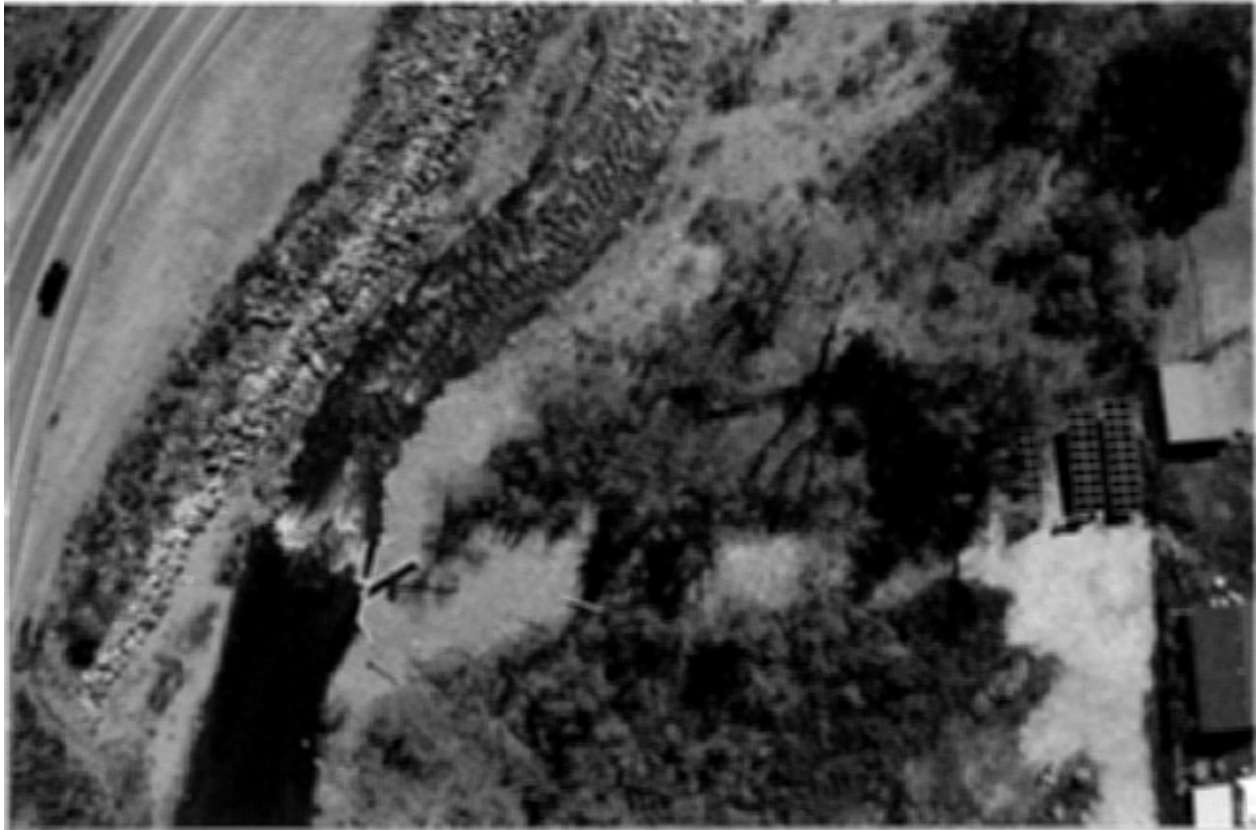


WaterSMART Grants: Small-Scale Water Efficiency Projects for Fiscal Year 2022

Bureau of Reclamation Funding Opportunity No.
R22AS00195

Dave Miller Mutual Ditch Company

Dave Miller Ditch Piping Project



New Solar Powered Pump Diversion-Dave Miller Ditch 2019

April 28, 2022

Applicant:
Dave Miller Mutual Ditch Company
1636 Apple Valley Road
Lyons, CO 80540

Project Manager:
Jeff Crane
600 Crystal Lane
Carbondale, CO 81623
jeff@craneassociates.net
(970) 261-5043

APR 28 '22 PM12:06

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Technical Proposal and Evaluation Criteria

Executive Summary

Date: 04/28/2022

*Applicant Name: Dave Miller Mutual Ditch Company
Lyons, Boulder, Colorado*

Project Manager:

Jeff Crane

Project Manager

(970) 261-5043

jeff@craneassociates.net

Applicant Category: A

Grant Funding Request: \$84,325

Non-Federal Matching Funds: \$177,869

Total Project Cost: \$262,194

Project Duration:

Estimated Project Start Date: 04/01/2023

Estimated Project Completion Date: 06/30/2023

Located on Federal Facility:

Unique Entity Identifier:

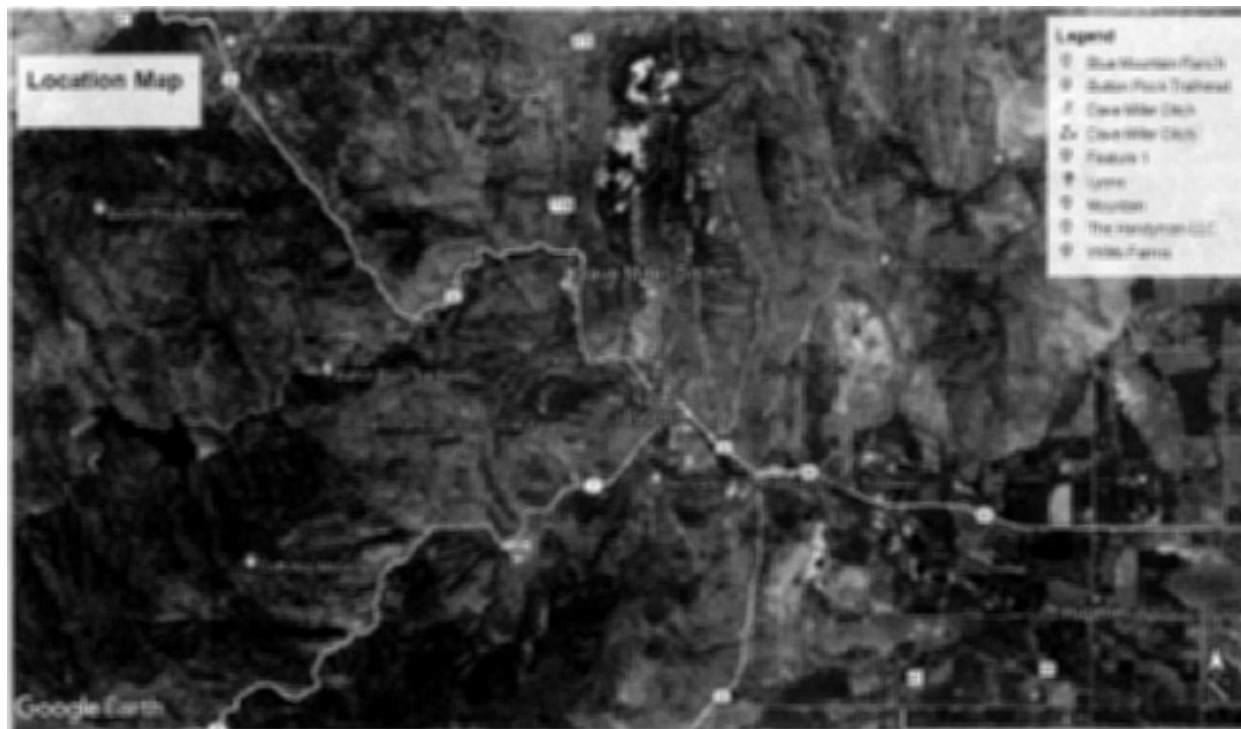
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Project Summary

The Dave Miller Mutual Ditch Company, located in Lyons Colorado, will realign and pipe the Dave Miller ditch with 5,000 feet of high-density polyethylene or polyvinyl chloride pipe, eliminating a leaky open ditch within competing right-of-way easements. The project will include isolation valves at 14 customer turnouts and air evacuation valves along the pipeline. The pipeline will be buried in a narrow trench away from other utility easements and will avoid existing trees and shrubs and minimize environmental impacts. The piping project will save water by reducing substantial seepage and evaporation losses and enable the shareholders to better manage their water supply. The project will irrigate 45 acres of agricultural land that has been in production since 1874. The project will also enable the 14 ditch shareholders to make future on-farm irrigation improvements through NRCS programs. The project meets the goals of the Colorado Water Plan (2015) and the St. Vrain Watershed Master Plan (2015).

Project Location

The Dave Miller Ditch is located along Apple Valley Road in Lyons, Colorado. The project, located in Boulder County, can be located at latitude 40-14-15.9N, longitude 105-17-18.6W within the North St. Vrain Creek watershed.



Technical Project Description

The Dave Miller ditch was first established in 1874 and has been used primarily for hay production. The open ditch ran alongside Apple Valley Road with substantial losses from infiltration, leakage and evaporation. This shovel-ready project proposes to realign the ditch outside of the road right-of-way and pipe it approximately 5,000 feet with PVC pipe to irrigate 45 acres of agriculture. The pipeline would tie to a newly installed, solar-powered, pump irrigation diversion station on North St. Vrain Creek and pressurize the system for downstream users. A 12" pipe has been sized to deliver the 1.43 cfs water right distributed among 14 shareholders along the ditch for irrigation. Individual water turnout valves, sediment and water drains, and air evacuation valves will be installed. The pipe will be buried in a 16" wide and 3' deep trench. The project will minimize environmental impacts by limiting the construction area to a narrow corridor with a 20' wide easement and avoiding trees and shrubs. The trench excavation will be revegetated with native grasses as recommended by the USFWS. The project does not impact any wetland areas and final construction plans are under review by Boulder County. Aside from a small sliver of land owned by Boulder County, the project is all on private property and all landowners have approved the realignment location.

Evaluation Criteria

E.1.1. Evaluation Criterion A – Project Benefits (35 points)

Benefits to the Category A Applicant's Water Delivery System: Describe the expected benefits to the Category A applicant's water delivery system.

- *This project will maximize water efficiency by saving up to 30% of losses associated with an open ditch as calculated by USDA-NRCS NEH Part 23, Chapter 2, Irrigation Water Requirements. The open ditch is perched between*

the road and a steep embankment and crosses a gully. Infiltration and leakage loses significant amounts of water. Transpiration and uptake by vegetation uses even more before agricultural application. Furthermore, climate change has increased evaporative losses. These losses will be minimized by the piping project and applied directly to agriculture.

- *This project will minimize maintenance costs and competition with utilities located in the road right-of-way. The open ditch requires substantial cleaning and repairs each season. The piping project will eliminate those annual maintenance expenses and the buried pipeline will minimize maintenance associated with a pipeline. Gas and domestic water utilities located in the roadway conflict with ditch operations. The realignment will eliminate all conflicts with other utilities.*
- Explain the significance of the anticipated water management benefits for the Category A applicant's water delivery system and customers.
 - *Customers typically run out of water before the end of the irrigation season. Maximizing efficiency and minimizing losses will increase the irrigation season for these irrigators.*
 - *A newly installed state-of-the-art metering system will improve data collection, assist the water commissioner with water rights administration and reduce conflict.*
 - *Downstream ditch users are not getting their water. It is lost to upstream users and ditch losses before it ever arrives. They need this project to deliver water and maximize efficiency otherwise conflicts will arise.*
 - *Customer water restrictions are currently not in place because water oftentimes cannot physically make it downstream, but a water user agreement will be negotiated by the existing shareholders once this pipeline is constructed and operational.*
 - *This project will result in a reduction of its carbon footprint by minimizing vegetation growth in the ditch, its subsequent removal and decomposition, and the energy associated with trash removal.*

Broader Benefits: Describe the broader benefits that are expected to occur as a result of the project.

- *This project is supported by the St Vrain & Left Hand Water Conservancy District, Left Hand Watershed Center, the South Platte Basin Roundtable, and the Town of Lyons because it provides for broader water supply reliability and resiliency at the sub-basin scale and acts as an example for other ditch companies.*
- *This project builds on the recently completed solar irrigation diversion pump station that allows for upstream fish migration and downstream safe recreational boating while providing for a full decree of irrigation water*

- *This project will prioritize individual landowners for on-farm irrigation efficiency projects through other NRCS/BOR program partnerships. Several water users have expressed interest in further maximizing efficiency with sprinkler systems and storage facilities.*
- *This is an area identified with agricultural water shortages in an over-appropriated watershed. Extreme drought conditions continue to persist throughout Colorado.*

E.1.2. Evaluation Criterion B – Planning Efforts Supporting the Project (30 points)

Plan Development:

The St Vrain & Left Hand Water Conservancy District has recently completed a stream management plan that specifically calls for ditch improvements within the District to improve water conservation and water efficiencies. A summary of the specific recommendations can be found under Initiative 4-Water Use and Management (Infrastructure) on page 75 of the plan and can be downloaded at: svlhwdc.org. The summary page is included in this proposal. The Dave Miller Mutual Ditch Company is an active member of the District and a letter of support from the District is also included in this proposal.

Support for the Project:

Improved ditch efficiencies are a priority documented in the stream management plan for the St. Vrain watershed. This project will implement that goal and addresses the need for improved infrastructure efficiencies. Infrastructure rehabilitation and upgrade projects are listed in Task 4 of the plan to advance water stewardship for multiple benefits supported by stakeholders within the watershed.

E.1.3. Evaluation Criterion C – Implementation and Results (20 Points)

- Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.

The implementation of this piping project is not expected to take more than 90 days. It is expected that all permits and funding will be in place by April 1, 2023 and construction will begin then. Contractors have already submitted estimates for construction including a materials list for pipe, appurtenances and erosion control. Major tasks include erosion control measures, clearing and grubbing in a narrow 20' wide alignment to minimize habitat loss; trenching and pipe installation; backfilling, and revegetation with native grasses. Project completion by June 30th.

Table 1. – Project Schedule

Project Construction Schedule		
Stages	Begin	End
Erosion Control Measures	4/3/2023	4/7/2023
Clearing & Grubbing	4/10/2023	4/21/2023

Trenching, Pipe Installation & Backfill	4/17/2023	5/26/2023
Revegetation	5/15/2023	6/9/2023
Final permitting inspections	6/16/2023	6/16/2023

- Describe any permits that will be required, along with the process for obtaining such permits.

Boulder County has issued conditional approval of the project contingent upon an approved grading plan, a floodplain development permit, a stormwater quality permit, a revegetation plan and consultation with the US Fish & Wildlife Service for Preble’s Jumping Mouse habitat. The Dave Miller Ditch Company has already received a biological opinion from USFWS that includes a specific seeding mix for Preble’s habitat during the revegetation stage.

- Identify and describe any engineering or design work performed specifically in support of the proposed project.

Alliance Engineering and Surveying has been contracted to do the design and engineering of the project. Field surveying and preliminary plans have been completed including alignment and hydraulic analysis and has resulted in the conditional approval from Boulder County. Final plans are underway for approval of the grading, hydraulics, erosion control, floodplain development and revegetation. Plans are scheduled to be complete and approved by August 2022.

- Describe any new policies or administrative actions required to implement the project.

The Dave Miller Ditch Company must consult with the USFWS prior to construction to implement specific recommendations in the biological opinion.

- Describe the timeline for completion of environmental and cultural resource compliance. Was the timeline for completion of environmental and cultural resource compliance discussed with the local Reclamation office?

Environmental and cultural resource compliance has not yet been discussed with the local Reclamation office however, Boulder County staff has performed their own environmental and cultural survey and determined that no adverse impacts to historic or archaeological resources are anticipated from the proposed re-alignment.

E.1.4. Evaluation Criterion D – Nexus to Reclamation (5 points)

The Dave Miller ditch receives water from North St. Vrain Creek which is controlled by releases from the Ralph Price (Buttonrock) Reservoir and managed by the City of Longmont. The City of Longmont has received funding from the Bureau of Reclamation for that facility.

The Colorado-Big Thompson Project is a major Reclamation project and managed by the Northern Colorado Water Conservancy District. The St. Vrain Left Hand Water Conservancy District (SVLFWCD) has allotment contracts to receive C-BT water. The

Dave Miller ditch has an option to purchase water from the SVLHWCD and this project is designed to accept that additional water if the shareholders choose to purchase it.

E.1.5. Evaluation Criterion E – Presidential and Department of the Interior Priorities (10 points)

E.1.5.1. Sub-criterion No. E1. Climate Change

Please describe how the project will address climate change:

*In the coming decades, the changing climate is likely to **decrease water availability and agricultural yields in Colorado**, and further increase the risk of wildfires. The project supports resilience to climate change and strengthens water supply sustainability by minimizing evaporative losses due to a warming planet. Agricultural greenery adds CO₂ to the atmosphere when vegetation dies and decomposes, increasing total emissions. The reduction of vegetation growing and decomposing along open ditch banks will reduce CO₂ emissions.*

E.1.5.2. Sub-criterion No. E2. Disadvantaged or Underserved Communities

This project does not benefit any underserved communities

E.1.5.3. Sub-criterion No. E.3. Tribal Benefits

This project does not have any Tribal benefits.

Overlap or Duplication of Effort Statement

There is no overlap or duplication of efforts between the proposed project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel. The proposal submitted for consideration under this program does not in any way duplicate any proposal or project that has been or will be submitted for funding consideration to any other potential funding source.

Project Budget

Funding Plan and Letters of Funding Commitment

Grant funding from SWEP will be used to match grants already awarded from the Colorado Water Conservation Board (CWCB) and from both cash and in-kind contributions from the Dave Miller Mutual Ditch Company. The ditch company received two grant awards from two different programs at the CWCB. The first was for \$46,875 for design and engineering awarded in September 2021 from the Water Supply Reserve Fund and matched with \$28,125 cash from the ditch company. The second was for \$84,325 for 50% of the construction costs for the piping project from the Agricultural

Water Plan grant program and awarded in March 2022. This proposal requests \$84,325 from the SWEF program to match the CWCB Water Plan grant. The ditch company will contribute \$18,544 in-kind for construction in the form of clearing and grubbing the pipeline site.

Budget Proposal

Table 2. – Summary of Federal and Non-Federal Sources

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. Water Supply Reserve Fund - CWCB	\$46,875
2. Dave Miller Mutual Ditch Company - cash	\$28,125
3. Agricultural Water Plan grant - CWCB	\$84,325
4. *Dave Miller Mutual Ditch Company – in-kind	\$18,544
Non-Federal Subtotal	\$177,869
REQUESTED RECLAMATION FUNDING	\$84,325

Table 3. – Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$ 84,325
Costs to be paid by the applicant	\$ 46,669
Value of third-party contributions	\$ 131,200
TOTAL PROJECT COST	\$ 262,194

Table 4. – Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	\$/UNIT	Quantity		
Salaries and Wages				
No Employees				\$ -
Fringe Benefits				
No Employees				\$ -
Equipment				
No Equipment				\$ -
Supplies and Materials				
Pipe & appurtenances				\$ 105,360
Revegetation				\$ 9,290
Contractual/Construction				
Pipe installation	\$ 8	5,400	LF	\$ 43,200
Erosion control installation	\$ 10,800	\$ 1	LS	\$ 10,800
Third-Party In-Kind Contributions				
Clearing & grubbing in-kind	\$ 18,544	\$ 1	LS	\$ 18,544
Contributor B				
Other				
Engineering & Surveying				\$ 75,000
TOTAL DIRECT COSTS				\$ 262,194
Indirect Costs				
No Indirect Costs				\$ -
TOTAL ESTIMATED PROJECT COSTS				\$ 262,194

Budget Narrative

This project has previously been awarded funds from the Colorado Water Conservation Board for engineering and surveying. Those expenditures began on 10/25/21 with field surveying and preliminary engineering for Boulder County permitting. Final engineering is currently underway. To date \$8,002.50 has been expended from the \$75,000 budgeted. If this proposal is awarded the project will be shovel-ready by April 1, 2023.

There are no salaries, wages, fringe benefits, travel or equipment needs associated with this project. The officers of the ditch company are managing the project and have contracted engineering and surveying. The ditch company president is using his own tractor for clearing and grubbing as an in-kind donation to the project. Materials for this

project have been estimated from a piping company and is included in the appendix, and a bid from a piping contractor is also included. There are no indirect costs and environmental and regulatory compliance has been addressed by Boulder County. The permitting determination letter from Boulder County is included in this proposal.

Environmental and Cultural Resources Compliance

- Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

Every effort has been taken to minimize impacts. A small mini trackhoe with a 16" bucket will be used to install the 12" pipe below the surface. There will be minimal excavation and all cut material will go back in the trench as backfill. Most trees and shrubs will be avoided and the site will be immediately revegetated with native grasses. All work will be limited to a 20' wide easement. Access and staging will take place from an existing road on one of the shareholder's property at an existing barn area. Half of the 5,000 foot pipeline will be installed in the bottom of an existing ditch owned solely by the President of the Dave Miller Mutual Ditch Company (DMMDC) further minimizing impacts on the surrounding environment.

- Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

Yes. This project is located within known habitat of the Prebles Jumping Mouse. In 2019 the DMMDC received a grant to rebuild their diversion structure. During that time a biological opinion was developed by the USFWS and specific conservation measures were required for revegetation. Those conservation measures are included in the appendix and we have consulted with the USFWS again for this project. The same conservation measures are expected to be required which generally minimizes environmental impacts and implements a specific seed mix for revegetation.

- Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States"? If so, please describe and estimate any impacts the proposed project may have.
There are no wetlands or surface waters of the US involved in this project. State Water Resources engineer has further confirmed that conclusion and documentation is included in the appendix.
- When was the water delivery system constructed?
The original water delivery system was constructed in 1874.

- Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.
Yes. The ditch will be re-aligned, piped and individual 2" turnouts will be installed at each of the 14 shareholders property.
- Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.
There are no buildings, structures or features in the irrigation district listed or eligible for listing on the National Register of Historic Places. A cultural resources inventory was conducted by Boulder County and is included in the appendix.
- Are there any known archeological sites in the proposed project area?
There are no known archeological sites in the proposed project area.
- Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?
There will be no impact on low income or minority populations.
- Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on tribal lands?
There will be no impact to tribal lands
- Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?
The project will not contribute to the introduction, continued existence or spread of noxious weeds or non-native invasive species.

Required Permits or Approvals

A conditional approval has been issued by the Boulder County Board of County Commissioners dependent upon a final approval of a grading plan, a floodplain development permit, a stormwater quality permit (erosion control), a revegetation plan and a consultation with the USFWS for Preble's Mouse habitat. The final plans are currently being developed by Alliance Engineering and Surveying and will be submitted to Boulder County for review shortly.

Letters of Support

Letters of project support from the following entities are included in Appendix:

1. Left Hand Watershed Center
2. Town of Lyons
3. South Platte Basin Roundtable
4. St Vrain & Left Hand Water Conservancy District

Official Resolution

An official resolution is included in Appendix.

Conflict of Interest Disclosure

No actual or potential conflict of interest exists with any member of the Dave Miller Mutual Ditch Company.

Uniform Audit Reporting Statement

The Dave Miller Mutual Ditch Company was not required to submit a Single Audit report for the most recently closed fiscal year.

Certification Regarding Lobbying

The Dave Miller Mutual Ditch Company is not requesting more than \$100,000 and is not involved in any lobbying activities.

APPENDIX

Dave Miller Ditch Company, LLC

Official Resolution

4/1/22

The governing body, the officers of the Dave Miller Ditch Company, LLC [DMD], grants authority for Matthew B Rooney, as President of DMD, to have legal authority to enter into legally binding agreements for grants and loans. The vote occurred at the annual meeting on January 30th 2021.

The DMD shareholders voted on February 20th, 2021, to approve the funding and/or in-kind contributions to match the grants.

The DMD will work with the Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

On behalf of the DMD members, Matthew B Rooney, acting as president of the DMD, signs below.

A handwritten signature in black ink, appearing to read 'M. B. Rooney', with a large, sweeping flourish extending to the right.

Matthew B. Rooney
4/1/22



August 31, 2020

Re: Dave Miller Mutual Ditch Company Piping Project

Dear CWCB Board Members,

On behalf of Left Hand Watershed Center I am pleased to offer this letter of support for the Dave Miller Ditch Company's Piping Project. We have come to know the Ditch Company's vice president, Matt Rooney, working with him on a river restoration project that includes his property on the North St. Vrain. Matt Rooney has been an excellent partner on our project and I believe that he will be an effective and reliable leader on the Dave Miller Ditch project.

Left Hand Watershed Center works to protect and restore the watershed for people and the environment using a collaborative and science based approach. While historically we have focused our efforts solely in the Left Hand Watershed, we recently expanded our work to include the larger St. Vrain Basin. We would welcome the opportunity to work with and support the Dave Miller Ditch Company on this project and help the community recover from the 2013 flood.

I hope you agree that this proposal aligns with the Colorado Water Plan and that it could potentially serve as a foundation for similar efforts statewide. We give Matt Rooney and the Dave Miller Ditch Company our full support as they work to find resilient solutions that meet the goals of the Ditch Company and community.

Regards,

A handwritten signature in black ink, appearing to read "J. Olson", is positioned above the typed name.

Jessica J. Olson
Executive Director
Left Hand Watershed Center
6800 Nimbus Road, Longmont CO 80503 (office)
P.O. Box 1074, Niwot, CO 80544-1074 (mailing)
303.530.4200 (office) | 303.746.7937 (cell)
jolson@watershed.center | www.watershed.center

Colorado Water Conservation Board
Department of Natural Resources
1313 Sherman St., Rm. 718
Denver, CO 80203

RE: Water Plan Grant

Dear Members of the Board,

The Town of Lyons Board of Trustees would like to express our support for the Dave Miller Mutual Ditch Company's application to the Colorado Water Conservation Board's Water Plan Grant for their piping project. We believe this proposal aligns well with Colorado's Water Plan, and its scalability allows it to serve as a foundation for similar efforts statewide, making it a great candidate for funding.

In 2013, a 500-year flood event destroyed buildings, land, and infrastructure in the Lyons area. This was the worst recorded flood in the history of the town of Lyons; recovery has been a long journey that the Town and its residents grapple with still today. During the flood, the Dave Miller Ditch, which supplies water to fourteen shareholders in Apple Valley, was decimated, leaving only 20% of its length usable. The Dave Miller Mutual Ditch Company was awarded a DOLA grant for the reconstruction and repair of this ditch in 2018, which resulted in the construction of a solar array-powered electric pump to pump water into the piping system in 2019. In support, the Board of Trustees unanimously passed Resolution 2019-14, which allowed for an easement adjustment for this project that would have a lesser impact on Town land.

The Dave Miller Mutual Ditch Company's piping project has the goal of getting water to the shareholders in Apple Valley who lost access after the flood. In its current condition, the existing ditch has poor conveyance efficiency because it is earthen and laden with vegetation and other debris. If awarded, this grant would fund the installation of approximately 5,000 feet of the ditch with 12" pipe to service approximately 45 acres of agricultural use. This project would boost agricultural efficiency while maintaining fish and boat passage in the St. Vrain Creek for recreational users.

We believe that providing funding to aid in the implementation of the Dave Miller Mutual Ditch Company's piping project in the Apple Valley area is very important to the future of our town and our residents. We strongly encourage the Colorado Water Conservation Board to fund the Dave Miller Mutual Ditch Company's piping project through a Water Plan Grant.

Sincerely,

Nick Angelo, Mayor
Town of Lyons

DOUBLE GATEWAY
TO THE ROCKIES

TELEPHONE

303.823.6622

FACSIMILE

303.823.8257

432 5TH AVENUE • P.O. BOX 49
LYONS • COLORADO 80540

TOWNOFLYONS.COM

Colorado Water Conservation Board
Department of Natural Resources
1313 Sherman St., Rm. 718
Denver, CO 80203

RE: Water Plan Grant

Dear Members of the Board,

The Town of Lyons Board of Trustees would like to express our support for the Dave Miller Mutual Ditch Company's application to the Colorado Water Conservation Board's Water Plan Grant for their piping project. We believe this proposal aligns well with Colorado's Water Plan, and its scalability allows it to serve as a foundation for similar efforts statewide, making it a great candidate for funding.

In 2013, a 500-year flood event destroyed buildings, land, and infrastructure in the Lyons area. This was the worst recorded flood in the history of the town of Lyons; recovery has been a long journey that the Town and its residents grapple with still today. During the flood, the Dave Miller Ditch, which supplies water to fourteen shareholders in Apple Valley, was decimated, leaving only 20% of its length usable. The Dave Miller Mutual Ditch Company was awarded a DOLA grant for the reconstruction and repair of this ditch in 2018, which resulted in the construction of a solar array-powered electric pump to pump water into the piping system in 2019. In support, the Board of Trustees unanimously passed Resolution 2019-14, which allowed for an easement adjustment for this project that would have a lesser impact on Town land.

The Dave Miller Mutual Ditch Company's piping project has the goal of getting water to the shareholders in Apple Valley who lost access after the flood. In its current condition, the existing ditch has poor conveyance efficiency because it is earthen and laden with vegetation and other debris. If awarded, this grant would fund the installation of approximately 5,000 feet of the ditch with 12" pipe to service approximately 45 acres of agricultural use. This project would boost agricultural efficiency while maintaining fish and boat passage in the St. Vrain Creek for recreational users.

We believe that providing funding to aid in the implementation of the Dave Miller Mutual Ditch Company's piping project in the Apple Valley area is very important to the future of our town and our residents. We strongly encourage the Colorado Water Conservation Board to fund the Dave Miller Mutual Ditch Company's piping project through a Water Plan Grant.

Sincerely,

Nick Angelo, Mayor
Town of Lyons

DOUBLE GATEWAY
TO THE ROCKIES

TELEPHONE

303.823.6622

FACSIMILE

303.823.8257

432 5TH AVENUE • P.O. BOX 49
LYONS • COLORADO 80540

TOWNOFLYONS.COM

December 1, 2020

Chris Sturm
Stream Restoration Coordinator
Colorado Water Conservation Board
Chris.sturm@state.co.us
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Sturm,

On behalf of the South Platte Basin Roundtable, I am pleased to submit this letter of support for the Dave Miller Mutual Ditch Company's Piping Project. The Roundtable supports this project that will increase agricultural efficiency in an over-appropriated system, while maintaining fish and boat passage in St. North Vrain Creek along a popular reach for recreational users. The South Platte Basin Roundtable unanimously voted to support this application during the September 2020 meeting.

The Dave Miller Ditch was severely damaged in the 2013 flood. A new solar-powered pump station was constructed in 2019 to replace the destroyed irrigation diversion on North St. Vrain Creek upstream of Apple Valley Road in Lyons. The project was funded by the CDBG-DR program during flood recovery. The new diversion allows for fish passage and safe recreational boating. A solar array funds the electricity cost to pump water into the ditch. It is an innovative showcase for future irrigation diversion projects. However, the ditch itself was also damaged and currently cannot service most of its shareholders. The ditch is approximately one mile long but can only service the first 1,000 feet. The project proposes to pipe and re-align approximately 5,000 feet of the ditch with 12" pipe to service approximately 45 acres of agricultural use. The piping will conserve water by minimizing infiltrative and evaporative losses, reduce maintenance costs and maximize the 1.43 cfs water right for agricultural purposes. The ditch has been in use for hay production since the 1874.

This project supports the goals of the State Water Plan by conserving water and improving irrigation conveyance efficiency. The length, slope, substrate and presence of vegetation and other debris affects how much and how quickly water gets to the application system. The further from the source, combined with the presence of unmaintained vegetation or debris, and the type of ditch (earthen vs. concrete vs. pipe) means more water to seep and soak before it gets to the irrigated property. In this case that is 5,000 feet. The existing ditch is earthen and heavy with vegetation and debris. This piping project would improve irrigation conveyance efficiency by up to 30%.

Sincerely,



Garrett Varra
Chairman, South Platte Basin Roundtable



ST. VRAIN AND LEFT HAND WATER CONSERVANCY DISTRICT

9595 Nelson Road, Suite 203 • Longmont, CO 80501 • 303-772-4060 • www.svlhwcd.org

August 28, 2020

Dear CWCB Board Members,

On behalf of the St. Vrain and Left Hand Water Conservancy District, I am pleased to offer this letter of support for the Dave Miller Mutual Ditch Company's Piping Project. We believe this project will increase agricultural efficiency in an over-appropriated system, while maintaining fish and boat passage in St. Vrain Creek along a popular reach for recreational users.

Currently, the system is only capable of delivering water to the first 1,000 feet of ditch (20% of the total length). The proposed 5,000-foot section of pipe is the final component of flood repairs necessary to resume normal operations in the ditch system after the catastrophic 2013 rain event destroyed nearly all the in-stream infrastructure in the basin.

I trust you will agree this proposal aligns with Colorado's Water Plan and with its scalability can serve as a foundation for similar efforts statewide. For these reasons I believe this is an excellent project to fund with the limited resources available to CWCB.

Jason A. Roudebush, Water Resource Specialist

A handwritten signature in black ink, appearing to read "J. A. Roudebush". The signature is written in a cursive style with a large, looping initial "J".



Community Planning & Permitting (CPP)

Courthouse Annex - 2045 13th Street - Boulder, Colorado 80302 - (303) 441-3930 - Fax 303-441-4856

Mailing Address: Post Office Box 471 - Boulder, Colorado 80306 www.bouldercounty.org

Matt Jones

County Commissioner

Claire Levy

County Commissioner

Marta Loachamin

County Commissioner

3/31/2022

Jeff Crane
600 Crystal Lane
Carbondale, CO 81623

Matt Rooney
1636 Apple Valley Road
Lyons, CO 80540

Dear Applicant(s):

This letter certifies that in accordance with section 4-800 of the Boulder County Land Use Code, the Boulder County CPP Director has Approved with Conditions the site plan for the following, effective March 31, 2022.

Docket: SPR-21-0072 Dave Miller Ditch Re-Alignment

Request: Site Plan Review to re-align approximately 5,000 linear feet of the Dave Miller Ditch.

Location: 0 ST VRAIN DRIVE

Zoning: Rural Residential

Applicant: Jeff Crane

This is a Conditional Approval made by the CPP Director, and is not final until a 14-day referral period has transpired. During the next 14 days, the Board of County Commissioners (BOCC) may choose to call this docket up for a public hearing. If no hearing is required, this letter will serve as the final determination. Building, grading and access permits will be subject to any and all conditions of approval.

If the BOCC should decide to modify the CPP Director's approval, or determines that further review is necessary, a public hearing will be held. Upon completion of the public hearing and approval by the BOCC, if a building, grading or access permit has been applied for, it will continue in the process and permits may be issued subject to any and all conditions of approval.

In the event that you wish to appeal any conditions of the CPP Director's determination, you are entitled to appeal the determination to the BOCC. You must file an appeal for this purpose with the CPP Department in writing no later than 14 days after the date of this letter. If an appeal is requested, the BOCC will review the CPP Director's determination at a public meeting.

Please be aware that the attached Conditions of Approval become final if the docket is not called up by the BOCC at the end of the 14-day review period. There are no other administrative means to appeal. If you wish to resubmit information with regards to complying with any of the attached Conditions of Approval, and have this information reviewed for approval by staff prior to the end of the 14-day review period, your submissions must be received by the office no later than 10 days from the date of this letter.

Site Plan Review approval is valid for three years from the date of this letter although any changes in County regulations could affect the proposal prior to application for a building permit. In order to be issued a building permit, the project must comply with all policies and regulations in effect at the time of permit application.

A Building Permit cannot be issued for this project until the applicable conditions above have been met. Furthermore, a Certificate of Occupancy cannot be issued for this project until the applicable conditions above have been met. A SPR inspection will need to be scheduled with this department prior to the issuance of a Certificate of Occupancy. None of the conditions of approval will be waived or a Certificate of Occupancy issued for this project based upon the applicant's need to meet financial obligations (i.e., construction cost overruns or loan closing dates). Any future additions to the approved structure, regardless of size, will require SPR approval to amend this SPR.

The Public Notice sign must remain posted for 14 days after the date of this letter and then returned to the CPP Department in a timely manner after this date. Or, if your Site Plan Review application requires a public hearing, please return the sign after the final public hearing. We will begin processing a refund for the \$25 sign deposit when your sign is returned, and a check will be mailed to you within approximately 2 weeks.

Please carefully review the attached conditions of approval. Compliance with these conditions will be confirmed as is necessary throughout the process.

Sincerely,



Dana Sparks



September 20, 2021

Dana Sparks
Boulder County Land Use Department
Transmission via email: dsparks@bouldercounty.org

Re: Dave Miller Ditch Re-Alignment Project, Docket SPR-21-0072
Between Apple Valley Road & North Saint Vrain Creek
Sections 12 & 13, Township 1 North, Range 71 West, 6th P.M.
Water Division 1, Water District 5

Dear Ms. Sparks:

We have reviewed the above referenced referral for a Site Plan Review to re-align approximately 5,000 linear feet of the Dave Miller Ditch (WDID 0500513). The realignment is desired in order to move the ditch away from existing infrastructure. The ditch is proposed to be piped with a 10-inch PVC water line.

Based on the submitted materials, no wetlands will be disturbed as a result of this project and the pipeline will not cross North Saint Vrain Creek. However, construction will occur close to the creek at several points. The construction associated with the project could temporarily affect downstream diversion structures and the quantity or quality of water in the stream system. The District 5 Water Commissioner visited the site early last week, and did not identify any areas of concern regarding the pipework for the Dave Miller Ditch that is proposed to be placed along North Saint Vrain Creek.

Should you or the applicant have any questions regarding this matter, please feel free to contact me at this office.

Sincerely,

Sarah Brucker, P.E.
Water Resources Engineer

Cc: Shera Sumerford, Water Commissioner, Water District 5
Referral file no. 28867



July 9, 2019

Tim Katers
Colorado Department of Local Affairs
CDBG-DR Watershed & Planning Program Manager - Grant Specialist
1313 Sherman St., Room 323
Denver, CO 80203

Memo: WI 18-102 Dave Miller Mitigation Measures

Dear Mr. Katers,

The Dave Miller Mutual Ditch Company Board has reviewed the proposed mitigation measures required by USFWS. The Dave Miller Mutual Ditch Company agrees with these mitigation measures. We will adhere to the short-term and long-term compliance requirements of the proposed mitigation measures. Dave Miller Mutual Ditch Company plans to conduct or hire a contractor in order to comply with the required annual monitoring of the vegetation reestablishment after construction is completed. Dave Miller Mutual Ditch Company will provide the annual results of these reports to the State (DOLA) and the Service annually after each growing season for two years after construction is completed.

If you have any further questions please do not hesitate to contact me at (303)-818-7793 toddjlyons@yahoo.com

Sincerely,



Todd Jacobson
President
Dave Miller Mutual Ditch Company



United States Department of the Interior



FISH AND WILDLIFE SERVICE Colorado Ecological Services

IN REPLY REFER TO:
FWS/R6/ES CO

Front Range:
Post Office Box 25486
Mail Stop 65412
Denver, Colorado 80225-0486

Western Slope:
445 W. Gunnison Avenue
Suite 240
Grand Junction, Colorado 81501-5711

TAILS: 06E24000-2019-F-0516

July 23, 2019

Terrance Ware
CDBG-DR HUD CPD Specialist
1670 Broadway, 24th Floor
Denver, Colorado 80203

Dear Ms. Morey:

In accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*) and the Interagency Cooperative Regulations (50 CFR 402), this document transmits the U.S. Fish and Wildlife Service's (Service's) final biological opinion on impacts to the federally threatened Preble's meadow jumping mouse (*Zapus hudsonius preblei*) and its critical habitat from the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant-Disaster Recovery (CDBG-DR) Ditch Program authorization of the David Miller Mutual Ditch Company project to rebuild their water delivery intake structure on North St. Vrain Creek in Boulder County, Colorado through the Colorado Department of Local Affairs (DOLA).

AGEISS Inc., on behalf of DOLA and the for HUD's CDBG-DR program, initially requested informal consultation with the U.S. Fish and Wildlife Service (USFWS). We received DOLA's request on behalf of HUD for formal consultation on May 29, 2019. Per Federal regulations with regard to formal consultations, the Service consults directly with the Federal action agency, HUD in this case (50 CFR § 402.08 - Designation of non-Federal representative: A Federal agency may designate a non-Federal representative to conduct informal consultation... The ultimate responsibility for compliance with section 7 [of the ESA] remains with the Federal agency.) Thus, this biological opinion is addressed to HUD but is shared with DOLA.

The project would repair September 2013 flood damage to the upper length of the David Miller Mutual Ditch, along North St. Vrain Creek. The ditch suffered two primary areas of damage. The intake of the ditch was damaged in a way that prevented the flow of water from the river channel to the ditch. As a result, water supply was completely cutoff to the ditch. There was

significant sediment deposition on the floodplain bench and in the ditch channel preventing efficient water flow.



Figure 1. Map of project.

We base this biological opinion on the biological assessment prepared by AGEISS dated February 22, 2019, as well as any subsequent clarifying correspondence. The biological assessment addresses the proposed project's potential direct, indirect, and cumulative impacts to the Preble's meadow jumping mouse. Critical habitat for the species has not been designated for North Saint Vrain Creek. The Service concurs with your determination that the proposed project may affect, and is likely to adversely affect the Preble's meadow jumping mouse. The proposed project would have no effect on its designated critical habitat.

CONSULTATION HISTORY:

AGEISS Inc. contacted the Service's Colorado Ecological Services Field Office on February 22, 2019 requesting informal consultation for the David Miller Mutual Ditch, Boulder County, Colorado under the Community Development Block Grant-Disaster (CDBG-DR) Recovery Ditch Program.

The Colorado Department of Local Affairs had authorized AGEISS to initiate Section 7 consultation with the USFWS on their behalf.

The accompanying Biological Assessment concluded that providing CDBG-DR funding to the David Miller Mutual Ditch for this project, "...may affect, but is not likely to adversely affect..." the following federally-listed species or critical habitats occurring within the flood impacted project area:

- The federally threatened Preble's meadow jumping mouse;
- The federally threatened Ute-ladies'-tresses orchid; and
- The federally threatened Colorado butterfly plant.

On April 4, 2019, the Service initiated email exchanges with AGEISS to obtain project clarifications. This was followed by a telephone conversation between the Service and AGEISS on May 10, 2019 which included descriptions of conservation measures the David Miller Mutual Ditch Company could take to reduce adverse effects on Preble's mouse.

The Service responded to AGEISS in a letter dated May 6, 2019 concurring with their conclusions regarding the Ute-ladies'-tresses orchid and Colorado butterfly plant; however, did not concur regarding the Preble's mouse and suggested that formal consultation would need to be initiated due to the extent of the riparian and wetland habitat that would be impacted by the project.

On May 29, 2019, DOLA sent a letter to the Service requesting formal consultation over the Preble's mouse. The Service responded in an email the same day with recommended conservation measures. On June 12, 2019, DOLA sent a second letter to the Service requesting formal consultation over the Preble's mouse containing the recommended conservation measures; however, there were some questions about some specific aspects of the conservation measures which the Service pointed out to DOLA on the same date. Between June 12 and 21, 2019, a series of emails were exchanged among AGEISS, DOLA, and the Service regarding post-construction seeding methods and rates, and seed species mixes. AGEISS also suggesting the Service should offer specific site restoration recommendations for DOLA and the David Miller Mutual Ditch Company, which the Service answered.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION:

The David Miller Mutual Ditch project would install a solar array and pump system downstream from the existing headgate (Figure 1) to repair the damage caused by the 2013 floods. The solar pump diversion would be located over 300 feet east of the Apple Valley Bridge at an existing fish-friendly boulder drop structure, and water would be pumped from North St. Vrain Creek via underground pipe 250 feet to the first shareholder property and existing ditch channel. A pipeline to flush sediment would be constructed parallel to the creek east of the pump for 135 feet. The proposed solar array would be located about 220 feet southeast of the pump location, but less than 30 feet east of the existing ditch. The solar array would require an additional 12 feet of vegetation to be removed around the area. An access road from the main road exists along the Town of Lyons' property line and would need only minor maintenance (no fill would

be added). However, this existing access road would need to be extended by approximately 250 feet of 12-foot-wide surface to follow the new ditch supply line. A wetland delineation was recently conducted and determined that the project would temporarily impact 0.096 acres of wetland habitat (Figure 1). Temporary impacts would occur from the access road (1,595 square feet), pipeline installation (1,157 square feet), and the sediment flush pipe installation (1,430 square feet). All disturbed areas would be reseeded with native seed mix and willow whips may be planted around the inlet and outlet structures to help locally stabilize those areas. The David Miller Mutual Ditch Company has examined other possible locations for replacing the damaged ditch, as well as redesigning the access road out of the wetland area; however, no other suitable locations were found. Therefore, DOLA requested formal consultation with the Service for potential impacts to the Preble's mouse from the Dave Miller Mutual Ditch project.

Conservation Measures

Conservation measures are actions outlined in the project description that the project proponent will implement in order to reduce the environmental impacts of the action or promote the recovery of threatened and endangered species. The Service considers the beneficial effects of these conservation measures during the jeopardy and adverse modification analyses. Conservation measures are part of the proposed action and their implementation is required under the terms of this consultation.

- Design projects to avoid and/or minimize all temporary and permanent impacts to riparian and adjacent upland habitats.
- Install limits of work fencing (e.g., orange barrier netting or silt fencing), signage, or other visible markers to delineate access routes and the project area from habitats. Use this fencing to enforce no-entry zones.
- Restrict the temporary or permanent removal of vegetation to the footprint of the project area.
- To the maximum extent practicable, avoid or minimize disturbing (e.g., crushing, trampling) or removing (e.g., cutting, clearing) all existing live vegetation, such as willows, trees, shrubs, and grasses within 100 feet of the riparian corridor.
- Minimize the use of heavy machinery and use smaller equipment when possible.
- Follow best management practices (BMPs) to limit soil compaction, erosion, and sedimentation, and to prevent the spread of invasive weed species.
- Bury riprap if used.
- Conduct the work entirely during the Preble's mouse hibernation period (September through May) and during daylight hours.
- Remove waste (e.g. construction debris or flood debris clean-up) to minimize site disturbance and avoid attracting predators.
- Locate, designate, and use access routes, staging areas, and work areas within previously disturbed or modified non-habitat areas.
- Locate, store, stage, operate, and refuel all equipment more than 200 feet from all wetlands and riparian corridors in a designated safe location.
- Operate equipment from previously disturbed or modified roadbeds or road shoulders above the riparian habitats when and where possible.

- Upon completion of project, revegetate all disturbed areas with native vegetation.
- Contact the Service immediately at (303) 236-4773 if a Preble's meadow jumping mouse, Ute ladies'-tresses, Colorado butterfly plant, or any other threatened or endangered species is found alive, dead, injured, or hibernating within the project area.
- In the riparian vegetation areas where vehicles and heavy equipment will operate (such as the access road), vegetation will be clipped down to near ground level shortly before work begins to promote post-construction regeneration from the root structure.
- A removable geotextile cover will be applied to these areas and covered with certified weed-free straw and clean soil.
- Minimize impacts on the neighboring woody vegetation by pruning as needed the aerial portions of trees and shrubs that hang over the project area that would otherwise be injured during operations.
- Upon completion of the construction, the geotextile cover will be removed and the site prepared for reseeding appropriate to the local site's native species composition. Any upland site surface soils compacted by vehicular and heavy equipment traffic will be ripped in preparation for seeding.
- Temporary silt fencing will be applied as needed upon work commencement to minimize surface runoff into the creek.
- Use appropriate wildlife-friendly soil stabilization methods, such as fully biodegradable "jute" netting erosion-control blankets, for minimizing surface runoff in disturbed areas, plus other soil amendments and certified weed-free top cover will be applied after seeding.
- Use Service-reviewed seed mixes, and seeding methods and rates developed during consultation.
- Willow whips will be planted around the inlet and outlet structures to help locally stabilize those areas.
- Monitoring of the vegetation reestablishment will be conducted by the Dave Miller Mutual Ditch Company for two years and the resulting reports provided to the State (DOLA) and the Service annually after each growing season.
- Photo-points will be established in the project area to document vegetation establishment. The ditch company will discuss with the Service, and inform the State (DOLA), of potential additional restoration actions to take for areas lacking vegetation establishment should re-establishment become an issue.
- If work begins before September, a nesting bird survey would be conducted. If any nests are found, work would be delayed until the nest(s) is no longer occupied and the young are safe from disturbance in the project area.

ACTION AREA:

The action area is not only the immediate area involved in the action, but also includes all areas to be affected directly or indirectly by the Federal action (50 CFR § 402.02). The action area contains the most far-reaching potential effects of the Federal and non-Federal actions on the species being discussed. The action area is defined by measurable or detectable changes in land, air, and water or to other measurable factors that will result from the proposed action. In other words, the action area is not limited to the "footprint" of the action, but rather encompasses the

biotic, chemical, and physical impacts to the environment resulting directly or indirectly from the action.

We describe the action area as including not only the project area, which is defined by the limits of the project's disturbance, but also downstream reaches of the affected drainages for a distance of 3.0 miles. We include downstream reaches in order to evaluate the proposed project's potential secondary impacts from erosion, sedimentation, pollution, hydrologic changes, and fragmentation. We use 3.0 miles to conservatively define the action area's downstream limit along a drainage, based on the 2.3-mile (4.0-kilometer) maximum recorded dispersal distance for the Preble's meadow jumping mouse.

STATUS OF THE PREBLE'S MEADOW JUMPING MOUSE:

The Service added the Preble's meadow jumping mouse to the List of Endangered and Threatened Wildlife in 50 CFR 17.11 as a threatened species on May 13, 1998 (63 FR 26517). As discussed in more detail under the Environmental Baseline section, previous trapping surveys and habitat evaluations confirm that the species occupies the action area.

Taxonomy

The Preble's meadow jumping mouse is a member of the family Dipodidae (jumping mice) with four living genera, two of which, *Zapus* and *Napaeozapus*, are found in North America (Hall 1981). The three living species within the genus *Zapus* are *Z. hudsonius* (the meadow jumping mouse), *Z. princeps* (the western jumping mouse), and *Z. trinotatus* (the Pacific jumping mouse). Edward A. Preble (1899) first documented the meadow jumping mouse from Colorado. Krutzsch (1954) described the Preble's as a separate subspecies of meadow jumping mouse limited to Colorado and Wyoming. Taxonomic authorities recognize the Preble's subspecies of meadow jumping as 1 of 12 subspecies of meadow jumping mouse (Hafner *et al.* 1981).

A September 2013 publication in *Molecular Ecology* further evaluated the genetic relationship between jumping mice, including the Preble's (Malaney and Cook, 2013). This study broadly evaluated the entire *Zapus* genus, including all 12 subspecies of meadow jumping mice (*Z. hudsonius*) and confirmed that the Preble's is distinct from neighboring subspecies that were previously proposed to be taxonomically synonymized (*Z. h. campestris* and *Z. h. intermedius*) (Malaney and Cook, 2013, pp. 8, 10). However, the study concludes that Preble's is closely related to two meadow jumping mouse subspecies that are found in Alaska and Canada (*Z. h. tenellus* and *Z. h. alascensis*), which the study refers to as the "northern lineage" of meadow jumping mice (Malaney and Cook 2013, p. 8, 10).

Although the study suggests that the Preble's meadow jumping mouse is genetically similar to two subspecies of jumping mice found in Alaska and Canada, it does not propose to revise the formal taxonomy of Preble's or any of the other subspecies of jumping mice (Malaney and Cook 2013, p. 10). Specifically, the study concludes, "additional tests will be required before hypotheses of infraspecific taxonomic synonymy can be implemented... [and that] a revised taxonomy of the group is needed but is outside the context of this study" (Malaney and Cook, p. 10).