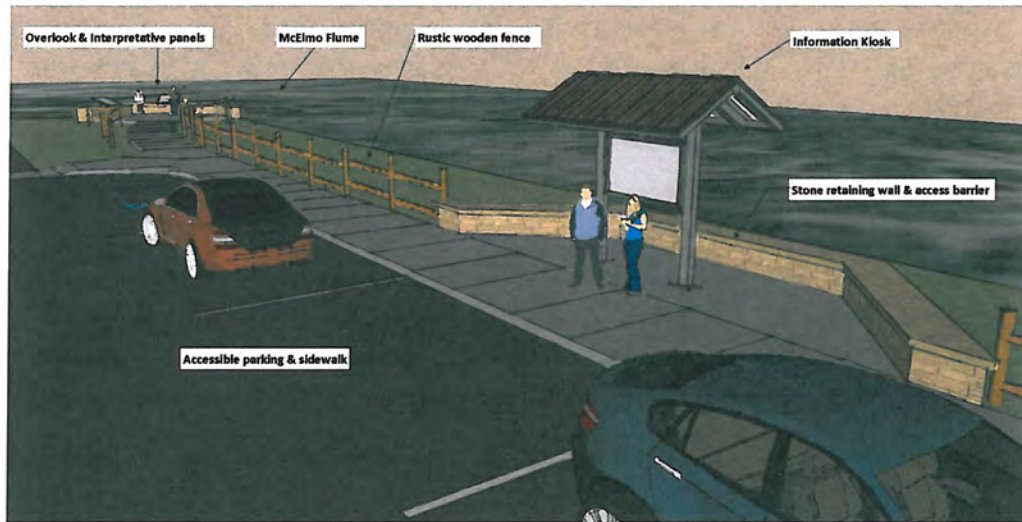
Rehabilitate the McElmo Creek Flume



Plans for the new TOTA Interpretive Site:

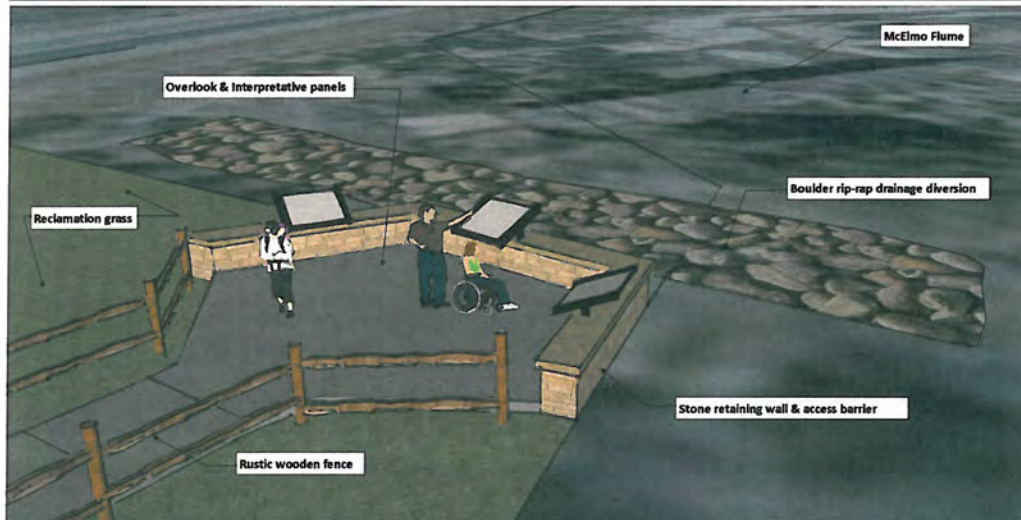


Trail of the Ancients/ San Juan Skyway Interpretative Site



Historic McElmo Flume
Montezuma County Colorado

Trail of the Ancients/ San Juan Skyway Interpretative Site



Historic McElmo Flume
Montezuma County Colorado

Photographs of the McElmo Creek Flume



McElmo Creek Flume ca. 2002 (Photo by John Porter)



McElmo Creek Flume in 2012 (Photo by Linda Towle)



Supports at southern end of McElmo Creek Flume where bank has eroded away
(Photo by Linda Towle)



Looking southeast across Highway 160 to informal CDOT pullout and McElmo Flume (on left), with Montezuma County Fairgrounds and North Escarpment of Mesa Verde National Park in background, 2010 (Photo by John Porter)