



2022 319 Application Form - General and Focus Watershed

*******REVISED 10/22/2021*******

General Information

Project Name	Dry Creek Restoration - Phase 3		
Sponsor Name	Trout Unlimited, Inc.		
Registered with the Secretary of State?	<input type="text" value="N"/>	Registered with SAM?	<input type="text" value="Y"/>
Duns #	051698132	Does your organization have liability insurance?	<input type="text" value="Y"/>
Primary Contact	Connor Parrish		
Title	Gallatin River Project Manager		
Address	321 E. Main Street, Suite 411		
City	Bozeman	State	<input type="text" value="MT"/> Zip Code 59715
Phone Number	406-223-9331		
Email Address	connor.parrish@tu.org		
Signature	Connor Parrish <small>Digitally signed by Connor Parrish DN: cn=Connor Parrish, o, ou, email=connor.parrish@tu.org, c=US Date: 2021.10.26 16:02:29 -06'00'</small>		
Signatory	Warren Colyer		
Title	Western Water and Habitat Project Co-Director		
Address	312 N. Higgins, Suite 200		
City	Missoula	State	<input type="text" value="MT"/> Zip Code 59801
Phone Number	406-540-2185		
Email Address	Warren.Colyer@tu.org		
Signature	Warren Colyer <small>Digitally signed by Warren Colyer DN: cn=Warren Colyer, o=Trout Unlimited, ou=Western Water & Habitat Program, email=warrencolyer@tu.org, c=US Date: 2021.10.29 10:35:04 -06'00'</small>		

Technical and Administrative Qualifications

Trout Unlimited's Bozeman based staff Connor Parrish and Pat Byorth will lead this project with support from private consulting partners Jeff Dunn and Briana Schultz. The project team has successfully implemented Phases 1 and 2 of the Dry Creek Restoration and completed two reports identifying restoration opportunities in Dry Creek, all of which were supported by the Montana Department of Environmental Quality. Connor Parrish has 10-years of experience working in the field of fisheries including 3.5 years managing aquatic restoration projects. Pat Byorth managed wild trout fisheries and aquatic restoration in southwestern Montana for 31 years and is TU's Montana Water Director. Jeff Dunn with WGM has 18 of experience designing and implementing aquatic restoration projects. Briana Schultz with Sundog Ecological has 15 years of experience with wetland delineation and revegetation.

Past Projects

Project Name	Grant or Contract Amount	Funding Entity (entity name/program, contact person, phone, email)	Completion Date
Dry Creek Restoration Phases 1 & 2	\$ 433,193.00	Montana Department of Environmental Quality, Eric Trum, (406) 444-0531, etrum@mt.gov	August 2021
Upper Deer Creek River Access Improvement Project	\$ 295,000.00	Gallatin River Task Force, Emily O'Conner, 406-548-8111, emily@gallatinrivertaskforce.org	October 2020 (Revegetation in May 2021)
Reese Creek Irrigation Infrastructure & In-stream Flow Project	\$ 412,000.00	Yellowstone National Park, Ann Rodman, 406-581-0910, ann_rodman@nps.gov	May 2020

Budget Summary: **Fields outlined in **black** on this page will auto-populate from other sections of the application form. Fields outlined in **red** on this page will not auto-populate. You must manually input the information for fields outlined in **red**.*

	319 Funding Request	Non-Federal Match	Federal Match	Other Funding	Total Cost
Education and Outreach Project	\$ 0	\$ 1,500	\$ 0	\$ 0	\$ 1,500
Administration	\$ 11,488	\$ 0	\$ 0	\$ 0	\$ 11,488

Project 1 Name	Dry Creek Restoration - Phase 3				
Project Planning & Oversight	\$ 0	\$ 36,000	\$ 0	\$ 0	\$ 36,000
Landowner Agreements, O & M	\$ 0	\$ 500	\$ 0	\$ 0	\$ 500
Project Implementation	\$ 103,400	\$ 35,200	\$ 0	\$ 0	\$ 138,600
Other Activities	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Project Effectiveness Monitoring	\$ 0	\$ 4,500	\$ 0	\$ 0	\$ 4,500
Total	\$ 103,400	\$ 76,200	\$ 0	\$ 0	\$ 179,600

Project 2 Name					
Project Planning & Oversight					\$ 0
Landowner Agreements, O & M					\$ 0
Project Implementation					\$ 0
Other Activities					\$ 0
Project Effectiveness Monitoring					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

Project 3 Name					
Project Planning & Oversight					\$ 0
Landowner Agreements, O & M					\$ 0
Project Implementation					\$ 0
Other Activities					\$ 0
Project Effectiveness Monitoring					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

Project 4 Name					
Project Planning & Oversight					\$ 0
Landowner Agreements, O & M					\$ 0
Project Implementation					\$ 0
Other Activities					\$ 0
Project Effectiveness Monitoring					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

Grand Total	\$ 114,888	\$ 77,700	\$ 0	\$ 0	\$ 192,588
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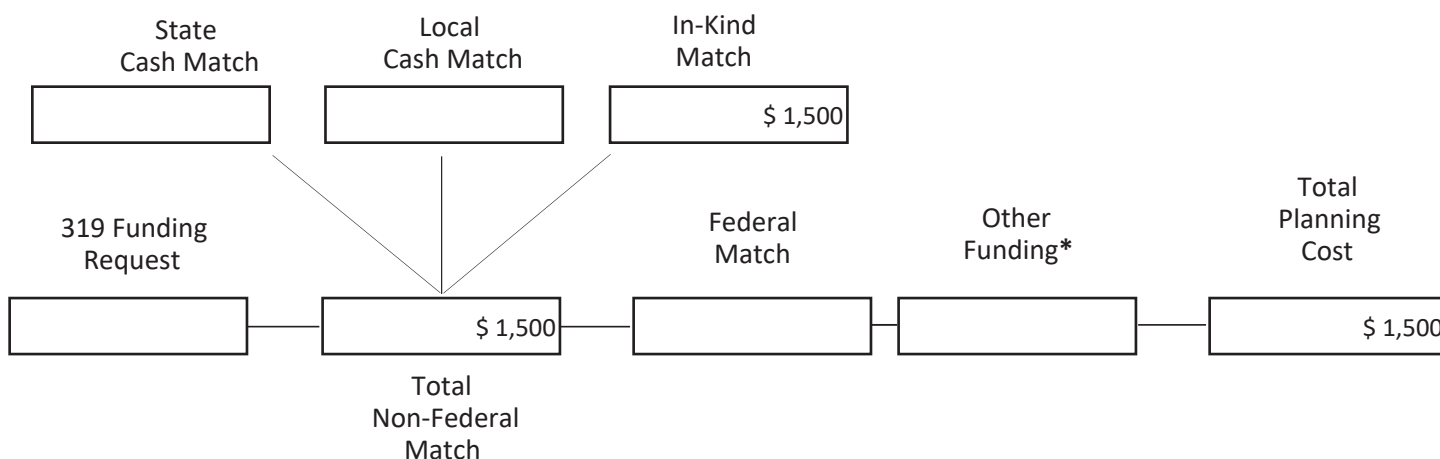
Education and Outreach

DEQ recognizes that developing good projects often requires a considerable amount of time and effort up front to build relationships and trust with individual landowners and stakeholder groups. To promote the development of future projects, DEQ is encouraging project sponsors to use up to \$5,000 in 319 funding for education and outreach to develop and capitalize on these critical relationships. DEQ encourages applicants to incorporate on-the-ground projects into education and outreach efforts through on-site demonstrations and project tours. 319 funding may not be used to pay for food and beverages, or for honorariums and gifts. Education and outreach activities funded by 319 or used as match for 319 funding must adhere to all of the eligibility requirements outlined in the annual Call for Applications document.

Education and Outreach Deliverables *(Identify the education and outreach activities you will engage in and methods you will use to document their completion.)*

Trout Unlimited continues to build relationships with landowners in the Dry Creek watershed and will utilize both completed and ongoing restoration efforts to engage and educate stakeholders. To highlight the current work, Trout Unlimited will host at least one tour of the Phase 3 project reach post-completion to showcase restoration actions. We will also tour Phases 1 and 2 of Dry Creek restoration so participants can see how the restoration activities improve stream habitat over time. TU will work with participating landowners to contact their neighbors and encourage them to attend the project tour. Trout Unlimited previously hosted two tours of the Phase 1 reach, including a tour for local landowners and stakeholders, as well as hosting the Montana Watershed Coordination Council's fall 2019 tour. These tours and the completed work have generated additional interest in the watershed, including a landowner who is now part of this project proposal.

In addition to project tours and stakeholder outreach, Trout Unlimited will continue outreach to the approximately 900 members of the Madison-Gallatin Chapter of Trout Unlimited (MG TU) by highlighting progress on the Phase 3 project at monthly and annual MG TU membership meetings. Trout Unlimited will also provide regular project updates through their Gallatin Home River Initiative social media accounts.



Match Source	Trout Unlimited	Secured	<input checked="" type="checkbox"/>
Match Source		Secured	<input type="checkbox"/>
Match Source		Secured	<input type="checkbox"/>
Match Source		Secured	<input type="checkbox"/>

**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Project Administration

Project administration includes book keeping, invoicing, interim/annual/final report preparation, office supplies, rent, communications, etc. Up to 10% of the total requested 319 funds for your entire application can be used to pay for project administration. However, like all other tasks, payment is by reimbursement for actual expenses incurred.

Project Administration Deliverables *(Include interim/mid-year, annual, and final reports, as well as invoicing and office necessities.)*

Trout Unlimited will oversee and be accountable for the completion of all project administration tasks. Trout Unlimited will prepare and submit billing statements, status reports, annual reports, and a final report. Trout Unlimited shall maintain regular contact as defined by DEQ project manager.

State Cash Match	Local Cash Match	In-Kind Match	319 Funding Request	Federal Match	Other Funding*	Total Planning Cost
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ 11,488	<input type="text"/>	<input type="text"/>	\$ 11,488
Total Non-Federal Match			\$ 0			

Match Source	Trout Unlimited	Secured	<input checked="" type="checkbox"/>
Match Source	Bonneville Environmental Foundation	Secured	<input checked="" type="checkbox"/>
Match Source		Secured	<input type="checkbox"/>
Match Source		Secured	<input type="checkbox"/>

**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Project Form

A separate Project Form (***including providing separate attachments***) must be submitted for each project included in your application. Use the following examples to help determine when to lump and when to split projects. For additional assistance, contact Mark Ockey at mockey@mt.gov or 406-465-0039.

Splitting Examples (fill out multiple Project Forms)

- Stream restoration work occurring on two separate streams, on parcels owned by two separate individuals
- Two projects with significantly different sets of project partners
- Two projects that address substantially different pollution sources (e.g., one project moves a corral off of a streambank, and another removes mine tailings, with both projects being on the same property)

Lumping Examples

- Contiguous stream restoration work spanning multiple land parcels
- 3 projects that address similar sources of pollution on a single land parcel (e.g., moving a corral off a stream, implementing a grazing management plan, and relocating a manure storage facility out of the floodplain, all on the same ranch)

Project 1 Name

Dry Creek Restoration - Phase 3

Select the watershed restoration plan (WRP) that your project will help implement.

Lower Gallatin - Greater Gallatin Watershed Council

☐ YLetter of support from author entity attached? *(If no, explain why below.)*

Waterbody name from 2020 List of Impaired Waters

Dry Creek

Probable causes of impairment to be addressed

Channel incision, sedimentation/siltation, alteration in stream-side vegetative cover

Waterbody name from 2020 List of Impaired Waters

n/a

Probable causes of impairment to be addressed

n/a

OR*

Name of healthy waterbody to be protected

n/a

Description of identified threat to non-impairment status

n/a

Name of healthy waterbody to be protected

n/a

Description of identified threat to non-impairment status

n/a

**While the majority of the available 319 project funding is dedicated to addressing known impairments, EPA is allowing states to use a limited amount of funding to protect non-impaired waters (healthy waters) from becoming impaired.*

Project 1 Location

Upstream End	Latitude	<input type="text" value="45.87078"/>	Longitude	<input type="text" value="-111.21206"/>
Downstream End	Latitude	<input type="text" value="45.86893"/>	Longitude	<input type="text" value="-111.22027"/>
Centerpoint	Latitude	<input type="text" value="45.86921"/>	Longitude	<input type="text" value="-111.21602"/>
Upstream End	Latitude	<input type="text" value="45.93721"/>	Longitude	<input type="text" value="-111.18340"/>
Downstream End	Latitude	<input type="text" value="45.93350"/>	Longitude	<input type="text" value="-111.18301"/>
Centerpoint	Latitude	<input type="text" value="45.93538"/>	Longitude	<input type="text" value="-111.18286"/>
Upstream End	Latitude	<input type="text"/>	Longitude	<input type="text"/>
Downstream End	Latitude	<input type="text"/>	Longitude	<input type="text"/>
Centerpoint	Latitude	<input type="text"/>	Longitude	<input type="text"/>

List the 12-digit Hydrologic Unit Code(s) (HUCs) in which the project area is located

100200081203 - Lower Dry Creek



Project site map(s) attached, showing the location of all proposed on-the-ground restoration activities?

Community Participation and Support

Landowner	Contributions to Project	Letter of Support Attached?
Tim Crawford	Access, willows for live stakes	<input checked="" type="checkbox"/>
Steve Carlson	Access, willows for live stakes	<input checked="" type="checkbox"/>
Kevin Thompson	Access, willows for live stakes	<input checked="" type="checkbox"/>
		<input type="checkbox"/>

Partner	Role	Letter of Support Attached?
Madison-Gallatin Chapter of Trout Unlimited, Sarah Clark	Volunteer opportunities and project support.	<input checked="" type="checkbox"/>
Gallatin Watershed Council, Holly Hill	Project support, assistance with education, outreach, and volunteer opportunities	<input checked="" type="checkbox"/>
SIMMS, Diane Bristol	Supporting Trout Unlimited's Gallatin Home Rivers Initiative through funding for staff time. Also, will coordinate volunteer opportunities for SIMMS staff.	<input checked="" type="checkbox"/>
Bonneville Environmental Foundation, Scott Mccaulou	\$25 in project funding (secured)	<input checked="" type="checkbox"/>

Other Community/Stakeholder Support

Warriors on Quite Waters is a non-profit that hosts post 9/11 combat veterans and teaches them how to transition from a life of service through fly fishing and the outdoors. One of their experiences is to have veterans help out with stream restoration projects. WQW has assisted with other Trout Unlimited projects in Montana and they are excited to contribute volunteer labor for this project. A letter of support from WQW is included in this application.

Project Description

Describe the nature and extent of the nonpoint source problem you are trying to address, the root causes of the problem, and your proposed solution.

Dry Creek is a right bank tributary to the East Gallatin River that drains the northern portion of the Gallatin valley from the Horseshoe Hills and the west slope of the Bridger mountains. Historically, Dry Creek was a sinuous stream with multi-threaded channels where healthy populations of beaver constructed dams that slowed powerful spring flows, captured sediment, and connected the stream to its floodplain. The elevated water table allowed for dense riparian forests to thrive. These riparian plants stabilized streambanks, shaded the stream channel, and filtered out fine sediment that occasionally flowed overland after summer thunderstorms. Currently, according to DEQ, Dry Creek is not fully supporting aquatic life and primary contact recreation beneficial uses due to historic and current land-use practices. Dry Creek was originally listed in 1992 as impaired for sediment due to channel realignment associated with transportation, reduced riparian vegetation, and streambank failure associated with agriculture. These actions have resulted in entrenched channel conditions and large eroding streambanks along much of Dry Creek, which provide a nearly-continuous source of fine sediment loading to the stream. 2009 and 2013 assessments of Dry Creek indicated that it exceeded the maximum level allowed for fine sediment. Additionally, field observations noted that fine sediment from eroding streambanks was accumulating in pools.

To address Dry Creek's sediment impairment, TMDLs were developed calling for a 53% reduction from sediment loading, including a 31% reduction in sediment loading from streambank erosion sources. To achieve this load reduction, the Lower Gallatin Watershed Restoration Plan (WRP) recommended a suite of restoration actions (Section 4.5 and Table 4.5 of the WRP). This project seeks to implement those recommendations by focusing on water quality improvement through streambank stabilization, restoration of entrenched channel conditions, and riparian buffer enhancement. Restoration treatments include lowering large eroding streambanks and creating floodplain benches to immediately reduce fine sediment contributions. The newly shaped stream banks will then be revegetated with native plants and stabilized using natural materials which will protect the banks from future erosion. Where possible, Beaver Dam Analogs (BDAs) and gravel augmentations will also be used to raise the elevation of the stream bed to encourage access to the floodplain during high water events. This will also raise the water table, which will stimulate the growth of the riparian area.

Similar restoration methods were successfully employed for Dry Creek Restoration Phases 1 and 2 which resulted in an estimated 92% reduction of fine sediment inputs. For Phase 3, twenty-three streambanks totaling approximately 2,032 ft of bankline would be treated over an approximately 5,064-foot project reach. Anticipating results similar to previous Dry Creek restoration efforts, the proposed project would eliminate an additional 139 tons of sediment. The landowners have also agreed to maintain a 50-foot riparian buffer along the project reach, which achieves the measurable milestone (outcome #36) in DEQ's 2017 Nonpoint Source Management Plan to reduce NPS pollution. Once complete, Dry Creek Phase 3 will immediately reduce fine sediment inputs and restore natural processes that contribute to a healthy stream.

Is this project a continuation of a previous project? If so, please explain the connection.

Trout Unlimited, with support from Montana DEQ has completed two phases of restoration in Dry Creek. Combined, Phase 1 and 2 resulted in an estimated sediment load reduction of 454 tons/year. To build upon the success of these projects, TU recently completed two assessments in the Dry Creek watershed with funding from DEQ. One assessment identified restoration opportunities at the basin scale and the second focused on a property called Pheasant Farms. This proposal for Dry Creek Phase 3 builds upon these assessments and the success of prior restoration efforts by continuing to address sediment contributions from large eroding streambanks. Once completed, Phase 3 will further contribute to the reduction of sediment in Dry Creek, getting us closer to established TMDL targets.

Water Quality Benefits and Sustainability

Explain why the project is an appropriate next step for making progress towards removing a pollutant/waterbody combination from Montana's 2020 Impaired Waters List or preventing a healthy waterbody from becoming impaired?

Dry Creek's TMDL targets include reducing sediment loads from eroding stream banks by a total of 31% or an estimated 984 tons/year. As stated in the previous answer, Phases 1 and 2 of Dry Creek Restoration resulted in an estimated sediment load reduction of 454 tons/year. The proposed Phase 3 of Dry Creek Restoration would result in an estimated reduction of an additional 139 tons of sediment per year, getting us closer to established TMDL targets. Additionally, the establishment of 50 ft riparian buffers and channel aggradation will ensure long term success of the project by promoting natural processes that reduce the likelihood of large scale erosion events.

Will your project address a major local source of nonpoint source pollution? Explain.

Yes, sediment loading from large streambanks along Dry Creek is a major nonpoint source of sediment pollution to Dry Creek and the East Gallatin River. Dry Creek's TMDL listing for sediment calls for reducing sediment loads from eroding banks by a total of 31% or an estimated 984 tons/year. The proposed 3rd phase of Dry Creek Restoration would treat eroding streambanks and restore natural processes that support stream health and improved water quality. Assuming Phase 3 of Dry Creek Restoration is as successful as Phases 1 and 2, this project would result in an estimated reduction of 139 tons of sediment per year.

Will the project create long-term, sustainable reductions in NPS pollution? Explain.

The project is designed to immediately address fine sediment issues, however the ultimate goal is long-term improvement of water quality and stream health. Reshaping large eroding streambanks, revegetation using native plants, and aggradation of the stream channel will promote natural processes that reduce the erosive power of Dry Creek. Instead of a narrow incised stream channel that focuses powerful spring flows at large eroding banks, Dry Creek will be able to access its newly constructed floodplain. This will allow Dry Creek's water to spread out and slow down as it encounters a robust riparian area of native woody plants. Once completed, Dry Creek Phase 3 will ensure longterm, sustainable reductions of fine sediment inputs for years to come. Finally, increasing floodplain width may increase groundwater storage which could improve late summer temperatures and flow further improving water quality.

Describe how the project will promote self-maintaining, natural, ecological and social processes that protect water quality?

Dry Creek's stream channel has incised to such an extent that it is unlikely it will ever be completely reconnected to its historic floodplain. There for the best path forward is to create an inset floodplain. Restoration treatments involve lowering large eroding streambanks and creating floodplain benches. This process mimics the natural development of an inset floodplain which would otherwise take decades and contribute thousands of tons of sediment to Dry Creek. The creation of this inset floodplain decreases the erosive power of the stream during periods of high flow. Instead of a raging stream confined within a narrow channel it will now be able to access its floodplain where water can spread out, slow down, and dissipate its energy. The construction of floodplain benches will also create conditions for native plants to reestablish a riparian plant community. Raising the local water table by aggrading the streambed will make water more available to plants year round. The combination of deeply rooted native plants and less powerful stream flows restores natural processes that allow rivers to self-maintain while avoiding large scale erosion events. The completed project will naturally improve Dry Creek's water quality and restore ecological function to these reaches of stream without ongoing maintenance.

Nonpoint Source Goals and Success Metrics

Nonpoint source pollution goal Action that will be taken to reach the goal Metrics used to measure success

Reduce or Eliminate fine sediment inputs from 23 large eroding streambanks that are currently contributing an estimated 150 tons of sediment per year to Dry Creek.	Physically lower 23 eroding streambanks and construct a new bankline and floodplain bench. Bankline construction will use native materials including cobbles, wetland sod, and bundles of willows. Newly constructed streambanks will be revegetated with native seed, willow livestakes, and containerized vegetation plantings.	Estimate sediment load reduction using a modified version of the Bank Erosion Hazard Index. Vegetation survival estimates. Establish photo monitoring points and collect before and after photos each year for the life of the grant.

Project Education and Outreach

Describe the educational benefits of your project. Will the project inspire additional nonpoint source pollution prevention work within the watershed?

Trout Unlimited seeks to build relationships with landowners in the Dry Creek watershed, as well as stakeholders throughout the Gallatin River watershed, and will utilize the completed and ongoing restoration efforts to engage stakeholders. To highlight the current work, Trout Unlimited will host at least one tour of the Phase 3 project reach post-completion to showcase restoration actions. A previous tour of Dry Creek Phase 1 generated additional interest in the watershed, including a landowner who is now part of this project proposal. TU plans to work with the landowners involved in Phase 3 to get their neighbors to attend the tour in hopes of inspiring future nonpoint source pollution prevention projects within the watershed.

Bigger Picture Benefits

NPS pollution projects often have benefits that go beyond simply cleaning up Montana's lakes and streams. Describe your project's benefits to each of the items below. If there are no associated benefits, type "NA" for "not applicable".

Environmental Justice (EJ)

Will the project improve or create public access to a healthy environment?

Reducing sediment loads will improve stream health within the project area as well as downstream into the East Gallatin River where fine sediment from eroding streambanks has negatively impacted the aquatic ecosystem. There are no public road crossings located within the project reach on Dry Creek, however there are road crossings both upstream and downstream that provide access opportunities for the angling public. Additionally, reestablishing a floodplain and a riparian forest with native plants will improve the aesthetic value of a healthy riverine ecosystem for people who enter the 5,064 ft project area. The East Gallatin River supports significant recreational opportunities enhanced by reducing sediment in Dry Creek.

Will the project have a public benefit in a county where 15% or more of the population lives below the poverty level? Counties include: Big Horn, Blaine, Chouteau, Deer Lodge, Garfield, Glacier, Golden Valley, Hill, Lake, Liberty, Lincoln, Meagher, Mineral, Musselshell, Pondera, Powell, Roosevelt, Rosebud, Sanders, Silver Bow, Toole and Wheatland.

No, the project is located within Gallatin County.

Will the project benefit historically underserved populations (e.g. minority populations, people with disabilities)?

The project will partner with Worries on Quite Waters which is a non-profit that hosts post 9/11 combat veterans and teaches them how to transition from a life of service through fly fishing and the outdoors. One of their experiences is to have veterans help out with stream restoration projects. WQW has assisted with other Trout Unlimited projects in Montana and they are excited to contribute volunteer labor for this project. A letter of support from WQW is included in this application.

Climate Change

Will the project improve climate change resilience for communities, native plants, wildlife or ecosystems?

Connecting streams to floodplains and expanding riparian areas have repeatedly been cited as some of the most effective ways to mitigate the effects of climate change on fish, plants, and wildlife. Restored stream and riparian ecosystems provide improved conditions for a diversity of native plant growth which in turn creates habitats for wildlife. The project will significantly improve habitat for fish species sensitive to changes in water quality and elevated water temperatures all the way to the East Gallatin River. Raising the local water table and establishing a moist riparian forest can help slow the spread of wildfire across the landscape and dampen effects of drought. If fire does burn through the watershed a healthy stream can recover more quickly than in its current degraded condition. This can benefit the local human community in addition to plants and wildlife. Reconnected floodplains can help store flood water that will return to the stream later in the season as cool hyporheic flow. The riparian area created by this project will provide shade to Dry Creek which will help keep stream temperatures cool during warm summer months.

Will the project restore or protect cool, late-season flow?

This project will provide Dry Creek with a new accessible floodplain and create conditions for the development of a robust riparian area. These actions will improve cool stream flows during warm summer months. When streams are able to access their floodplain during high flows water can be absorbed into the soil which helps recharge the local groundwater. This water moves very slowly through the soil and can return to the creek at later points during the season as cooler hyporheic flow that helps moderate warm summer stream temperatures and contributes to instream flow. Gravel augmentation and installation of Beaver Dam Analogs will also raise the local water table. Additionally, a robust riparian area will shade the stream which creates a cooling effect and reduces evaporation of surface water. The combination of these restoration outcomes will have a positive impact on the late season flows of Dry Creek and build resiliency in the East Gallatin River by delivering cleaner, colder water and a place of refuge for coldwater species.

Impacts to Downstream Communities

Will the project reduce pollutant loading above a permitted point source discharge in a way that could increase assimilative capacity in the the receiving water?

Dry Creek is a tributary to the East Gallatin River which receives permitted point source discharge from sources upstream of its confluence with Dry Creek (Bozeman, Belgrade, etc.). The East Gallatin joins the Gallatin River ~6 miles downstream downstream from its Dry Creek confluence. The East Gallatin and Gallatin River receives permitted point source discharge from a number of communities along its path (Big Sky, Four Corners, Manhattan, Logan, etc.). Improved water quality and streamflows from Dry Creek will in turn increase the assimilative capacity of the East Gallatin and Gallatin Rivers.

Will the project help protect a drinking water source?

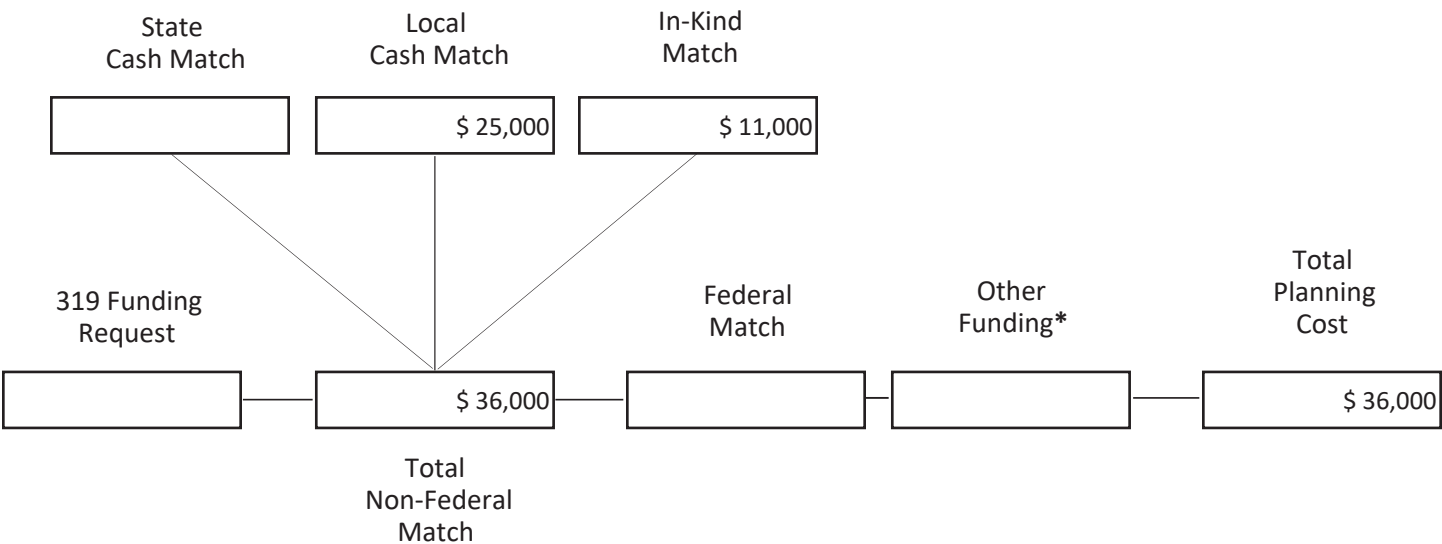
This restoration project will improve the overall water quality within the watershed. Increasing Dry Creek's floodplain connection will increase overland flows that can be adsorbed and stored in the groundwater. Locally, downstream property users have wells that access groundwater to provide drinking water which makes it conceivable that this project would benefit their water source. Helena, Montana is the next major city downstream that derives its drinking water from the Missouri River, to which Dry Creek is a headwater tributary.

Tasks and Budget

DEQ uses a standard template to develop scopes of work for 319 contracts. The tasks below match up with DEQ standard scope of work template. Some tasks might not be applicable to your project. Please leave the non-applicable tasks blank. If your project doesn't fit the task outline, use the task labeled "Other" to describe your project.

Task 1 - Project Planning Deliverables *(Include such things as completing project designs, conducting site evaluations, obtaining permits, organizing volunteers, conducting scoping meetings, etc. Identify specific deliverables that will be submitted.)*

Project planning will include general project management tasks including coordination with stakeholders, landowners and contractors. Community involvement through volunteer plantings and willow harvest will require the project manager to coordinate activities with multiple groups. The TU project manager will also be responsible for completing final design and permitting for the project. Sundog Ecological will also be completing a wetland delineation and WGM Group will conduct surveys which will inform final designs and permitting. Updates on the project manager's activities will be submitted through mid-year and annual reports to DEQ which is a deliverable under the administration task.



Match Source	Trout Unlimited	Secured	<input checked="" type="checkbox"/>
Match Source	Bonneville Environmental Foundation	Secured	<input checked="" type="checkbox"/>
Match Source		Secured	<input type="checkbox"/>
Match Source		Secured	<input type="checkbox"/>

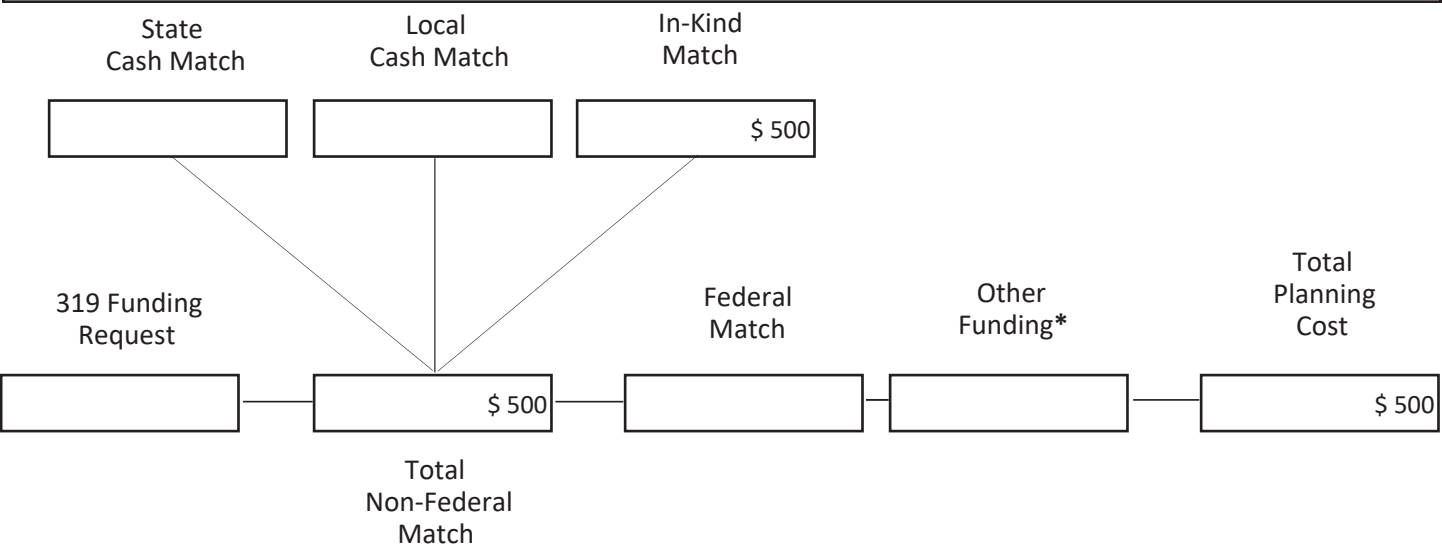
**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Landowner Agreements, Operation and Maintenance

This task only applies to projects involving on-the-ground activities. DEQ periodically evaluates the effectiveness of each on-the-ground project. To accomplish this, DEQ requires a process be in place to allow periodic access to the project site. The landowner agreement should also specify the roles of each project partner in the design, implementation and continued operation of on-the-ground pollution prevention practices. DEQ does not require the use of a specific landowner agreement template. In some situations, existing agreements between the project sponsor and the landowner may be sufficient.

Task 2 - Landowner Agreements, Operation and Maintenance Deliverables *(Include such things as landowner/ sponsor communication, and draft and final agreements.*

There are 3 landowners expected to participate in this project. A draft landowner agreement modeled on Phases 1 and 2 will be submitted to DEQ for each landowner for review prior to execution. After landowner and DEQ approval, the final landowner agreements will be executed and copies delivered to DEQ.



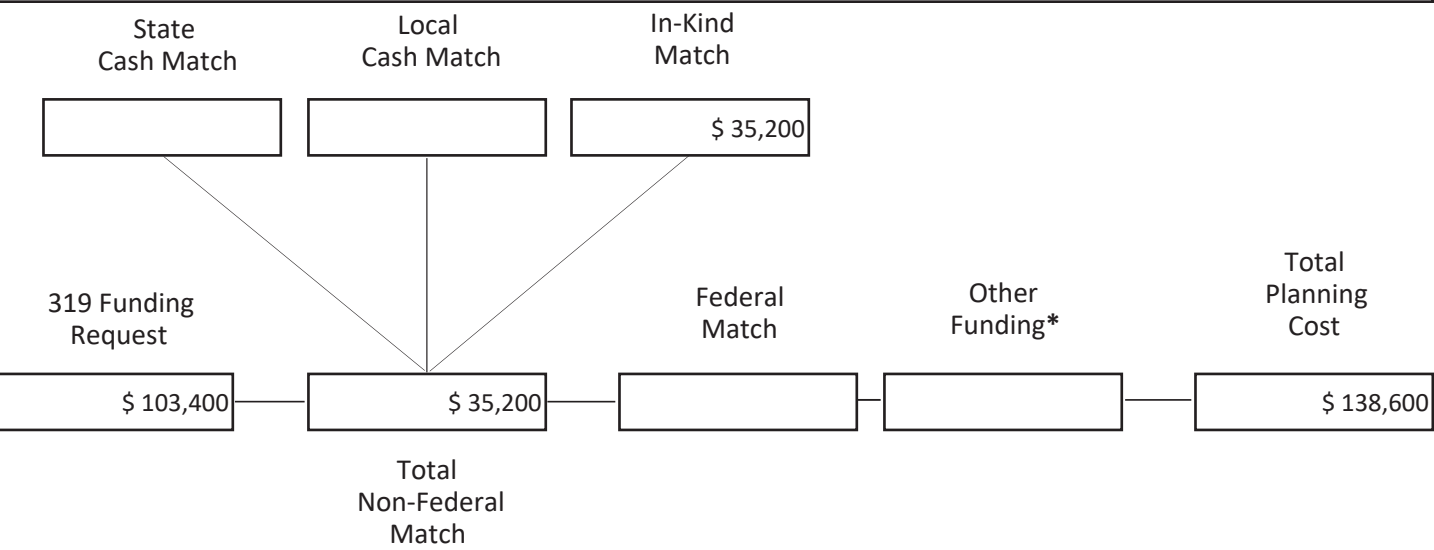
Match Source	Trout Unlimited	Secured	<input checked="" type="checkbox"/>
Match Source		Secured	<input type="checkbox"/>
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**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Project Implementation

Task 3 - Project Implementation Deliverables *(Include such things as construction oversight, implementation of on-the-ground restoration practices, preparation and submittal of as-built drawings, etc.)*

Project implementation will include design and construction contractor fees, along with construction oversight and revegetation, which will be supported by project partners, WGM Group and Sundog Ecological. To implement Phase 3 on-the-ground, vertical eroding streambanks will be restored to slopes suitable for woody riparian plantings and will include construction of a bioengineered inset floodplain bench at the toe of the treated banklines composed of native-sized gravel and cobble, along with sedge, brush and willow clump transplants. The opposite vegetated bankline will be graded as a point bar after the vegetated surface composed of sod, grasses and woody vegetation is removed and utilized in the construction of the new bankline. In addition, riffles will be enhanced with additional cobbles (referred to as "channel plugs" in the conceptual design) to effectively raise the streambed and enhance floodplain reconnection, while also jump-starting sediment transport processes that will scour out excess fine sediment that has accumulated on the streambed. Beaver Dam Analogs (BDAs) will be installed at select locations where they can be used to capture mobile sediment, aggrade the stream channel, raise the local water table, and reduce stream power. Twenty three streambanks totaling approximately 2,032 feet (0.38 miles) of bankline will be treated over an approximately 5,064-foot (0.96 miles) project reach. Project implementation deliverables will also include final designs including as-built drawings.



Match Source	Trout Unlimited	Secured	<input checked="" type="checkbox"/>
Match Source		Secured	<input type="checkbox"/>
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**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Other Activities

Use this task if the activities you are proposing are outside the scope of the typical design/implement/monitor process. Provide sufficient details to enable application reviewers to successfully compare the nonpoint source pollution reduction benefits of your project to those of other projects in the applicant pool.

Task 4 - Project Deliverables *(Include activities you will complete and the products you will submit to demonstrate completion.)*

State Cash Match	Local Cash Match	In-Kind Match		Federal Match	Other Funding*	Total Planning Cost
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319 Funding Request	<div style="position: relative; height: 100px;"> <div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; border-left: 1px solid black; border-right: 1px solid black;"></div> </div>		Total Non-Federal Match	Federal Match	Other Funding*	Total Planning Cost
<div style="border: 1px solid black; width: 100px; height: 25px;"></div>	<div style="border: 1px solid black; width: 100px; height: 25px; display: flex; align-items: center; justify-content: center;">\$ 0</div>			<div style="border: 1px solid black; width: 100px; height: 25px;"></div>	<div style="border: 1px solid black; width: 100px; height: 25px;"></div>	<div style="border: 1px solid black; width: 100px; height: 25px; display: flex; align-items: center; justify-content: center;">\$ 0</div>

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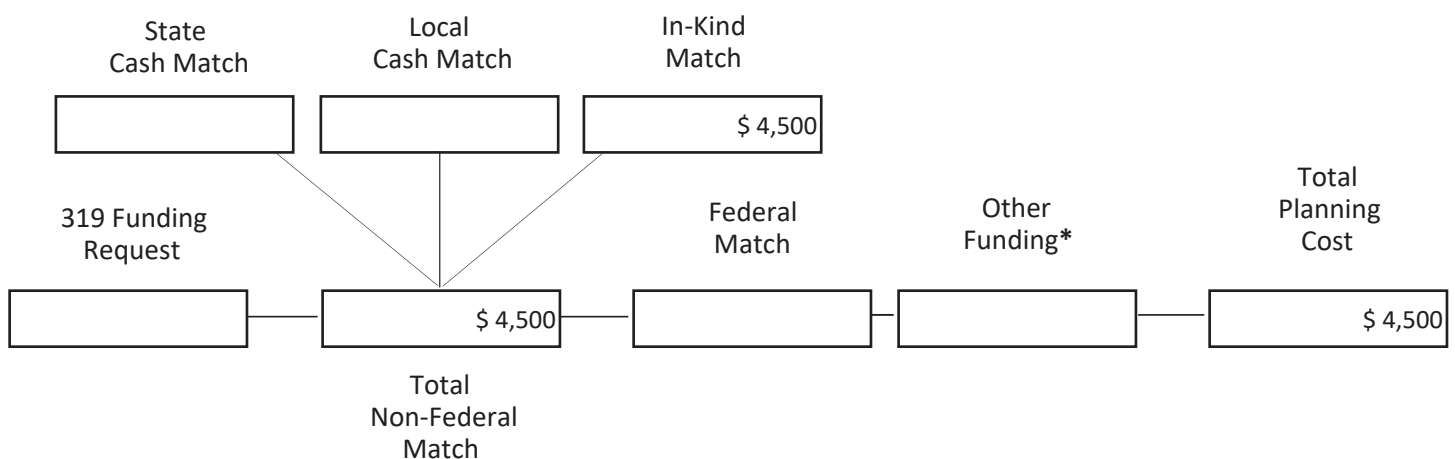
**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Project Effectiveness Monitoring

The short duration (1-3 years) and limited spatial extent (often just a few hundred yards) of most 319-funded projects frequently precludes the use of traditional water chemistry monitoring as a means of evaluating project effectiveness. Instead, DEQ encourages project sponsors to use simpler, more qualitative tools. Typically, this will include pre- and post-construction photo point monitoring, vegetation mortality measurements, and perhaps modeling to estimate pollution load reductions. Please contact one of the DEQ Nonpoint Source Program staff for guidance relative to your specific project.

Task 5 - Project Effectiveness Monitoring Deliverables *(Identify the specific tools and products you will use to evaluate and demonstrate the effectiveness of your project in reducing nonpoint source pollution.)*

Project effectiveness monitoring will include establishing photo points and capturing before/after photographs to document the progress of restoration efforts. Sediment load reduction estimates will be based on before and after bank erosion measurements using a modified version of the Bank Erosion Hazard Index. The number of plants installed and vegetation mortality rates will also be monitored. Project Effectiveness Monitoring Deliverables will include a report summarizing the monitoring results with before and after photos at predetermined photo points. For education and outreach we will record the number of volunteers and the hours of labor they contribute to the project. Additional, information on the number of landowners that attend the site tours will also be recorded.



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**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Additional Attachments

Attach additional items that could help reviewers better understand your project. Items could include site photos, design drawings, site evaluations, permits, etc. Please be conscious of reviewers' time, as they may not have time to read lengthy studies and reports. List all additional attachments below.



The attachment document contains representative photos of eroding streambanks within the proposed project area. There are also photo points from Dry Creek Phases I and II that show before and after photos of treated eroding streambanks. Finally, there are maps including a watershed map that identifies the location of the two project areas and then a map of the proposed individual project reaches.

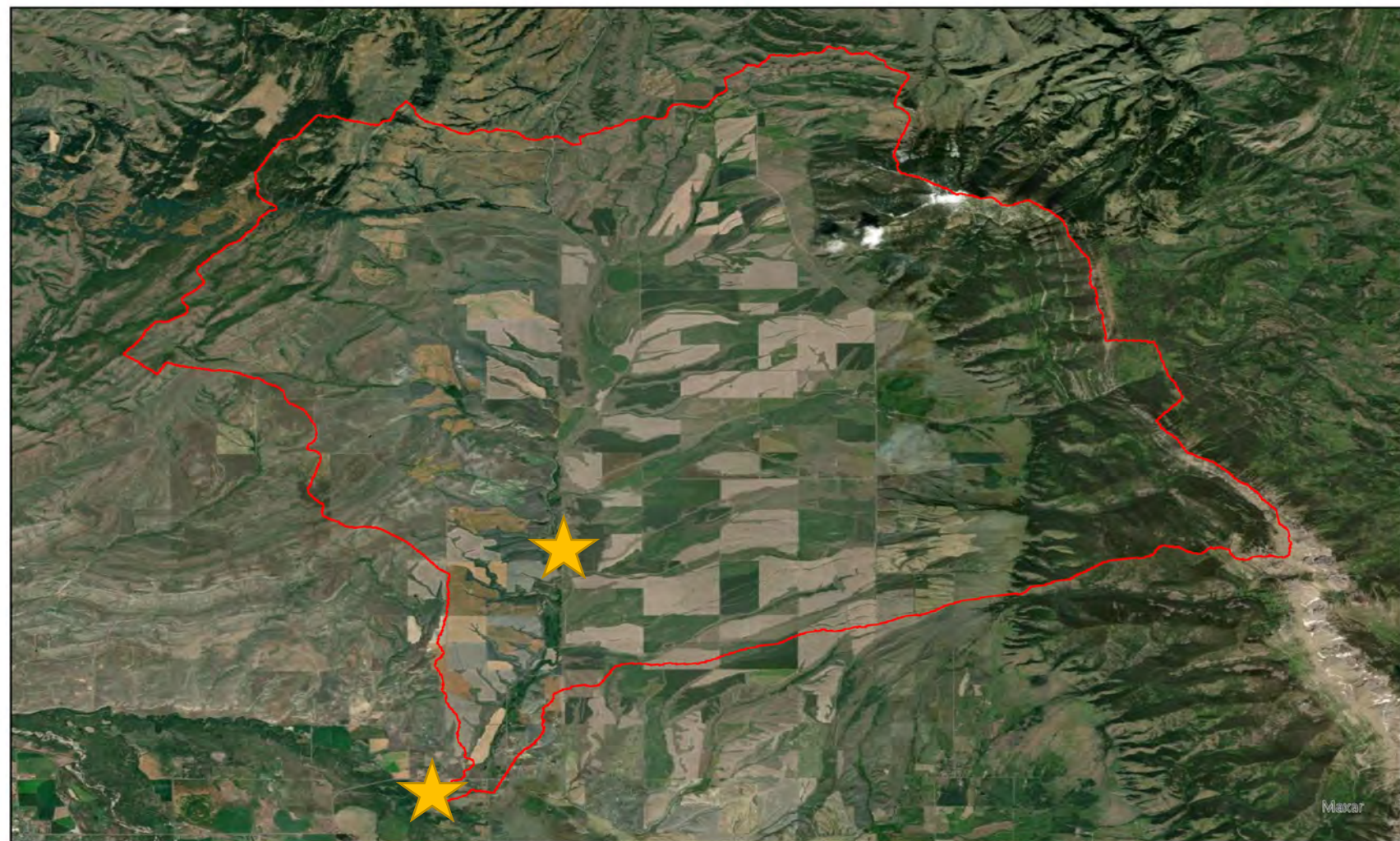


Letters of support from partners and landowners.



Additional information that could assist reviewers in evaluating the project's potential impact on NPS pollution.

Project Map



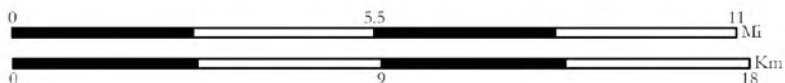
Watershed
Boundary



Proposed Phase
3 work sites



Dry Creek Watershed





Property Boundry

Dry Creek

Eroding Banks



Dry Creek Phase 3 Downstream

0 0.18 0.35 Mi

0 0.28 0.56 Km





Maxar, Microsoft

Property Boundry

Dry Creek

Eroding Banks



Dry Creek Phase 3 Upstream

0 0.05 0.1 Mi

0 0.07 0.15 Km



Letters Of Support



October 29, 2021

Watershed Protection Section
Montana Department of Environmental Quality
Attn: Mark Ockey
1520 E. Sixth Avenue
Helena, MT 59620

Dear Mr. Ockey,

The Gallatin Watershed Council welcomes the opportunity to provide our support for Trout Unlimited's (TU's) proposal to improve water quality in the Lower Gallatin Watershed with support from the 319 Grant Program. Having been a partner on the Dry Creek Restoration Project over the past several years, GWC has seen the commitment and dedication of the landowners and project stakeholders toward cooperatively improving water quality, restoring hydrologic connectivity and improving instream flows. The Phase III proposal will extend work both up and downstream of Dry Creek Phases I and II. It would treat twenty-three streambanks totaling approximately 2,032 feet of bankline over an approximately 5,064-foot project reach.

GWC developed the Watershed Restoration Plan for the Lower Gallatin Watershed, in conjunction with other community stakeholders and collaborating entities. Trout Unlimited's project goals are in alignment with the goals and direction of our watershed's WRP. GWC has supported riparian planting efforts for other phases of the Dry Creek Restoration Project by providing financial assistance and helping to coordinate volunteer planting days. We look forward to identifying ways to bring project support to this phase as well.

We value TU's experience and knowledge in watershed conservation and commend their leadership on this important project. The Dry Creek Project serves as a model for future cooperative projects in the area and we urge your full support.

Respectfully,

A handwritten signature in black ink that reads "Holly Hill".

Holly Hill
Executive Director
Gallatin Watershed Council

*Actively working to conserve, protect and restore
southwest Montana's coldwater fisheries and their watersheds since 1968.*



October 25, 2021

Mr. Mark Okey
Watershed Protection Section
Department of Environmental Quality
PO Box 200901
Helena, MT 59620-0901

Re: Dry Creek Restoration Project Phase III

Dear Mr. Oakey,

The Madison-Gallatin Chapter of Trout Unlimited (MGTU) is proud to be a partner in the ongoing efforts to restore Dry Creek - a critical headwater tributary feeding the East Gallatin River. In support of this effort, MGTU provided volunteers for willow harvest and planting in Phase I, and \$25,000 in financial contributions for the recently completed Phase II. MGTU pledges additional volunteer support for Phase III of the Dry Creek Restoration Project, which builds upon the successful completion of Phases I and II. Reducing sediment inputs from large eroding banks on Dry Creek has directly benefited the restored reach and a reduction in fine sediment on the streambed is clearly visible. In addition, this reduction in sediment loading will offer a stream environment that is healthier for recruitment and spawning. Sediment reduction loading also benefits the East Gallatin River, which is a cherished local fishery. Phase III aims to further reduce sediment inputs from the large eroding streambanks using native materials to restore riparian vegetation and reconnect the floodplain, which will further reduce sediment inputs to the stream, along with providing enhanced streamside shading. We support this project, and we hope you will too!

Thank you considering Trout Unlimited's grant application for Phase III of the Dry Creek Restoration Project.

Sincerely,

A handwritten signature in black ink that reads "Sarah Clark". The signature is written in a cursive, flowing style.

Sarah Clark, Board President
Madison-Gallatin Trout Unlimited

WARRIORS & QUIET WATERS FOUNDATION

October 22, 2021

Mr. Mark Oakey
Watershed Protection Section
Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

Subject: Trout Unlimited's Dry Creek Restoration Project Phase III Proposal

Mr. Oakey,

This past summer, Warriors & Quiet Waters Foundation conducted a Conservation Fishing Experience (FX) at Dry Creek in support of Phase II restoration efforts. The Conservation FX is an integral part of our programming to provide post-9/11 combat veterans a renewed connection to the WQW community, extend their community to include a connection with a like-minded Conservation Partner, educate them on key land / water / fishery / wildlife conservation issues, and provide them a sense of accomplishment through the completion of a meaningful conservation project. We are steadfast in our continued support of Trout Unlimited's proposal and understand the benefit it has for both the Gallatin River and its fisheries, as well as for participants in our Conservation FXs. It is a "win-win" for everyone involved, including the citizens of our great state.

The continued restoration efforts on Dry Creek will play off the efforts our organization, in partnership with Trout Unlimited, completed this past summer. These efforts consisted of cleaning out sediment and vegetation along a spring creek to establish spawning grounds for brown trout and cleaning up decades old trash piles from the stream beds.

Warriors & Quiet Waters Foundation wholeheartedly supports the funding of Phase III of this project, which will regrade eroding streambanks, revegetate areas with native plants, and install Beaver Dam Analogs. Our organization is also looking forward to collaborating on another Trout Unlimited project!

Thank you for your consideration.



Brian Gilman
Colonel, USMC (Ret.)
Chief Executive Officer

351 Evergreen Dr. Suite A | Bozeman, MT 59715
wqwf.org | info@wqwf.org | (406) 585-9793
501(c)(3) Nonprofit | EIN 20-8837637



October 24, 2021

Mr. Mark Oakey
Watershed Protection Section
Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

Re: Dry Creek Restoration Project Phase III

Dear Mr. Oakey,

SIMMS supports Trout Unlimited's proposal to continue their restoration efforts on Dry Creek, which is a primary tributary to the lower East Gallatin and is critical to the long-term resilience of the Gallatin River system. Phase III of the Dry Creek Restoration Project builds upon the successful completion of Phases I and II and aims to further reduce sediment inputs from large eroding streambanks using native materials to restore riparian vegetation and connection with the floodplain.



The leadership team at SIMMS has committed to a 3-year project with Trout Unlimited, Gallatin Home Rivers Initiative, wrapping up the first year at the end of 2021. We have made this commitment because we feel the Gallatin is a rare treasure for those who get to know it; but a history of intense use has left the Gallatin in a compromised condition. It will require hard work to restore the Gallatin to its full potential.

We believe that this project directly benefits the cold-water fisheries of this headwater stream in the Gallatin River watershed and offer our full support.

Thank you for considering this request for funding.

Sincerely,

Diane Bristol
Sr. Director, Employee & Community Engagement



October 27, 2021

Mr. Mark Ockey

Watershed Protection Section
Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

Re: East Gallatin Process Based Restoration Planning

Dear Mr. Ockey,

The Bonneville Environmental Fund (BEF) is proud to be a partner in the ongoing efforts to restore Dry Creek. In support of this effort, BEF has provided \$25,000 in financial contributions for restoration of Dry Creek. This funding will be used to implement restoration work that will restore stream function and improve water quality by reducing fine sediment inputs to Dry Creek.

BEF supports the Trout Unlimited's submission of the Dry Creek Phase III to DEQ's 319 grant program. This proposal would treat eroding streambanks and restore natural processes that support stream health and improved water quality. The project would treat twenty-three streambanks totaling approximately 2,032 feet of bankline over an approximately 5,064-foot project reach resulting in an estimated reduction of 139 tons of sediment per year.

Thank you for considering the Trout Unlimited's Dry Creek Phase III application.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott McCaulou", is positioned below the "Sincerely," text.

Scott McCaulou
Director, Water Stewardship Project Portfolio
Bonneville Environmental Foundation

MSRH, LLC
POST OFFICE BOX 1797
BOZEMAN, MONTANA 59771
DIRECT DIAL: 952.454.5690
EMAIL: SBC@SAGEHORNLLC.COM

5 November 2020

Water Protection Bureau
Attention: Mark Oakey
Dept. of Environmental Quality
PO Box 20091
Helena, MT 59620

Re: Dry Creek Restoration Project Phase III

On behalf of Miller and Sons Ranch Holdings, LLC, I want to offer our financial support to the ongoing restoration efforts that are being guided by Trout Unlimited in the Dry Creek watershed located in Gallatin County, Montana.

With Phase I and II completed, we would like to participate in Phase III. We consider the projects to be tremendously successful and a benefit to all stakeholders.

Thank you for consideration of the merits of our application submittal.

Sincerely,

Stephen Carlson
Member
Miller and Sons Ranch Holdings, LLC

November 11, 2020

Mr. Mark Oakey
Watershed Protection Section
Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

Re: Dry Creek Restoration Project Phase III

Dear Mr. Oakey,

As a landowner along the proposed Phase 3 reach of the Dry Creek Restoration Project, I want to express my support for Trout Unlimited's project. My property is located upstream of Phases I & II and I appreciate the work the downstream landowner has completed with assistance from the Montana Department of Environmental Quality. I can attest that the completed restoration work in Phases I and II has greatly improved conditions within Dry Creek and I would like to see this great work continue along my property and throughout the Dry Creek watershed.

Thank you for considering this grant request.

Sincerely,

A handwritten signature in black ink, appearing to be "K B L" followed by a long horizontal flourish.

Supplemental Information

Attachments

Photos of typical streambank erosion conditions:



Figure 1: Streambank erosion conditions lower proposed work site.



Figure 2: Streambank erosion conditions upper proposed worksite.

Examples of restored streambanks from Dry Creek Phases 1 & 2:

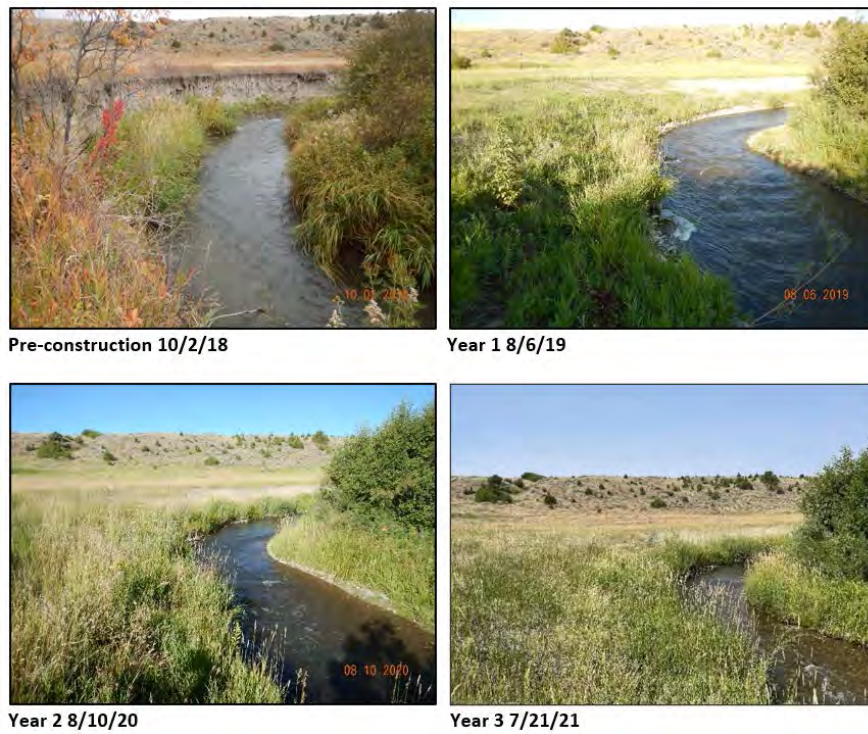


Figure 3: Streambank restoration example 2

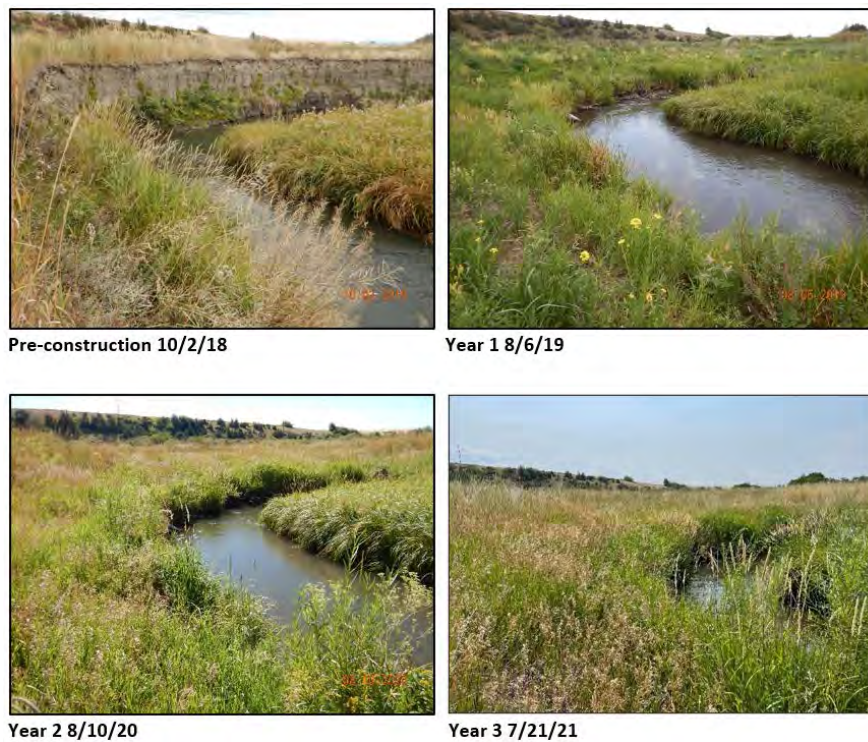


Figure 4: Streambank restoration example 2