Funding Opportunity BOR-DO-190F010
WaterSMART Cooperative Watershed Management Program, Phase I
Existing Watershed Group
Task C: Watershed Management Project Design

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Abbreviations

BMP	Best Management Practice
BSWC	Big Sky Watershed Corps Member (AmeriCorps)
CWMP	Cooperative Watershed Management Program
DEQ	Montana Department of Environmental Quality
FWP	Montana Fish, Wildlife and Parks
GID	Greenfields Irrigation District
HUC	Hydrologic Unit Catalog
MCTF	Muddy Creek Task Force
MSUEWQ	Montana State University Extension, Water Quality Division
NRCS	Natural Resources Conservation Service
SRWG	Sun River Watershed Group
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Loads
WRP	Watershed Restoration Plan

Referenced Reports

TMDL 2004, Montana Department of Environmental Quality (2004), TMDL, Water Quality Restoration Plan and Total Maximum Daily loads for the Sun River Planning Area

WRP 2013, Montana Department of Environmental Quality (2013), WRP, Sun River Watershed Restoration Plan

MSUEWQ 2019, Montana State University Extension Water Quality Division, 2019 DRAFT Nutrient Trends Report for the Sun River Watershed

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Executive summary

Date: November 12, 2019

Applicant: Sun River Watershed, Great Falls, Montana

Montana's Sun River watershed is east of the continental divide, south of Glacier National Park, and includes 2,200 square miles across three counties. The Sun River flows from the Bob Marshall Wilderness through forests and grasslands, farms, ranches, and small communities, to its confluence with the Missouri River at the city of Great Falls. Ranching and farming sustain the rural landscape. The river and its tributaries provide habitat for fish and wildlife, recreational opportunities, and water for farming and ranching of over 116,000 irrigated acres. In 1994, the Sun River Watershed Group (SRWG) formed, initially as a grass-roots and later a 501c3 nonprofit organization, to address water quality issues on Muddy Creek, a major tributary of the Sun River and at the time, one of the largest sources of nonpoint pollution in the state of Montana. SRWG implemented several projects on Muddy Creek that resulted in dramatic reduction in sediment inputs, and began to extend efforts to the rest of the watershed. The SRWG Watershed Restoration Plan (2013) and recent water quality trend analysis revealed some improvements to Muddy Creek but also a need for ongoing work towards TMDL (2004) objectives. The recent 10-year Strategic Plan funded by Reclamation identified Muddy Creek as a priority concern for SRWG and established tasks related to addressing the ongoing issues. This proposed project would leverage past restoration efforts, assessments, data, and other information and enable SRWG to prioritize next steps and move towards on-the-ground project implementation. Funds would be used to: 1) Support SRWG staff to coordinate this project, oversee contractors, and perform public outreach and education related to the project; 2) Contract a consultant team to review and update existing data and assessments and develop a multi-faceted strategy to address Muddy Creek issues in accordance with SRWG's Strategic Plan; 3) Identify and prioritize locations and techniques for on-the-ground restoration; 4) Develop initial design for priority project sites including cost estimates for construction; and 5) Identify environmental and cultural compliance requirements anticipated to be associated with construction and permitting. As part of SRWG's Strategic Plan development, we worked closely with landowners, state, federal and local agencies, other nonprofit groups, irrigation and conservation districts, and others to identify resource concerns, and this project represents the next step in addressing multiple top-priority concerns identified through this process. SRWG is confident this project can be completed within the budget and timeline specified in this proposal. None of the proposed activities are located on a Federal facility. SRWG has received Reclamation grants in the past, and with many dams and reservoirs across the watershed, SRWG has a close relationship with our local Reclamation office.

Background data

Muddy Creek is a tributary to the Sun River, located in Central Montana. Muddy Creek is 42 miles long and accumulates flow from a 314 square mile drainage area, largely from irrigation ditches and agricultural return flows. The town of Power, Montana receives water from the Power Teton County Water District from a surface water intake located in Muddy Creek. Muddy Creek is a major tributary of the Sun River, which in turn flows into the Missouri River. In addition to providing municipal and agricultural water supplies, Muddy Creek, the Sun River, and the Missouri River support recreation activities and provide habitat for fish and wildlife. Water quality issues in Muddy Creek are not only important to address due to Muddy Creek's values, but because of its contributions to and effects on the Sun River and the Missouri River.

Photos: 2019 Google Imagery. Muddy Creek flowing into the Sun River (top) and Sun River confluence with the Missouri River (bottom).

Before irrigation development in the 1930s, Muddy Creek flows ranged from 0 to 30 cfs in the spring and frequently went dry in the late summer and fall. By the 1960s irrigation had developed and flows were frequently exceeding 600 cfs with erosion rates hitting a high of 600,000 tons per year. The Muddy Creek Task Force (MCTF) was formed in the 1980s and enacted several studies and stream projects to address this issue. In the 1990s, the SRWG was borne out of the MCTF, which led to more studies and projects, as well as the development of long-term water quality and flow monitoring programs. SRWG contracted with Montana State University Extension Water Quality (MSUEWQ) in 2002 to study the flow and sediment patterns in Muddy Creek, and this relationship continues today. The most recent water quality trend analysis performed by MSUEWQ on Muddy Creek will be finalized in December 2019.

In addition to the data collection, trend analysis, and studies by MSUEWQ, in 2004 the Montana Department of Environmental Quality (DEQ) established TMDLs for the Sun River watershed, including Muddy Creek. In 2013, SRWG and DEQ finalized a Watershed Restoration Plan (WRP) that highlighted focus areas and described goals and associated tasks to achieve TMDL targets. The 2004 TMDL and 2013 WRP address water *quality* concerns, as well as water *quantity* issues that contribute to those water quality concerns, and identify Muddy Creek as a key area of concern within the greater Sun River watershed. Muddy Creek issues are largely traced to human causes including flow alterations and augmentation, fallow cropland (alteration/removal of vegetation), and influences of livestock grazing. Muddy Creek impairments include suspended solids, nutrients, thermal modification, salinity/TDS/sulfates, and pH.

Upper Muddy Creek is characterized by bare, eroded banks and other impacts from cattle grazing

Slumping, incised, eroding banks are characteristic of Lower Muddy Creek.

Over the past 25 years, projects on Muddy Creek have included grazing management/fencing cattle off stream and providing off-channel water sources, in-stream structures to reduce velocity and redirect thalweg, and revegetation/bank stabilization. Strategies also tried to reduce erosion by increasing water storage to allow for more flexible management. Many of these projects were beneficial and resulted in an immediate dramatic reduction in sediment inputs to Muddy Creek. However, recent trend analysis by MSUEWQ indicates that over the past 15 years, there has not been a significant change in concentrations of nitrate, total nitrogen, or phosphorus. The analysis further indicates that nitrogen concentrations are highest during base flows, which suggests a groundwater source.

In addition to causing poor water quality, erosion around Muddy Creek is creating issues for landowners who live along the creek. As banks erode, fences and infrastructure are frequently damaged and many more are at high risk for loss. Stream crossings have been replaced or need to be replaced as they cannot convey high seasonal flows and undersized crossings add to erosion by altering stream path and velocity through over-topping and flows going around the ends of the crossings.


Photos are of the same crossing at low water (left) and during the irrigation season (right). Flows over run and erode such crossings, as well as running around the ends over banks.

In 2017-19, SRWG created a 10-Year Strategic Plan through a WaterSMART Phase I grant from Reclamation. Through the development of this plan, SRWG interviewed landowners, agency personnel, land and water managers, and other stakeholders across the Sun River watershed to learn which resource concerns were of priority to each group. SRWG's mission, *to collaboratively protect and restore the resources of the Sun River watershed and its communities*, arose from this process, as did our strategic goals, described later in this document.

This proposed project will include completing analysis for prioritization of watershed management projects; identification of specific project locations; completing site-specific project design and engineering; developing project timelines, milestones, and cost estimates for construction; and researching site-specific permitting requirements, including environmental and cultural federal permitting requirements.

The products of this project will be used for SRWG to acquire funding to construct the designed projects and inform future projects, including long- and short-term solutions.

Project location

Muddy Creek is a tributary to the Sun River (HUC 10030104) in Central Montana near Great Falls. At 42 miles long, it drains approximately 314 square miles of drainage area straddling Teton and Cascade counties. The Greenfields Irrigation District (GID) irrigates approximately 50,000 acres within the Muddy Creek drainage. Land use surrounding Muddy Creek is primarily agricultural and is largely privately owned.

Muddy Creek's major tributaries include the Sun River Valley Ditch Canal, MC#1, Lower Tank Coulee, and Lower Spring Coulee with several smaller named and unnamed tributaries. Groundwater also provides significant flows to Muddy Creek via multiple seeps from irrigated fields and ponds. Muddy Creek flows typically peak in July and August due to return of ground water and surface water from irrigation activities. Stream bank failures and erosion are also accelerated in the event of seasonal thunderstorms.

Soils around Muddy Creek are mostly alluvial and silty clays, which are highly erosive and poorly drained, combined with excessive salt accumulations in the soil profile, which create impervious layers, impeding drainage. Historic reports claimed that on average eight acres of bottomland were lost to erosion annually. In some places, the stream channel has down-cut 30 feet or more. Although early SRWG and MCTF projects dramatically reduced the level of erosion, Muddy Creek and the Sun River are still on the Montana 303 (d) list.

According to State of Montana classifications, Muddy Creek should be supporting the following uses: drinking, culinary and food processing purposes after conventional treatment; bathing, swimming, and recreation; growth and propagation of fishes and associated aquatic life, waterfowl, and furbearers; and agricultural and industrial water supply. However, Muddy Creek is unable to meet its designated uses due to excessive sediment loads, fluctuating flows, nutrients, thermal modification, and fisheries habitat modification (TMDL 2004).

Vegetation in and around Muddy Creek is sparse due to the incised nature of the channel, and is generally lacking in overstory. A variety of native vegetation can be found in pockets of minimal disturbance, including willow, wild rose, buffalo berry, chokecherry, snowberry, and a variety of grasses.

Fish in Muddy Creek are mostly limited to brown trout and white fish. In the Sun River, brown trout are the most abundant game fish, with small populations of rainbow trout, white sucker, fathead chub, lake chub, longnose dace, brassy minnow, mountain sucker, and mottled sculpin. The Sun River as a fishery is limited to short segments and is severely impacted by high sediment loads from Muddy Creek.

Technical project description

Applicant Category

The SRWG is an existing watershed group that *works collaboratively to protect and restore the resources of the Sun River watershed and its communities*. SRWG was formed on 1994 out of the MCTF and began working on water quality issues in Muddy Creek. In 1996, SRWG became a 501(c)3 nonprofit, and soon after began expanding projects to benefit the greater Sun River watershed. SRWG works with two local irrigation districts, three counties' conservation districts, fish and wildlife agencies, private ditch companies, private industry, land owners, water and land managers, and federal, state, and local governments to identify, prioritize, and address resource concerns across the Sun River watershed.

Past SRWG projects across the watershed have included implementation of irrigation and water use efficiencies, in-channel restoration, bank stabilization, weed control, trash and debris clean up along the river corridor, and collaborative efforts to improve water management for conservation and water quality purposes. For approximately 20 years, SRWG has been collecting water quality data to provide a long-term data set that is periodically analyzed to track changes and trends over time for determining progress of our efforts. SRWG also manages, operates, and/or maintains seven stream gages on the Sun River and its tributaries. SRWG is in the process of developing a Channel Migration Zone map to better understand the channel changes and associated risks on the main Sun River.

In the 1990s and early 2000s, SRWG completed several projects on Muddy Creek and its tributaries. Those projects included bank stabilization, revegetation, in-channel barbs and weirs to reduce velocity and erosion, grazing management, and irrigation efficiencies. SRWG has also worked with GID to improve water management in Muddy Creek to reduce flow fluctuation and volumes to reduce erosion. Currently, SRWG has one active project on upper Muddy Creek to manage grazing and revegetate damaged banks, with a goal of reducing sediment and nutrient inputs. SRWG is also in the process of applying for funds to replace a highly erosive crossing on lower Muddy Creek. Muddy Creek has two stream gage stations and two water quality monitoring sites operated by SRWG.

SRWG has also contracted many assessments and evaluations on the Sun River and Muddy Creek. Currently, MWUEWQ is finalizing a trend analysis report on the past 15 years of water quality data. SRWG also recently completed a 10-year Strategic Plan based on resource concerns gathered in a collaborative, inclusive process. This Strategic Plan was funded by Reclamation.

Eligibility of Applicant

SRWG is a 501(c)3 nonprofit (legal name: Sun River Watershed) with a board of directors elected by consensus. It is a grassroots organization formed to meet the needs of local landowners, state, federal, and local agencies, land and water managers, and other stakeholders. Government representatives participate in and may advise SRWG activities, but do not hold voting positions on the SRWG board of directors. SRWG strives to make decisions by consensus and act collaboratively with stakeholders to act in support of our mission and to achieve our strategic goals.

Goals

SRWG recently defined goals in our Strategic plan as follows (goals related to this specific project shown in *italics*:

- *Improve water quality by reducing sediment, nutrients, and temperature;*
- *Ensure streamflows are adequate in all seasons to support multiple uses including agriculture, recreation, fish, and wildlife;*
- *Promote healthy fish and wildlife habitat;*

- Control noxious weeds and reduce infestations;
- *Restore hydrologic processes such as floodplain connectivity and river migration;*
- *Foster collaboration across the Sun River watershed and its stakeholders*
- *Provide community education about watershed issues and solutions; and*
- *Sustain an organization capable of pursuing these goals.*

As part of the Strategic Plan, SRWG developed objectives and tasks specific to each goal and maintains annual and long-range workplans that prioritize these tasks. Muddy Creek is specifically called out as a priority site for tasks related to SRWG's goals described above.

The goals of this specific project include reviewing and supplementing past analyses in order to identify and prioritize strategies to address Muddy Creek issues; identifying strategies and prioritizing locations for on-the-ground work on Muddy Creek, and creating designs and estimating construction costs, including permitting. These tasks are aimed at providing all the necessary information to procure funding and implement on-the-ground construction.

Approach

SRWG regularly partners with local, state, and federal agencies, private land owners, water and land managers, and other organizations to identify resource concerns and to prioritize, plan, and implement projects to address those concerns. In 2017-19, through a CWMP Phase I Reclamation grant, SRWG created a Strategic Plan to guide the next 10 years of work. This plan was informed by surveys and meetings with our many partners and communities and included a new mission, goals, objectives, tasks, and work plan to prioritize and address resource concerns identified through this process. The activities described in this funding proposal stem from that Strategic Plan and include:

SRWG is not proposing any activities under *Task A – Watershed Group Development* or *Task B – Watershed Restoration Planning*. SRWG's activities all fall under Task C, Watershed Management Project Design:

COMPLETING AN ANALYSIS IN ORDER TO PRIORITIZE WATERSHED MANAGEMENT PROJECTS AND IDENTIFY SPECIFIC PROJECT LOCATIONS.

SRWG will work with a hired consultant team to review the many past reports and analyses for Muddy Creek and visit sites of past projects. Through this process, we will evaluate efficacy and longevity of past projects to determine which need repair, which might be replicated in other locations, and which additional long- and short-term strategies are needed to address resource issues. This process will identify potential sites for on-the-ground projects, assess the risk, cost, and other factors, and prioritize these sites, with the intention of identifying sites for immediate design and others for recommended future work. This task will include SRWG coordinator time for the selection and hiring time to contract a consultant team, coordination time with landowners, land and water

managers, and other partners, and organization, sharing, and discussion of past assessments with the selected consultant. This task will include consultant time to review past assessments, conduct any additional field surveys and data collection to fill in any informational gaps or updates, and create a report with recommendations for locations, strategies, and prioritization.

COMPLETING SITE-SPECIFIC PROJECT DESIGN AND ENGINEERING, INCLUDING ESTIMATES FOR CONSTRUCTION COSTS, PROJECT TIMELINES, AND MILESTONES.
The selected consultant team will develop site-specific designs for 3 to 5 priority locations based on acknowledged Best Management Practices (BMPs) and efficacy of past Muddy Creek projects. Strategies will include on-the-ground efforts to reduce sediment and nutrient inputs to Muddy Creek such as bank stabilization, grazing management, vegetation enhancements, in-channel structures, and other recognized BMPs, as appropriate for each site. Designs will include estimates of construction cost and permitting requirements, with the intent of having construction-ready designs and adequate information for SRWG to use to apply for construction funding.

RESEARCHING SITE-SPECIFIC PERMITTING IS REQUIRED AND ASSOCIATED COSTS, INCLUDING ENVIRONMENTAL AND CULTURAL FEDERAL REQUIREMENTS.
As part of the design for specific priority sites, the consultant team will research the permitting, including environmental and historical federal requirement elements, and include this in the construction cost estimates for each site.

COMMUNITY OUTREACH AND TRAINING ASSOCIATED WITH THESE EFFORTS.
SRWG will hold meetings with stakeholder including Muddy Creek landowners and project partners to discuss prioritization, get permission for assessments and design, inform design process, and share the final report and design. This task will include SRWG and consultant time to perform these activities, with a minimum of three stakeholder meetings throughout the process. This task also includes funding for the SRWG Project Manager to attend training on watershed restoration in the state of Montana.

Evaluation criteria

E.1.1. Evaluation Criterion A— Watershed Group Diversity and Geographic Scope

SUB-CRITERION NO. A1. WATERSHED GROUP DIVERSITY
Stakeholders in the Sun River watershed, which includes Muddy Creek, include residents, recreationists such as anglers and kayakers, water and land managers, farmers, ranchers, irrigation districts, municipalities conservation districts, and agencies. These groups can be broken down into four major stakeholder groups that are affected by water quality and quantity:

Agriculture – Includes ranchers, farmers, irrigation managers. These groups rely on – and impact - water supply and water quality. Though they require adequate water for crops and livestock, these groups also contribute to and can mitigate water quality issues through grazing and water management, stream-side stewardship, and irrigation delivery efficiencies. SRWG works with these groups to facilitate communication regarding water needs and supply plans, and to reduce their impact on water supply and quality across the watershed. SRWG regularly attends monthly supervisor meetings for the two local irrigation districts and has participated in resource concern meetings arranged by the local conservation districts and Natural Resources Conservation Service (NRCS) Districts.

Municipal – Municipalities such as the town of Power rely on Muddy Creek for water supply. Though water is treated before use, water quality is still a concern and supply needs to be adequate to support the population. SRWG has worked with the town of Power in the past and invited a representative from Power to participate in a recent watershed tour to talk to tour guests about Power's water supply issues and the role of Muddy Creek. SRWG has an open dialog with county commissioners and participates in meetings.

Recreation – Muddy Creek is a concern for recreation as a tributary of the Sun River. Fluctuation and volumes of flow in Muddy Creek affect water quality in the Sun River. Water quality and flow volumes are important for sustaining good habitat for game fishes and recreation activities such as kayaking. SRWG consults often with Montana Fish, Wildlife, and Parks (FWP) biologists to understand resource concerns, and FWP participates in both our Water Management and Water Quality working groups. SRWG also engages with Trout Unlimited, Ducks Unlimited, and other fish and wildlife groups to understand the role of the Sun River and tributaries to support recreation such as hunting, fishing, boating, and camping. Supporting these uses is also valuable to the local communities, as they provide a source of income for local businesses.

Ecological – The Sun River supports a modest fishery, as well as wildlife. As a major tributary, Muddy Creek is an important contributor to water supply and quality, as well as habitat for fish and wildlife. The TMDL for the Sun River identifies fish habitat as a use for Muddy Creek, yet due to impairments, Muddy Creek is unable to support this use. SRWG works with FWP and others to understand the habitat requirement for fish, and works with agriculture users including land and water management to communicate those needs and attempt to make sure they are met. SRWG also works with NRCS and local conservation districts to understand and address resource concerns in the watershed. SRWG attends monthly meetings of the conservation districts and holds a board of directors position for a representative from each of the three conservation districts that the Sun River watershed overlaps. FWP is active in SRWG's working groups.

As part of our prior CWMP Phase I project, SRWG extensively met with, surveyed, and interviewed multiple representatives from each stakeholder group to learn their resource concerns and to inform SRWG's mission and goals and prioritize tasks. Upon completion of that strategic plan, SRWG held an event and watershed tour to continue the dialog about resource concerns, watershed needs, and SRWG efforts to address these. SRWG leads two working groups, the Water Management Working Group and the Water Quality Working Group, which are comprised of a wide array of stakeholders in the watershed. These two groups each meet twice a year to discuss watershed issues and projects and to help inform SRWG's work. As an extension of the new Strategic Plan, but funded by another source, SRWG recently re-designed our website to be more user-friendly and relevant, and updated the information on the site to match current objectives. SRWG also uses Facebook and Instagram to engage stakeholders and releases a quarterly on-line newsletter. SRWG often participates in community events such as the local farmers markets and partner events by having an informational table and display.

If awarded these funds, SRWG will seek out input during the planning and design process from all of the aforementioned stakeholder groups.

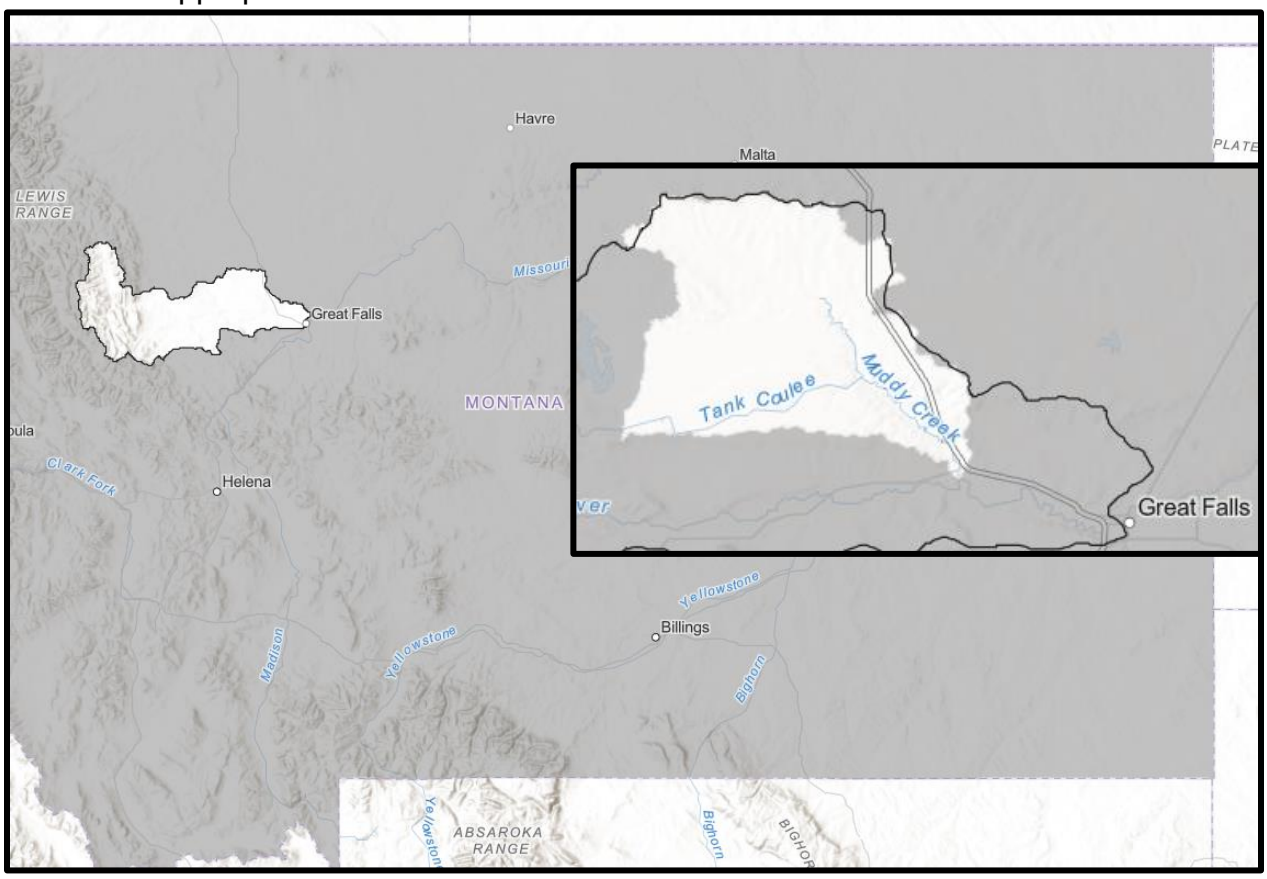
SUB-CRITERION NO. A2. GEOGRAPHIC SCOPE

A map of the Sun River watershed and Muddy Creek watershed are provided on the next page. Through stakeholder outreach and the SRWG Strategic Planning process, SRWG has identified water quality and quantity as priority resource concerns to be addressed. Muddy Creek has a large influence on the quality and quantity of water in the Sun River (HUC 10030104), which in turn affects the health of the Upper Missouri River (HUC subregion 100301). Muddy Creek is a significant source of sediment and impairments that not only affect users of Muddy Creek water, but also make their way into the Sun River. By improving Muddy Creek, this project will improve the lower Sun River watershed. This project will also build momentum and provide education and outreach opportunities across the broader watershed which SRWG anticipates will lead to additional projects to improve other parts of the basin.

Stakeholders of the Sun River watershed group include the demographics in the previous section, across a geographic region that begins at Gibson Dam at the edge of the Bob Marshall Wilderness and extends across 2,200 square miles to the Sun River's confluence with the Missouri River. This includes 507,552 acres of federally owned land, 98,560 state owned, and 799,048 acres of private land.

As described in sub-criterion No. A1, SRWG will engage stakeholders throughout the watershed throughout the project by holding meetings, having one-on-one visits, and through newsletters, the website, and social media. SRWG will provide regular updates and solicit feedback from project partners at working group meetings and when attending

meetings of those organizations. SRWG will also provide community presentations when and where appropriate.



Map of Sun River watershed within Montana; inset: location of Muddy Creek sub-basin within the Sun River watershed

E.1.2. Evaluation Criterion B — Addressing Critical Watershed Needs

SUB-CRITERION NO. B1. CRITICAL WATERSHED NEEDS OR ISSUES

Water quality is the major issue in the Muddy Creek sub-basin. This issue is related to land-use practices, water management, irrigation efficiency, and fluctuations of flows. Erosion, which impacts water quality, is also an issue as it puts infrastructure and agricultural land at risk of loss. This impacts the economy of the region, as farmers and ranchers continue to lose land, reducing their ability to produce. This loss creates tension and leads to finger-pointing and laying blame as to the sources of land loss and water impairments. Other effects of Muddy Creek water quality issues include poor general ecological conditions, loss of ecosystem resiliency, disruption of natural hydrological processes, and negative impacts on the economy and recreation.

The 2004 TMDL states that Muddy Creek is unable to accommodate its Montana State designated uses due to water quality impairments that include: nutrients, salinity/TDS/sulfates, flow alteration, suspended solids, habitat alterations, thermal

modification, and pH which are due to agriculture, flow regulation/modification, irrigated crop production, natural sources, and range land.

SUB-CRITERION NO. B2. DEVELOPING STRATEGIES TO ADDRESS CRITICAL WATERSHED NEEDS OR ISSUES

Through this proposed project, SRWG will prioritize on-the-ground project areas and create designs, including construction and permitting costs. The process for creating these designs will facilitate collaboration between SRWG stakeholders and leverage information assembled through past assessments and evaluations. The resulting project will address water quality issues described above.

SRWG will hire a consultant team and work with that team to:

- Outline objectives for this project based on resource concerns and priorities defined in the Strategic Plan;
- Develop a project timeline and milestones for this project;
- Use past assessments and evaluations to determine what information has already been gathered, what information is needed, and to fill in any gaps in data. This will include the evaluation of efficacy and longevity of past projects to determine if these techniques are replicable. It will also include evaluating known BMPs for relevancy to Muddy Creek issues and conditions.;
- Identify strategies for mediating water quality issues. This will include identification of immediate on-the-ground needs, as well as recommendations for future efforts, such as water management and irrigation efficiencies.;
- Of the on-the-ground sites, engineer design projects for 3 to 5 priority locations. Designs will include project design specific to that location as well as cost estimates for permitting and construction. This includes research to understand environmental and cultural permitting requirements. Projects will likely include bank stabilization efforts combined with in-channel structures, grazing management, and revegetation; and
- When feasible and cost-effective, SRWG will work with Reclamation's environmental and cultural resource staff to determine what site-specific compliance will be necessary for the project for implementation.

This project will contribute to the critical watershed issues and needs by immediately addressing top-priority on-the-ground sources of water quality concerns, and by recommending long-term future strategies for additional work.

This project builds on the Reclamation-funded Strategic Plan developed by SRWG and informed by stakeholder input. After this proposed project, the next step will be to acquire funds for construction. Not only will this project improve water quality in Muddy Creek, and by extension, the Sun and Missouri rivers, is will have far-reaching intangible benefits. By effecting on-the-ground improvements in this sub-basin, SRWG will build momentum

for future projects across the Sun River watershed. SRWG will leverage this Muddy Creek project to create interest and investments from partners and landowners across the Sun River watershed for similar projects, thus expanding the benefits of this work. This fuels capacity for SRWG and enables us to enact positive effects throughout the watershed.

E.1.3. Evaluation Criterion C— Implementation and Results

SUB-CRITERION NO. C1—UNDERSTANDING OF AND ABILITY TO MEET PROGRAM REQUIREMENTS

SRWG has reviewed the program criteria and is able to comply with all requisite timeframes and reporting. SRWG successfully executed a Phase I Reclamation project and is thus familiar with the program administration process. SRWG has considered the timeframe and funding schedule in planning tasks associated with this project, and should funding not be available for the second year of the program, the project will still result in a usable project. SRWG has experience managing large grants and the project manager has extensive experience with federal grant programs. The attached letters of support also indicate project partners committed to participating in the program to ensure successful delivery.

Table 1. – Schedule of Tasks, Timeframes and Milestones

TASK, TIMEFRAME, and COST	MILESTONES
Complete recommendations report for multi-faceted approach to Muddy Creek issues Year One *Specific dates are flexible and will adapt to timing of this funding contract with Reclamation* $49,083.65	• Develop a scope and timeline for this report that enables completion during the first year of funding. • Review of past assessments and data • Collect data as required to inform report • Recommend long-term and short-term strategies to address Muddy Creek water quality • Identify general strategies and priority locations for on-the-ground projects • This report will be usable by SRWG to inform designs should CWMP funding not be available for the second year of this program
Complete designs for 3 to 5 priority locations Year Two *Specific dates are flexible and will adapt to timing of this funding contract with Reclamation* $50,000	• Create site-specific designs for top priority locations using information acquired through the recommendation report • Estimate permitting costs, including environmental and historic federal grant requirements, using Reclamation assistance if feasible. • Estimate construction costs for each site

SUB-CRITERION NO. C2—BUILDING ON RELEVANT FEDERAL, STATE, OR REGIONAL PLANNING EFFORTS

This proposed project complements previous and current efforts by SRWG as well as several relevant Federal, state, and regional planning efforts including:

SRWG

This proposed project builds on the recently completed Reclamation-funded SRWG Strategic Plan by implementing tasks towards strategic goals identified in that Plan (see "Goals" in the Technical Project Description of this Technical Proposal). The Strategic Plan identifies Muddy Creek as a priority area for future work.

The project also moves Muddy Creek towards TMDL objectives identified in the SRWG 2013 WRP, by creating a plan to reduce sediment and other impairments towards established goals.

DEQ / EPA

As described above, the DEQ established TMDLs for the Sun River and tributaries in 2004, and in 2013 approved a Watershed Restoration Plan to help guide SRWG toward TMDL goals.

NRCS

The local NRCS District Conservationists have Long-Range plans in place that include improvements to water efficiency and bank stabilization. This proposed project will help further that effort and position SRWG for future NRCS funding for additional improvements.

E.1.4. Evaluation Criterion D— Department of the Interior Priorities (10 points)

This proposed project supports Department priorities as follows:

1. **Creating a conservation stewardship legacy second only to Teddy Roosevelt**
    a. **Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment**

    This proposed project will draw on past assessments, to be complemented with additional data collection if needed, and make recommendations for long- and short-term projects to address resource needs. As noted above, prior to the development of agriculture and associated need for irrigation, Muddy Creek did not experience the high flows and thus erosion and water quality issues on the level it does currently. Recommendations are expected to include changes to irrigation and water management practices in addition to on-the-ground projects, to help adapt to the evolving agricultural needs.

3. **Restoring trust with local communities**

a. **Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands; and**
b. **Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.**

This project will facilitate conversation between landowners and local land and water management organizations, including federal agency representatives. Already the preparation process for this proposal has begun engaging landowners and they have begun working together. As a funding entity for this proposed work, Reclamation would be engaged in a conversation with local residents affected by Muddy Creek issues, and by providing funding, Reclamation will be seen as an entity working to help against a common problem. So far in just the proposal process, SRWG has engaged with and received support from multiple landowners and the Greenfields Irrigation District (see Letters of Support), as well as DEQ and MSUEWQ about this proposed project.

Project budget

Budget proposal

Table 2. – Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	$99,083.65
Costs to be paid by the applicant	$
Value of third-party contributions	$
TOTAL PROJECT COST	**$99,083.65**

Table 3. – Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	$/Unit	Quantity		
Salaries and Wages				
Project Manager	$25	700	hours	$17,500
BSWC (AmeriCorps Member)	$800	1	stipend	$8,000
Fringe Benefits				
N/A				$0
Travel				
Local	$.58	1750	miles	$1,015
Conference	$914	2	meetings	$1,828
Equipment				
N/A				$0
Supplies and Materials				
Office Supplies	$200	2	Years' supply	$400
Printing (large format)	$1	200	page	$200
Tablet	$650	1	device	$650
Monitoring Supplies	$500	2	Years' supply	$1,000
Contractual				
Consulting & Engineering Team	$60,000	1	contract	$60,000
Other				
N/A				$
TOTAL DIRECT COSTS				**$90,593**
Indirect Costs				
De minimus rate	10%	$90,593		**$8,490.65**
TOTAL ESTIMATED PROJECT COSTS				**$99,083.65**

Budget narrative

Salaries and Wages

The salaries and wages for SRWG's Project Manager include costs described in the table below. The Project Manager will be responsible for:

- Consultant Selection. Manage the RFP and contracting process for selecting a consultant team in accordance with CFR 200.317 through 326 and SRWG's Procurement Policy.
- Consultant Management. Work with consultant to develop Scope of Work, timelines and milestones; support consultant requests for information; Coordinate tasks and assess progress towards timeline and milestones; Manage consultant budget and billing
- Stakeholder Outreach. Plan and execute meetings to gather information from stakeholders about project area and resource concerns, especially those not addressed by prior projects or assessments; obtain and coordinate landowner permission for consulting team to access property for assessment and data collection; coordinate meetings with stakeholders to inform and review designs and final report
- Assessment Coordination. Collect and organize past assessments performed on Muddy Creek; request assessments held by others (if any); work with Consultant to identify additional data required to inform project
- Admin / Grant Management. Oversight and direction of BSWC; Grant reporting and tracking; contact with Reclamation; other administrative tasks related to this proposal
- Training. Attendance of one conference per year for training on watershed restoration techniques and best practices. Each conference shall be located in the state of Montana and organized by a recognized organization (i.e. Montana Watershed Coordination Council and/or Montana Chapter of the American Fisheries Society). Includes mileage, hotel, and per diem at federally approved rates.

Table 4. – SRWG Project Manager Salaries and Wages

	Year 1			Year 2			TOTAL
	Hours	Rate	Total Y1	Hours	Rate	Total Y2	
Consultant Selection	50	$25	$1,250	n/a			$1,250
Consultant Management	80	$25	$2,000	100	$25	$2,500	$4,500
Stakeholder Outreach	80	$25	$2,000	80	$25	$2,000	$4,000
Assessment Coordination	40	$25	$1,000	n/a			$1,000
Admin/Grant Management	80	$25	$2,000	110	$25	$2,750	$4,7500
Training	40	$25	$1,000	40	$25	$1,000	$2,000
TOTAL			$9,250				$8,250

The budget also includes funds for an AmeriCorps Big Sky Watershed Corps Member (BSWC). SRWG has qualified for this program in the past and anticipates managing a BSWC member during the course of this project. The BSWC Member will assist with monitoring and education & outreach as well as general administrative tasks associated with this proposal. The BSWC member's full annual stipend cost share paid by SRWG is $12,250 for an 11 month term. As the BSWC member will be working on other tasks not affiliated with this proposal, this proposal reflects only the portion of that stipend associated with tasks supporting this project, for a total of $8,000.

Fringe benefits
n/a

Travel

- Local. This includes SRWG Coordinator travel to and from the Muddy Creek area for various outreach and coordination purposes. The travel estimates site visits from 30 to 45 miles away from office at 1,750 total estimated miles, times the current federal mileage rate of $.58, for a total estimate of $1,015 for two years.
- Conference. This includes travel for the SRWG Project Manager to attend one training conference per year during the course of this grant. Conference travel includes mileage, lodging, and per diem at the current federal rate, based on an average price and distance to likely conference locations, as exact host locations are not known at this time.

Table 5. – Table Conference Travel Details (based on average MT Federal rates)

Task	#	Unit	Rate	Total
Mileage	400	Miles	$.58	$232
Per Diem (full day)	3	Days	$61	$183
Per Diem (travel day)	2	Days	$45.75	$91.50
Hotel	4	Nights	$102	$408
Total Travel per year				$914.50
Total ConferenceTravel for 2 years				**$1,828**

Equipment
n/a

Materials and Supplies
Office supplies required include a tablet for data collection and entry in the field; professional printing for design, maps, and other prints that exceed SRWG's printer's legal-size maximum size capacity; and general supplies such as pens, paper, printer ink, etc. that support general office tasks related to this project. Also requested is $500 per year for supplies to support water quality monitoring equipment, which includes replacing sensors, solutions, and batteries required for operation of water quality equipment that

will be used on this project. Costs were estimated by searching multiple suppliers for equivalent items and taking an average of the sales prices. Where possible, prices from vendors specializing in nonprofit support were used.

Table 6. – Office supplies anticipated

Office Supply	Purpose	$/Unit	Quantity	Unit Type	Total Cost
Rugged Electronic Tablet	Data collection and entry	$650	1	Device	$650
Professional Printing	Oversize prints	$1.00	200	11x17 or larger	$200
Pens, general office support supplies	General	$200	2	Monthly supply need	$400
Sensors, batteries, etc.	Monitoring	$500	2	Annual supply need	$1,000
Total office supplies					**$2,250**

Contractual

As many of the tasks associated with this project are outside the technical ability of the SRWG Project Manager, SRWG will hire a consulting team, including engineers, in accordance with CFR 200.317 through 326 and SRWG's procurement policy. Fees described here were estimated by reviewing budgets for projects similar in scope and objective. The total estimated for contractors is $60,000 which includes tasks as described on page 15, E.1.2. Evaluation Criterion C, Schedule of Tasks and Milestones.

Environmental and Regulatory Compliance Costs

There are no requirements for compliance with Federal environmental and cultural resource laws or other regulations associated with this project. However, this project will include estimates for permitting requirements for construction as part of the design deliverable.

Other Expenses

n/a

Indirect Costs

SRWG is requesting 10% of the base direct cost to cover indirect expenses. This rate is comparable to other grants.

Environmental and cultural resources compliance

The proposed activities do not require environmental or cultural compliance. However, this project will involve researching the requirements and associated costs for the construction of projects designed under this scope.

Required permits or approvals

The proposed activities do not require any permits or approvals. However, this project will involve researching the requirements and associated costs for the construction of projects designed under this scope.

Letters of Support

Letters of Support for this project are attached to this proposal.

Official Resolution

The next meeting of the Sun River Watershed Group is December 5, 2019. SRWG plans to pass a resolution approving this grant request at that time. A quorum of Directors have given email approval to this effort, indicating that this resolution will pass on December 5. SRWG will provide the Grant Administrator a copy of that signed resolution as soon as possible.

Attachments

United States Bureau of Reclamation
WaterSMART Cooperative Watershed Management Program (CWMP)
Phase I Grant Program
RE: 2020 Sun River Watershed Cooperative Watershed Management Phase I Grant

Dear Grant Administrator,

As landowners affected by the ever-changing Muddy Creek, we strongly support the Sun River Watershed Group's (SRWG) application for a CWMP Watershed Management Project Design for the Muddy Creek.

Muddy Creek landowners are suffering from the erosion caused by the fluctuating water flows seen on the creek. Several projects were completed along the Muddy Creek over the past few decades, but multiple issues still remain. Some issues currently facing landowners: fence lines and large areas of shoreline falling into the creek, structures and septic systems in jeopardy, land being divided by the flows and creek crossings being washed away by the changing water levels. A long-term commitment to proper management and continuous improvement of the entire watershed are key ingredients to improving water quality and protecting landowners property.

We understand this is the first phase of a project to identify solutions, prioritize project areas, and prepare designs for future construction. As landowners, we will work with the SRWG to provide information about our properties and identify our concerns while allowing access to the project team for the purpose of furthering this effort. Our commitment is to assist the SRWG in achieving the overall improvement of the watershed while protecting our properties.

It is our belief, the SRWG is a consensus-based organization that looks to resolve watershed issues. We look forward to being active members of the group and providing a positive impact to the watershed. We appreciate your time and the opportunity to voice our concerns and look forward to your support of this very important issue.

Respectfully,

Skip Neuman
SKIP NEUMAN
1490 2nd Road NE
Vaughn, MT 59487

WAYNE TONNE
224 North Vaughn Frontage Road
Vaughn, MT 59487

MICHAEL REID
108 North Vaughn Frontage Road
Vaughn, MT 59487

JOHN SCOTT
68 Wibaux Road
Vaughn, MT 59487

Not available for signature.
JENNIFER HENNING
34 Wibaux Road
Vaughn, MT 59487

SEE ATTACHED EMAIL
SUSAN OVERFIELD
251 Gordon Road
Vaughn, MT 59487

RUSSELL LEITHEISER
440 North Vaughn Frontage Road
Vaughn, MT 59487
Russell Leitheiser

STEVEN KERLING
150 North Vaughn Frontage Road
Vaughn, MT 59487

See Additional Signature Page:

Additional LAND OWNERS:

Linda Berger
1 Second St
Vaughn MT 59487

Daniel Rhodes
1 Second St
Vaughn MT 59487

Steven Feist
446 N Vaughn Frontage Rd
Vaughn, MT 59487

Gmail Kelley Kerling <kerlingk@gmail.com>

Support Letter for the SRWG

Steve Kerling <kerling70@gmail.com> Fri, Nov 8, 2019 at 2:40 PM
To: Kelley <kerlingk@gmail.com>

---------- Forwarded message ---------
From: **Susan Overfield** <stockdog@3rivers.net>
Date: Fri, Nov 8, 2019, 6:37 AM
Subject: Re: Support Letter for the SRWG
To: Steve Kerling <kerling70@gmail.com>

The letter, with my name attached, is fine.

Thanks, Steve.

Susan

On Thu, Nov 7, 2019 at 12:12 PM Steve Kerling <kerling70@gmail.com> wrote:
How about this..

---------- Forwarded message ---------
From: **Steve Kerling** <kerling70@gmail.com>
Date: Tue, Nov 5, 2019, 12:48 PM
Subject: Support Letter for the SRWG
To: <neumanfarms@hotmail.com>, <hhbar@hotmail.com>, <gopheranch@yahoo.com>, <jenhenning@ymail.com>, <stockdog@3rivers.net>, <russellleitheiser@gmail.com>, Kelley <kerlingk@gmail.com>

All,

Please take a moment to review the attached letter. If you want something changed or added please let me know. I am gonna try and get it signed as soon as everyone gets back to me. Tracy Wendt from the water
shed needs it by COB Friday, but I might be able to get it to her on Saturday. Please check to make sure your address is right and I didn't misspell your name.

There is a meeting at the Sun River Valley Community Center this Thursday at 6:30; it will be a good time to raise our concerns.

We are trying to have a meeting of landowners on Saturday at 1000 at our house.
150 north Vaughn frontage road....the tan and green place by the underpass for Neuman school road.

Thanks and as also if you have a neighbor or know someone effected by this please get them involved.

steve

DEQ
Montana Department
of Environmental Quality

November 12, 2019

US Bureau of Reclamation
WaterSMART Cooperative Watershed Management Program (CWMP)
Phase I Grant Program

RE: 2020 Sun River Watershed Cooperative Watershed Management Phase I Grant

Dear Grant Administrator,

The Montana Department of Environmental Quality (DEQ) is submitting this letter to express support for the WaterSMART Cooperative Watershed Management Program proposal being submitted by the Sun River Watershed Group (SRWG). The WaterSMART grant would support efforts by SRWG to address nonpoint source pollution in the Muddy Creek watershed. Muddy Creek is identified on Montana's list of impaired waters as not fully supporting any of its designated beneficial uses. Causes of impairment include excess nitrogen, phosphorus, salinity, sediment, selenium, sulfate, temperature and total dissolved solids. Known pollutant sources include flow modification, crop and livestock production, and loss of riparian habitat. DEQ has developed Total Maximum Daily Loads (TMDLs) for the impairments on Muddy Creek, and we strongly support locally-led, voluntary implementation of conservation best management practices as the primary means of achieving TMDL goals.

DEQ's Watershed Protection Section has worked closely with the SRWG over the last two decades to find ways to improve water quality issues in Muddy Creek. SRWG and its partners have made significant progress towards reducing nonpoint source pollution, but much remains to be done.

The scope of work proposed by SRWG for funding under a WaterSMART grant represents an ambitious and appropriate next step towards solving the water quality problems in Muddy Creek. DEQ will continue to support SRWG's efforts as resources allow, and we strongly encourage the CWMP's participation in funding the efforts of this grass-roots organization.

Sincerely,

Kristy Fortman, Watershed Protection Section Acting Supervisor
Montana Department of Environmental Quality
1520 E 6th Ave
Helena, MT 59601
Email: Kristy.Fortman@mt.gov
(406) 444-7425

Cascade Conservation District

12 Third St. NW, Ste 300
Great Falls, MT 59404
Tel 406-727-3603 ext 125
Fax 406-727-4810
Email info@cascadecd.com
Web cascadedcd.com

November 4, 2019

US Bureau of Reclamation
WaterSMART Cooperative Watershed Management Program (CWMP)
Phase I Grant Program

RE: 2020 Sun River Watershed Cooperative Watershed Management Phase I Grant

Dear Grant Administrator:

Cascade Conservation District (CCD) supports the Sun River Watershed Group's (SRWG) application for a CWMP Watershed Management Project Design for Muddy Creek. This project will help identify and prioritize strategies and project locations, develop plans, and otherwise assist in the preparation for constructing projects to resolve watershed issues on Muddy Creek. CCD sees this project as a first step towards implementing watershed improvement projects that will have long-term benefits to protect the resources and communities of the Sun River while expanding the capacity of our valued partner, the Sun River Watershed Group.

SRWG is a consensus-based group comprised of a diverse array of stakeholders, including agencies, private property owners, state and local governments, and other entities concerned with the resources of the basin. Over the past 25 years, SRWG has worked hard to improve water reliability and management in the watershed and has a track record of collaborative solutions to watershed improvements. CCD has worked closely with the Sun River Watershed Group in the past and is confident the organization has capability carry out this project with long-term, watershed-scale benefits to water quality.

Muddy Creek is a tributary of the Sun River in Northcentral Montana. It is a major drainage of irrigation tailing water from one of the largest irrigation districts in Montana. That district supplies water to the southern tip of what is known as the Golden Triangle. Muddy Creek is a major contributor of both stream flows into the Sun River and impairments to land and water. Landowners on Muddy Creek are concerned with land loss due to erosion as well as water quality issues in this sub-basin. CCD is committed to supporting SRWG as they work to address these issues with a sustainable, long-term solution.

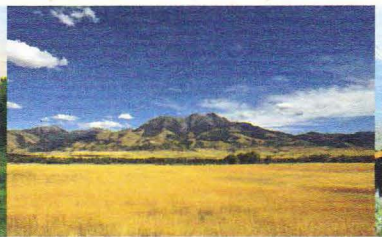
Cascade Conservation District is committed to long term sustainability and resiliency to soil and water resources in the Cascade County and all of Montana for current and future generations. This project will help all bring SRWG partners and stakeholders meet that commitment.

Cordially Yours,

Cascade Conservation District

Gayla M Wortman, Chair

Local leadership in conservation stewardship..


Greenfields
IRRIGATION DISTRICT

November 7, 2019
US Bureau of Reclamation
WaterSMART Cooperative Watershed Management Program (CWMP)
Phase I Grant Program

RE: 2020 Sun River Watershed Cooperative Watershed Management Phase I Grant

Dear Grant Administrator:

The staff and management of Greenfields Irrigation District (GID) are pleased to offer this letter of support towards the Sun River Watershed Group's (SRWG) application for a CWMP Watershed Management Project Design for Muddy Creek. The overall objective of this project is to identify and evaluate on-going watershed issues within the Muddy Creek drainage related to irrigation return flows; primarily erosion and subsequent deposition. The goal of this effort includes both short-term remediation and long-term solutions to the contributing factors. This planning grant will be used to develop plans for constructing on-the-ground projects that are part of the solution and make recommendations for additional strategies. GID views this project as a critical step towards implementing watershed improvement projects that will have long-term benefits to protect the resources and communities of the Sun River while expanding the capacity of our valued partner, the Sun River Watershed Group.
Muddy Creek is a tributary of the Sun River and a major contributor of both stream flows and impairments. Landowners on Muddy Creek are concerned with land loss due to erosion as well as water quality issues in this sub-basin. As a founding partner of the SRWG, GID is committed to supporting the work to address these issues with a sustainable, long-term solution. Over the last 25 years, GID donated manhours, equipment time, and resources towards SRWG projects as well as contributed financially to the organization.

SRWG is a consensus-based group comprised of a diverse array of stakeholders, including agencies, private property owners, state and local governments, and other entities concerned with the resources of the basin. Over the past 25 years, SRWG has worked hard to improve water reliability and management in the Sun River watershed and has a track record of collaborative solutions to watershed improvements. GID has worked closely with the Sun River Watershed Group in the past and is confident the organization has the ability and capacity to carry out this project and that the project will have long-term, watershed-scale benefits to water quality.

Please call if you have any specific questions regarding our support of the SWRG and their efforts to address on-going issues along Muddy Creek. Thank you

Respectfully,
Greenfields Irrigation District

Erling A. Juel, P.E.
District Manager

c: GID Board

TETON CONSERVATION DISTRICT

"To Assist the People of Teton County in Managing Our Natural Resources in a Responsible and Efficient Manner."

1102 Main Avenue N. Choteau, MT 59422
406-466-5722 x 103
tetoncd@yahoo.com

11-12-19

US Bureau of Reclamation
WaterSMART Cooperative Watershed Management Program (CWMP)
Phase I Grant Program

RE: 2020 Sun River Watershed Cooperative Watershed Management Phase I Grant

Dear Grant Administrator:

Teton Conservation District (TCD), one of 58 districts in the State of Montana was established in 1947 to work cooperatively with local landowners and non-profits to ensure the wise management of our natural resources in a responsible and efficient manner.

Since our inception, the District has been involved in locally-led efforts to ensure clean and sustainable waters for our farmers, ranchers and agricultural producers. Our Board members are boots-on-the-ground entrepreneurs who understand the land in which they operate and have a proven ability to work with other landowners, at the local and State level, to address water quality and quantity challenges and concerns including those along Muddy Creek.

TCD supports the Sun River Watershed Group's (SRWG) application for a CWMP Watershed Management Project Design for Muddy Creek. This project will help identify and prioritize strategies and project locations, develop plans, and assist in the preparation for constructing projects to resolve watershed issues on Muddy Creek.

Muddy Creek is a tributary of the Sun River and a major contributor of both stream flows and impairments. Landowners on Muddy Creek are concerned with land loss due to erosion as well as water quality issues in this sub-basin. TCD has given three landowners water rights for Muddy Creek who are concerned about water flow, turbidity and sedimentation due to streambank erosion.

Grant monies for this project is a first step towards implementing watershed improvement projects that will have long-term benefits to protect the resources and communities of the Sun River while expanding the capacity of our partner, the Sun River Watershed Group. We have worked closely with the SRWG for the past twenty years and are confident they can carry out this project to show long-term benefits to water quality. We are committed to supporting SRWG in this endeavor.

Thank you for your consideration of grant funding for this project.

Sincerely,

Ross Salmond
Vice-Chair

Laura Ziemer
Senior Counsel and Water Policy Advisor

November 4, 2019

US Bureau of Reclamation
WaterSMART Cooperative Watershed Management Program (CWMP)
Phase I Grant Program

Re: 2020 Sun River Watershed Cooperative Watershed Management Phase I Grant

Dear Grant Administrator:

Trout Unlimited (TU) has partnered with the Sun River Watershed Group since 1998, soon after its inception, to find solutions to difficult water scarcity problems in ways that work for both agriculture and conservation. Trout Unlimited believes that the most durable gains for conversation are achieved when solutions are forged through collaborative, creative work. The Sun River Watershed Group has put this idea into practice over the last twenty years in which TU has been a member of the Watershed Group, and we have made important strides in restoring flows to the dewatered Sun River. Working collaboratively across interests historically opposed to one another, the Watershed Group has found ways to bring benefits to both the basin's important agricultural production and the river. The Sun River has incredible potential as a wild trout fishery, and the Sun River Watershed Group's success will be the key to unlocking this river's potential.

TU supports the Sun River Watershed Group's application for a CWMP Watershed Management Project Design for Muddy Creek. Muddy Creek is a tributary of the Sun River and a major contributor of both stream flows and sediment inputs into the lower river. Landowners on Muddy Creek are concerned with land loss due to erosion as well as impaired water quality. The proposed project will help identify and prioritize strategies and project locations, and otherwise assist in the preparation for executing projects to address the sediment inputs, incised channel, and eroding banks on Muddy Creek. TU views this work as the next step in implementing the recently-finalized, ten-year strategic plan of the Sun River Watershed Group which identified remediation of Muddy Creek's contribution to water quality impairments in the basin as a priority action.

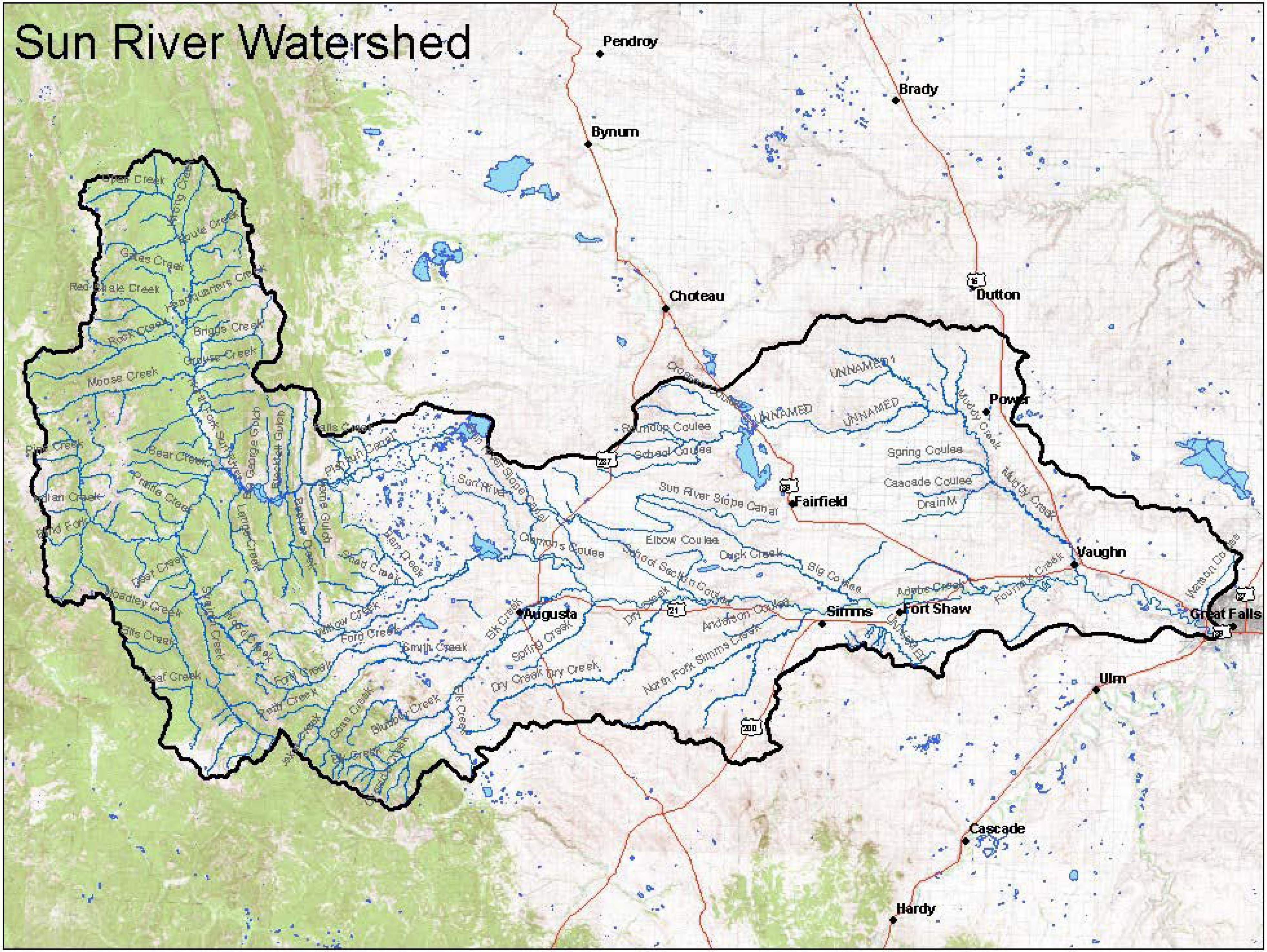
TU is committed to supporting SRWG as they work to address these issues with a sustainable, long-term solution. A grant through the Cooperative Watershed Management Program would provide essential support for improving the health of the Sun River while maintaining a viable and engaged agricultural community.

Please don't hesitate to contact me at lziemer@tu.org or (406) 599-2606 if I can provide any additional detail.

Yours truly,

Laura Ziemer
Senior Counsel and
Water Policy Advisor
Trout Unlimited

Cc: Tracy Wendt, Sun River Watershed Group


Sun River Watershed
Pendroy
Brady
Bynum
Choteau
Dutton
Power
Fairfield
Vaughn
Great Falls
Augusta
Simms
Fort Shaw
Ulm
Cascade
Hardy
Moose Creek
Gates Creek
Red Shale Creek
Rock Creek
Briggs Creek
Grouse Creek
Headquarters Creek
Pine Creek
Bear Creek
Indian Creek
Deer Creek
Hoadley Creek
Elk Creek
Willow Creek
Ford Creek
Smith Creek
Spring Creek
Dry Creek
North Fork Simms Creek
Anderson Coulee
Big Coulee
Adobe Creek
Muddy Creek
Spring Coulee
Cascade Coulee
Elbow Coulee
School Coulee
Sun River Slope Canal
School Section Coulee
UNNAMED
Fourth K Creek
Sun River
Pishkun Canal