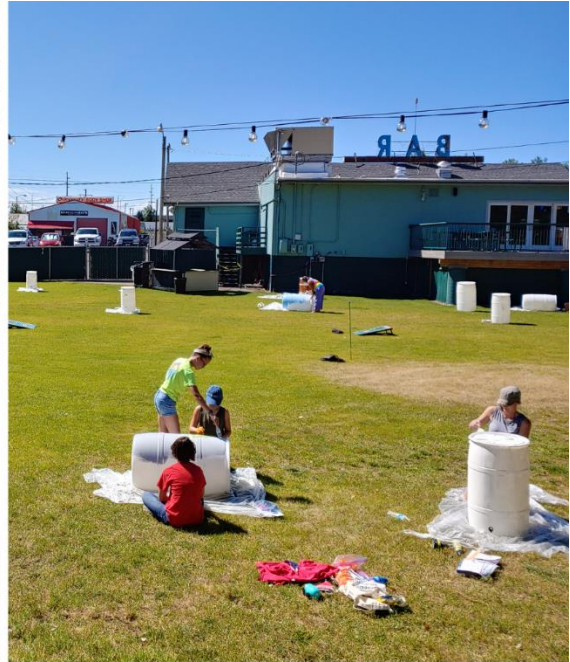


R23AS000362 WaterSMART Cooperative Watershed Management Program Phase I
**EXPANDING COLLABORATIVE PROGRAMS AND PROJECTS
IN THE SUN RIVER WATERSHED**



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Executive Summary

Project: Expanding Collaborative Programs and Projects in the Sun River Watershed
Date: November 30, 2023
Applicant: Sun River Watershed Group
Location: Great Falls, Cascade County, Montana

The Sun River Watershed Group seeks to expand our ability to support watershed stakeholders by enhancing programs and identifying projects that benefit natural resources and communities. SRWG developed a strategic plan under a previous CWMP grant and is ready to take the next steps in implementing that plan, using stakeholder outreach information captured during the past CWMP to expand existing programs, initiate new programs, and create a design for a high-priority project identified through stakeholder outreach. SRWG *works collaboratively with stakeholders to restore and protect the resources of the Sun River watershed and its communities*, working with local conservation districts and irrigation districts; municipalities; federal, state, and local agencies; landowners; and other organizations.

This project will be completed within three years. Given the anticipated award date of December 31, 2024, project will be complete by December 31, 2027.

Activities associated with this project will occur on a combination of private, state, and federally owned lands.

Project Location

The Sun River watershed (HUC 10030104) is in Central Montana, between Gibson Dam and the City of Great Falls (*Figure 1*). The watershed is approximately 2,200 square miles, spanning Lewis & Clark, Teton, and Cascade Counties and includes the Sun River and several tributaries. The western boundary of the watershed is at the Continental Divide where the Sun River's headwaters originate in the Bob Marshall Wilderness. Heading east out of Sun Canyon, the Sun River crosses and feeds plains and agricultural lands, including a mixture of Federal, State, and privately-owned property for 97.4 miles until its confluence with the Missouri River at Great Falls.

Task A and B activities will occur throughout the watershed.

Task C activities will occur at the Floweree Canal, located at 47.558534, -112.405707 and indicated on Figure 1 by a gold star.

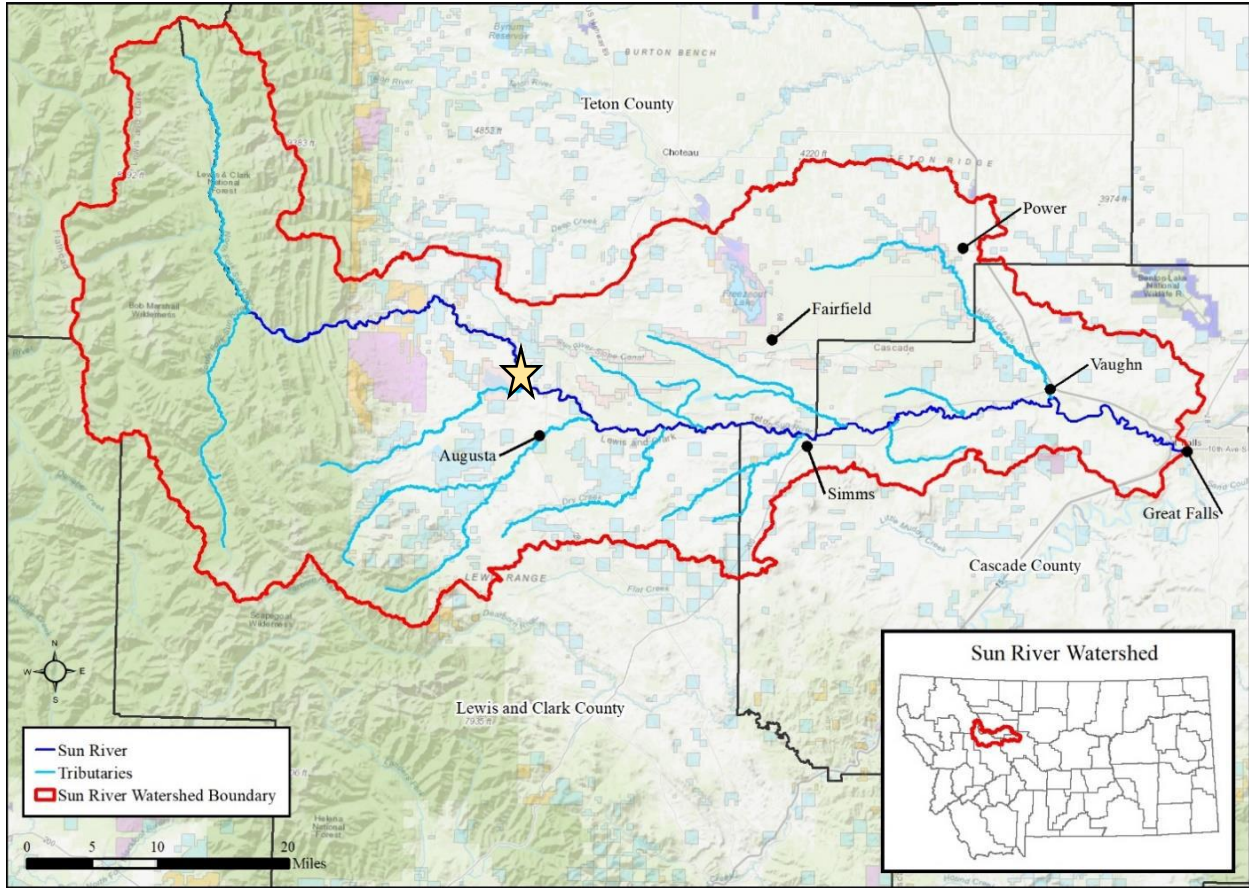


Figure 1. Map of the Sun River Watershed. Inset: location of watershed in Montana.

Applicant Category

SRWG began as a grass-roots group in 1994, focused on water quality issues on Muddy Creek, a tributary of the Sun River. Over the next 20 years, the group incorporated as a nonprofit (Sun River Watershed Group) and expanded – SRWG now works on the full watershed, from Gibson Dam to the city of Great Falls, improving the Sun River, its tributaries, and adjacent lands. SRWG has also expanded beyond water quality. Our Strategic Values include:

- *Improved water quality* through reduction of sediment, nutrients, and temperature;
- *Adequate stream flows* in all seasons that support multiple uses including agriculture, recreation, fish, and wildlife;
- *Restored hydrologic processes*, such as floodplain connectivity and river migration;
- *Enriched natural resources*, such as soils, fish, and wildlife;
- *Noxious weeds control*;
- *Community education* about watershed resources and stewardship; and
- *Monitoring and follow-up actions* to ensure project success.

These values, SRWG's mission, and our long-term workplan can be found in the recently updated [Watershed Restoration Plan](https://www.sunriverwatershed.org/resources) on our website: <https://www.sunriverwatershed.org/resources>.

Through the early 2000s, SRWG's work focused on water quality, stream flow, and weed control. When the founding Watershed Coordinator retired, SRWG worked through staffing issues and ultimately hired a new Executive Director. Under the current ED, SRWG has created a Strategic Plan, rebuilt our board and updated the bylaws (using CWMP funds). With other funding, SRWG updated the Watershed Restoration Plan and created a project matrix, which guide our work. As we enter 2024, our 30th, we will begin our next round of large-scale restoration with a project on Muddy Creek (design funded by CWMP, construction funded by a WaterSMART EWRP, state, and private funds).

SRWG's work is guided by input from stakeholder groups. SRWG holds annual Water Quality working group meetings, semi-annual Water Management working group meetings, and participates in meetings led by partners, such as monthly conservation and irrigation district meetings and annual Resource Working Group meetings.

Eligibility of Applicant

SRWG is eligible as an Existing Watershed Group.

Project Description

Under a previous CWMP grant, SRWG created a strategic plan (Attachment B) that describes SRWG's mission and strategic values:

SRWG works collaboratively to protect and restore the resources of the Sun River and its communities. This is accomplished by furthering the following strategic values:

- *Improved water quality*
- *Adequate stream flows in all seasons to support multiple uses*
- *Healthy fish and wildlife habitat*
- *Control of noxious weeds*
- *Restoration of hydrologic processes*
- *Collaboration with stakeholders*
- *Community education*
- *Sustenance of our organization*

SRWG has created several programs that help support these values, including:

- Water Quality
- Water Management
- Weed Control
- Fisheries
- Education/Outreach

SRWG has identified activities for this Proposal that will help expand existing programs and identify new programs that support our mission and strategic values. This will include

stakeholder outreach to guide expansion and development of programs, update to our outreach and fundraising plan to support programs, planning and execution of associated events and projects, and outreach to share SRWG's work with the public.

The activities will be accomplished by SRWG's Project Coordinator and Executive Director. This list is ambitious, and SRWG plans to seek additional support as needed to ensure all work is completed.

This Project includes activities associated with multiple tasks defined in the NOFO:

TASK A: WATERSHED GROUP DEVELOPMENT

Activity A1: Gather information about potentially reduced groundwater storage in irrigated portions of the watershed. As more irrigators change from flood to pivot irrigation, many stakeholders have noticed a dramatic reduction in groundwater recharge – one landowner noted he had to dig his well 200' deeper last year. SRWG will hire a consultant to gather information about recent conversions from flood to pivot irrigation and assess how conversions have impacted the watershed including groundwater storage and stream flows/timing of flows. This will include comparing places of historic flood irrigation to current flood and pivot irrigation, acquiring historic and current groundwater levels, and reviewing historic and current stream flows. This will help SRWG determine whether irrigation conversions are contributing to the problem and identify areas to focus future work to improve groundwater storage and where to focus future stream flow work.

Activity A2: Provide a tour and workshop at recently completed Arnold Coulee Project site. SRWG completed our first Low-Tech Process Based Restoration Project (LT-PBR) through mentorship from BLM and other local watershed groups. This was an inexpensive project that was easy to build without heavy equipment, and was an opportunity for SRWG to learn how to implement a LT-PBR program. LT-PBR uses natural materials, mostly found on-site, such as willows and posts/logs, to simulate natural processes, like beaver dams or large woody debris in a stream. The outcome is improved bank stability, repaired stream incision, better groundwater storage, and facilitation of revegetation. Feedback SRWG received indicates more Sun River watershed landowners are interested in using these techniques on their properties. SRWG will hold a tour of the completed project site for interested stakeholders, including potential funding and permitting entities, for the purpose of educating the public about this work and gaging interest in similar projects. SRWG anticipates needing to do maintenance at the Arnold Coulee project during this Project period and will hold a workshop so volunteer stakeholders can help do maintenance, further improving public understanding about this kind of work. The workshop may be separate or combined with the tour.

Activity A3: Create a program LT-PBR Program. SRWG will create an outline for a LT-PBR program that will guide future LT-PBR projects. This will be drawn from our learning experience planning and implementing the Arnold Coulee project, tour, and workshop,

from monitoring the Arnold Coulee project efficacy, through workshops and trainings SRWG staff and board attends, and by stakeholder outreach to be conducted during this Project period. *In 2024, SRWG will work with LT-PBR expert Amy Chadwick to identify potential future LT-PBR project sites in our watershed and to receive further guideship on this kind of work (funded by others, in preparation for this Project).* The deliverable for this activity is an outline for a new LT-PBR program and identification of future project sites.

Activity A4: Conduct outreach events, participate in partner meetings, and develop materials (brochures, website updates, social media) about SRWG's programs. This will include holding at least three events per year: two that showcase SRWG existing programs and at least one that showcases new or potential SRWG programs (in addition to the Arnold Coulee tour and workshop described above). SRWG will survey event attendees to assess satisfaction with the events and ways the program or event can be improved. In addition, SRWG will attend events and meetings organized by others when that event/meeting is a clear opportunity for SRWG to learn to address watershed issues. SRWG will also attend meetings, trainings, or workshops to learn about techniques or programs other watersheds are using to address problems similar to those our stakeholders have. SRWG will newsletters, create flyers, brochures, and social media campaigns to promote new & existing events, projects & programs. This will also include updates to the online, interactive map and the SRWG website to add projects & programs.

Potential events include:

A4-a: Rain Barrel Workshop: Two workshops have been held (2020 and 2022) and sold out, but SRWG has lacked the capacity to make this a regular annual event. Workshops include education about how collecting rain water helps reduce nonpoint source pollution, conserve water, and reduce pressure on municipal supplies. SRWG is asked by stakeholders each year to hold more rain barrel events, so we would use funds from this proposal determine how to make annual events possible and to create an event-planning document that streamlines the event process. As SRWG has been the pioneer for rain barrel events in Montana, the resulting document would be shared with other watersheds who wish to hold similar events, so this activity would have far-reaching benefits.

A4-b: Bear Aware Workshop: to be designed with Montana Fish, Wildlife, and Parks, building on the 2023 Bear Aware Workshop held in Sun Canyon. This will incorporate messaging into all of SRWG outdoor events to help attendees be safe while volunteering in a landscape that includes black and grizzly bears. This will also include exploring the need for annual or biennial "bear aware" workshops, with information about making homes and farms less attractive to bears and demonstrations of how to use bear spray. SRWG has learned through outreach that bear education and information about avoiding conflicts is important to our stakeholders.

A4-c: Volunteer Weed Control/Weed Pulls: SRWG hosts an annual Weed Whacker Rodeo that is very popular and has helped control weeds in the watershed. SRWG has been asked to hold more volunteer weed pulls and participate in weed control activities

hosted by our partners, however we lack the capacity to do so. This proposal will help SRWG explore additional events we might organize and which partner events we should participate in, as well as finding a way to fund this participation long-term.

A4-d: Volunteer River/Lake Cleanups: for the past couple years, SRWG has attempted various waterway cleanups that have received good feedback, but turnout is sporadic – likely due to our lack of capacity for outreach about the events. SRWG would use the increased capacity enabled by this Project to make cleanup events permanent. To date, efforts have included the Bashin’ Trash River Cleanup – a grass-roots river cleanup where volunteers spend a day picking up trash in their favorite park, fishing access site, or trail and the Freezout Lake Spent Ammo and Trash Cleanup, where volunteer remove spent ammunition and trash at this public park. SRWG would like to explore making these regular events and whether other similar events are warranted.

A4-e Fish Barrier and Habitat Assessment – SRWG staff and volunteers would follow [Southwest Aquatic Resources Partnership \(SARP\) protocol](#) for assessing Aquatic Organism Passage (AOP). This will help highlight fish passage barriers and areas of poor habitat for aquatic organisms, helping SRWG determine areas of need for future habitat projects. SARP’s protocol is accepted across the US and there will be a training in Montana in 2024 which SRWG staff will attend to learn the procedure.

Other Events to be determined – SRWG will attend events, workshops, and activities organized by groups similar to ours to learn how we might replicate their efforts to address our watershed issues. We will use feedback from surveys and stakeholder meetings to learn what kinds of outreach and events are wanted in the watershed and in which geographic areas to focus efforts.

Activity A5: Update SRWG’s outreach and fundraising plan. SRWG will use information gathered through surveys, events, and meetings to update our outreach and fundraising plan (Attachment C). This will include identifying and prioritizing new and existing programs and events, the plan to disseminate information about programs, projects, and events to the public, and will describe the necessary budgets to operate programs each year, including potential funding sources.

TASK B: WATERSHED RESTORATION PLANNING

Activity B1: Stakeholder survey to identify new program and event opportunities, ways to improve current or ongoing programs and events, and to determine the geographical areas of interest. This includes current and potential programs, volunteer activities and outreach/educational events. The survey will:

- Ask attendees of past events how those events could be improved
- Ask stakeholders what kind of event would they like to see SRWG hold and what kind of volunteer opportunities they would participate in
- List current and potential programs and ask stakeholders what additional resource needs would be helpful for SRWG to address
- Ask stakeholders where they live/work and where programs should focus activities
- Other questions suggested by SRWG’s board and partners; and,

- Offer one-on-one meetings with stakeholders who would like to provide details or who have additional concerns.

SRWG will also attend stakeholder meetings and meet one-on-one with stakeholders to ask similar questions. This will help round out information, as we realize not everyone likes to complete surveys.

Activity B2: Perform collaborative review of Water Quality program. SRWG has been gathering water quality data for the past 20 years in the same sites. These data provide baseline information so SRWG can identify areas of greatest need for future projects and see how projects improve water quality once implemented. The sites currently monitored were selected 20 years ago, based on which tributaries were likely contributing the most contaminants to the Sun River at that time. Over time, additional potential sources of contamination have been identified. This Proposal will support SRWG's time to work with our Water Quality Working Group to determine whether current sites are still the best places to be sampling – should we replace some sites with new areas of concern or add additional sites? SRWG will work under advice from the Working Group to review current water quality data and discuss additional sites to decide whether to maintain or alter our current sampling regime. The deliverable will be an updated Water Quality Sampling and Analysis Plan (SAP).

TASK C: WATERSHED MANAGEMENT PROJECT DESIGN

Activity C1: SRWG will have a Preliminary Design and Engineering Report (PER) created for the Willow Creek/Floweree Canal Water Management and Habitat Project. This is a top priority project, as identified by the Sun River Water Management Working Group (working group described in Section E.1.1.1. of this Proposal). This activity will include hiring an engineering consultant to create a report that includes:

- Identification of the problem
- Description and analysis of alternatives
- Identification of preferred alternative
- Description of cumulative benefits of the preferred alternative
- Preliminary designs for preferred alternative
- Construction cost estimate, including cost to complete design
- Description of the anticipated site-specific environmental compliance and permits that will be required to complete construction

The PER will be informed by stakeholder input, gathered through the formation of a Technical Advisory Committee (TAC). The TAC will be made up of stakeholders directly affected by the project, as well as stakeholders throughout the watershed representing related interests (fish, water management, water quality, recreation). The PER will draw on past reports, stream flow data, fisheries data, and other information collected at and around the site. This PER will be used to apply for construction funds, such as the WaterSMART EWRP program.

Further justification for this project is included in Sections E.1.2.1 and E.1.2.2. of this proposal and in Attachment D.

Previous CWMP

SRWG completed a *CWMP Phase I* grant in 2019. That grant supported tasks to help SRWG “reboot” our organization after our long-time Coordinator retired. This included updating bylaws, reorganization and recruitment of a Board of Directors, stakeholder outreach to inform a new mission and strategic plan, development of the strategic plan, and outreach to share the new Plan. The work associated with that funding is complete. This proposal differs from that CWMP because it builds on that work, developing programs and projects that arose from stakeholder outreach in development of that Strategic Plan and the recent update of the SRWG Watershed Restoration Plan.

Evaluation Criteria

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

E1.1.1. Sub-criterion No. A1. Watershed Group Diversity

SRWG is a well-established watershed group with a 30-year history of engaging with diverse stakeholders. We undertake several steps to ensure we support diverse interests:

- In recruiting a board of directors, SRWG seeks representation from various professional backgrounds and interests, as well as members representing all areas of the watershed. This can be seen by looking at our Board Member Skill Set Matrix (Attachment E). SRWG also reserves positions for a representative from each of the three conservation districts across the watershed and makes sure both irrigation districts in our area are represented on the board.
- SRWG hosts regular stakeholder meetings of our Water Management and Water Quality working groups. Summaries from each group’s most recent meeting are attached as Attachment F. Attendees include irrigation districts, conservation districts, fish and wildlife professionals (agency and nonprofit), hydropower, private landowners/citizens, natural resource professionals (state and federal), recreation groups, private businesses, universities, and more.
- SRWG’s staff and board regularly attend events and meetings organized by various stakeholders across the watershed. This includes fish & wildlife committees, irrigation and conservation districts, county commissioners, federal and state agencies. For example, SRWG’s Executive Director is an Associate Supervisor (non-voting member) on the Cascade Conservation District Board. She is also president of the local Trout Unlimited Chapter, attends board meetings for other stakeholders, participates in a community pond working group, and is helping guide grant programs as part of a Department of Natural Resource Conservation Stakeholder Group.

- In addition to SRWG's water quality and water management working groups, SRWG has a Fishery Management working group that meets less regularly, and SRWG participates in the Rocky Mountain Front Weed Roundtable working group (organized by others). SRWG's Executive Director also participates in *ad hoc* working groups organized by our partners as-needed, such as the outreach meetings that followed Elk Creek floods in 2018 and 2019.
- SRWG is a member of the Great Falls Chamber of Commerce and Montana Watershed Coordination Council (MWCC). SRWG's Executive Director is a board member of MWCC.

Participation in these groups, activities, and meetings ensures SRWG interacts and has two-way communication with a wide range of stakeholders and works to understand their needs. Most of SRWG's programs started due to stakeholder feedback, and potential new events and activities described in this Proposal were suggested by stakeholders.

E.1.1.2. Sub-criterion No A2. Geographic Scope

Activities in this Proposal will benefit the Sun River Watershed, a HUC 8 (10030104) watershed. Some programs, such as water quality and water management, have benefits that extend into the Upper Missouri (also a HUC 8 – 10030101).

The map on page 4 (Figure 1) shows the Sun River Watershed boundaries. This is slightly modified from the defined HUC 8 because SRWG also serves Freezout Lake. Freezout Lake is technically not in the HUC 8 boundary, but receives water from the Sun River landscape, so we also support stakeholders with interests at the lake.

As the watershed straddles three counties (Cascade, Lewis & Clark, and Teton), SRWG holds board positions for representatives from all three and attends meetings of all three groups. Activities described above will occur throughout the full extent of the watershed.

One way to better understand SRWG's work area and engagement throughout the watershed is to view our [web-based, interactive map](#). This is a work-in-progress that shows land ownership, stream gage and water monitoring sites, and is being updated to add recent and historic project areas.

Task A and B activities span the full watershed, as described above. Task C: Willow Creek/Floweree Canal Water Management and Habitat Project, was selected by the Water Management Working Group as our top-priority project. This project is located on the Sun River (see the gold star in Figure 1), and is anticipated to have positive effects on flows downstream and on fish populations that move above and below the project site.

E.1.2. Evaluation Criterion B – Developing Strategies to Address Critical Watershed Needs

E.1.2.1. Sub-criterion No. B1. Critical Watershed Needs or Issues

Key critical needs in the Sun River Watershed addressed by this Proposal include unstable water supply, poor water quality, and invasive weeds that may impede public well-being and livelihoods, as well as wildlife habitat.

Water Supply

The Sun River Watershed is east of the continental divide in Central Montana. Water is a limited resource, with 80% of supply coming from snowpack and precipitation most years.

Water is needed for food production – the Sun River provides irrigation for 116,000 acres, and food production (ranching and farms) makes up 63% of land use. Montana's, specifically the Sun River watershed's, agriculture is key to food production for our nation:

- In 2015, Montana [farmers harvested 44,200,000 bushels of barley](#), 73% of which were harvested in the Great Falls region.
- The Golden Triangle (fertile region in Central Montana that includes the Sun River Watershed) is [Montana's top producer of winter wheat](#), worth about \$400M annually.
- Cascade County (one of the counties overlapping the Sun River Watershed) [ranks 9th in beef production in Montana](#) and generates \$78M. [Teton County \(also in SR watershed\) ranks 18th](#) – cattle outnumber people in Teton County 8:1.
- [Thirty-five percent of the barley used to produce Coors beer](#) comes from Montana. The average farmer in Montana produces enough barley for 1 million cases of beer.

Limited water supply leads to low stream flows, which threatens food production. Greenfields Irrigation District (GID) analyzed releases from Gibson Reservoir and lengths of irrigation seasons going back to 2000 (Attachment G). Since 2000, the average length of an irrigation season has been 116 days, starting typically May 9 and running through September 2. Looking at the last three years, seasons have been only 104, 88, and 91 days. A shorter irrigation season means less growing time – which may translate into less food production and less income.

Water supply is also important for the Sun River fishery. While fish populations fluctuate annually (see Attachment H) and are much less than historical numbers, biologists concur that the Sun River has the potential to produce more fish. Analysis of the nearby Missouri River positively correlates fish populations to discharge (stream flows): more water equals more fish (see Attachment H). Due to irrigation and extended drought, reduced stream flows in the Sun River often leads to areas of dewatering, which reduces fish habitat and has a negative effect on fish populations. Fish rely of different types of habitat during different stages of their lives and at different times throughout the year. Low flows are a problem because they reduce the size of habitat and impair connectivity between types of habitat. Low flows also lead to increased temperatures, which stress fish and reduce fitness, also reducing productivity (spawning adult fitness and number of offspring). Through “wetted perimeter” analysis on the Sun River, FWP found low flows cause dramatic reductions in habitat and food production (insects and aquatic organisms that fish eat). Reduced fish populations represent an intrinsic loss to an important ecological value and equate to reduced fishing opportunities, impacting recreation, ultimately

negatively impacting Montana's tourism economy. Effects of the Sun River's unreliable stream flows are described further in a memo from Montana Fish, Wildlife and Parks to Reclamation (Attachment I).

As the Central Montana climate continues to be warm and dry, the Sun River watershed anticipates sinking deeper into drought. Projections from the National Weather Service for the coming (2023-24) winter call for warmer than normal temps and less than average precipitation. If this projection comes to pass, it could mean less snowpack, thus less water through hot summer months. (Data provided by [NOAA Climate Prediction Center](#).) Water will be at a premium and it will be even harder to stretch stream flows to satisfy the needs of food production, fish, recreation, fishing, and municipal water supplies.

Water Quality

The 2004 Total Maximum Daily Load ([TMDL](#)) report for the Sun River watershed compiled by DEQ describes threats to water quality. This report documented water quality conditions for the Sun River and other significant water bodies in the basin including likely sources of impairment. Some of the most common causes include: thermal modification, siltation, suspended solids, nutrients, and flow alteration. The most common sources of these degradations are agriculture, irrigated crop production, grazing or riparian pasture, and flow regulation/modification. These impairments have negative effects on Aquatic Life, Cold-water Fisheries, Drinking Water, Swimming/Recreation, Agriculture, and Industry. Some alarming takeaways from the TMDL include:

- The Sun River from Gibson Dam to Muddy Creek *is not likely to support* aquatic life or cold-water fisheries.
- Muddy Creek *is not likely to support* aquatic life, cold-water fisheries, or recreation, and *only partially supports* agriculture and drinking water (the town of Power gets their water from Muddy Creek).
- The Sun River from Muddy Creek to mouth (confluence with the Missouri at Great Falls) *is not likely to support* aquatic life or cold-water fisheries and *only partially supports* recreation, agriculture, or industry.



Figure 2. Sun River enters the Missouri at Great Falls

Impacts of Sun River impairments extend beyond the watershed (Figure 2). The City of Great Falls and Montana FWP monitor water quality on the Missouri River and note the Sun River is a major contributor of sediment to the Missouri. This affects fish habitat, water temperatures, sediment loading at dams, and other aspects of Missouri River health. Sediment routinely fouls the water intake for Wadsworth Pond in Great Falls, which is filled from the Sun River.

Weeds

Non-native plants are an issue across Montana because these weeds spread quickly and often out-compete native plants. This can create a “monoculture” where one non-native species dominates the landscape. Often nonnative plants have lower nutritional value for wildlife and livestock, so a landscape that is primarily made up of non-native plants has negative effects on wild and domestic animal fitness. For example, one study estimates a 97% reduction in available elk forage in lands where knapweed has invaded.

Weeds also interfere with agriculture, intermixing with cultivated plants and reducing value of crops. To combat this, farmers may treat their fields with chemicals to kill weeds, which end up in the soil and water causing compounded issues. “Containing existing [weed] populations, restoring rangeland severely degraded by invasive plants, and preventing the establishment of invasive plants in non-infested rangeland is critical to the ecological and economic integrity of western rangelands,” according to Montana State University Extension’s [Weed Control department](#).

The [Rocky Mountain Front Weed Roundtable](#) identifies the following as threats in the Sun River watershed: spotted knapweed, leafy spurge, Russian knapweed, whitetop, Canada thistle, musk thistle, and houndstongue. These nonnative, invasive weeds have little to no forage value, and in some cases are known to be toxic to livestock. Efforts to control or eradicate weeds are difficult because the seeds spread easily, often sticking to animal fur or human clothing, and the seeds can live for decades in the soil.

Other critical issues identified by stakeholders in recent years include threats to municipal water supply (water quantity and quality) and predation of livestock and danger to humans from bears. Stakeholder outreach continues to highlight new issues SRWG can help address.

E.1.2.2. Sub-criterion No. B2. Project Benefits

The activities described in this proposal address critical watershed issues in multiple ways. SRWG will use a variety of approaches including learning more about issues and potential solutions, hands on the land to directly tackle resource issues, and educating & empowering stakeholders to take action themselves:

Activity A1: Groundwater storage/irrigation report

Water Supply: Because water supply is limited in the Sun River watershed, it is important to understand how irrigation affects supply. As stakeholders have begun to point out,

changes to irrigation techniques may be negatively affecting groundwater supply. As groundwater is tied to surface water (stream flows help recharge groundwater, groundwater supplies streams with water late in the summer), SRWG seeks to understand how specific irrigation practices may be affecting groundwater. This activity will help SRWG understand the issue, identify how severe this issue is, and locate areas of urgent need. SRWG will use this information to work with water managers to implement solutions aimed at water reliability.

Water Quality: This proposed report will complement work in progress in our watershed by a PhD student studying how irrigation practices affect water quality.

Activity A2: Tour and workshop at Arnold Coulee project

Water Supply: Touring and holding a hands-on workshop at this project site will help stakeholders learn how LT-PBR projects help increase groundwater storage. As groundwater storage is increased, late-season stream flows should improve which will benefit fish, wildlife, and add flows needed for irrigation. Improved soil water will also facilitate vegetation growth, which provides cover, thermal refugia, and food supply for fish and other aquatic life. Improved flows will also facilitate better habitat connectivity for fish. This activity will help stakeholders see these benefits to the landscape and hopefully encourage them to work with SRWG to implement similar projects where similar needs exist. It is also important that permitting entities, potential funders, and future project partners get to see evidence of water supply improvements on the land, and this activity will provide that opportunity.

Water Quality: LT-PBR projects improve water quality by stabilizing banks to reduce erosion. In places where vegetation is sparse, these projects can encourage revegetation by raising the groundwater table. Vegetation helps stabilize banks, further reducing erosion, and can help filter nutrients from entering the stream. Reduced erosion will also benefit fish by providing better spawning habitat (sediment can suffocate fish eggs in the stream) and keeping stream temperatures down (turbidity can increase stream temperatures). Holding a tour and workshop on this site will help stakeholders see these improvements on the land.

Weeds: Through repeated site visits for project monitoring, tour, workshops, and planning activities, SRWG will be able to visually inspect the landscape for weed invasions. If weeds are spreading, we can implement future volunteer weed pulls at this project site.

Activity A3: Create LT-PBR Program

Water Supply and Water Quality: By creating a LT-PBR program, SRWG will facilitate more of these projects across the landscape, broadening the benefits to water supply, water quality, and habitat for fish and wildlife as described above. As more landowners implement LT-PBR on their small streams, groundwater storage across the watershed will be increased, improving late summer stream flows on a larger scale. This means more water in streams for fish and wildlife, and reducing pressure on reservoir storage for irrigation. Outreach and education about the LT-PBR project will not only help spread

more projects, but keeps the issues these projects seek to improve in the public eye, reminding people to be good stewards of our natural resources.

Weeds: As SRWG gets to know specific parts of the watershed more intimately to enact LT-PBR projects, we will be on the lookout for weed infestations we may need to address.

Activity A4: Potential Outreach events

A4-a: Rain barrel workshop: Rain barrel workshops address water supply and water quality. Participants each get a rain barrel to assemble, decorate, and set up at home and learn how gathering and reusing rain water helps conserve water and reduce stress on municipal water supplies. They also learn how collecting water at home reduces storm water runoff, thus reducing nonpoint source pollution. Participants learn of other ways to conserve water and reduce water pollution at home. Most of SRWG's programs focus farm and range resource improvements. Rain barrel workshops are a way for us to reach rural communities and cities and address resource improvements in towns.

A4-b: Bear Aware workshop: Bear safety is a new area of interest introduced by Sun River stakeholders. SRWG has learned that as grizzlies in particular have been expanding their territories, landowners want to know how they can protect their livestock and reduce attractants that bring bears close to homes and farms. As more people recreate in our area, it's also important to teach people how to avoid contact with bears as they camp, fish, hike, and hunt. SRWG is learning from FWP how we can teach landowners to use bear repellent, change behaviors, and otherwise be safe from bears.

A4-c: Volunteer weed control: SRWG has used volunteers to control weeds for over 25 years. These efforts have been effective, removing thousands of pounds of knapweed in Sun Canyon, thus reducing the spread of seeds downstream. However, we have lacked the capacity to consistently deal with other weeds or expand our weed control improvements beyond the canyon. SRWG will use this project to identify needs outside the canyon and beyond knapweed to control weeds by supporting partner events or additional events beyond our Weed Whacker Rodeo. Volunteers have great impact and many weeds can be controlled by hand-removal. SRWG has also learned that publicity for our weed pull event encourages people to more actively control weeds at home.

A4-d: Volunteer waterway cleanups: Volunteer waterway cleanups help improve water quality by removing trash that may contain pollutants from streams, rivers, and lakes. These events are also a great way to keep SRWG in the public profile and draw attention to our mission and our work. When SRWG holds cleanups, often the media show up and our efforts end up in the news. This helps remind people to pick up after themselves, but also shows that SRWG is doing good work for the community, resulting in more volunteers and more donations. As SRWG work is highlighted and funds are raised, it helps support all of our programs and projects. Cleanups also take volunteers out around the watershed and remind them of the value of our natural resources. Many volunteers report going back to those places to hunt, fish, and spend time with their families. As they do so, they tend to continue picking up trash or pulling weeds. By reminding people to enjoy resources and be good stewards, we further SRWG's mission and all our strategic values.

A4-e: Fish barrier and habitat assessment: Taking inventory of fish barriers and assessing habitat is an excellent way for SRWG to catalog areas of degradation – whether it be dewatered sections of the river, sources of poor water quality, weed infestation,

barriers to fish passage, or impairments to habitat quality. SRWG plans to follow provided protocol, documenting conditions and using that information to identify areas where future work is needed. This should lead to projects to improve water quality, secure water supply, control weeds, and address other fish and wildlife habitat needs.

Other: As SRWG surveys stakeholders and conducts outreach, we will identify other opportunities for events, workshops, and other activities that will address key watershed concerns.

Activity A5: Update outreach and fundraising plan

Updating SRWG's outreach and fundraising plan will help set goals and prioritize future efforts while identifying potential funding sources that will make this work possible. SRWG will use multiple approaches: social media, print & emailed newsletters, public meetings, tabling at events, and more to reach the public and let them know about resource concerns across the watershed, how we address those concerns, and how they can help.

Activity B1: Stakeholder survey

The stakeholder survey will focus on SRWG events and activities. We will seek to learn how valuable stakeholders feel past events have been, what kinds of events they would like us to organize, what resource needs are or are not being met by our activities, and whether they would be likely to attend future activities. This will help SRWG execute events that we know stakeholders are interested in and that meet community needs. By talking to the people who live and work across the watershed and finding out what they are concerned about and what they would like to learn, SRWG can use our time and resources more efficiently. The survey and associated outreach will inform the Outreach and Fundraising Plan and future activities.

Activity B2: Collaborative water quality program review

Water Quality: A collaborative review of SRWG's water quality program will help determine whether our current approach to water quality improvements is still relevant. For over 20 years, SRWG has collected water samples at the same sites and measured the same parameters. By holding meetings of the Water Quality Working Group and potentially assembling a Technical Advisory Committee, SRWG can make sure we are still addressing the water quality needs, or how we might need to alter our program to address changing conditions. In 2022, SRWG updated our Watershed Management Plan but could not afford at that time to take a deeper look into how water quality factors may have changed since the TMDL was created in 2004. This Project would allow us to do so.

Water Supply: Some of the watershed's water quality issues are related to supply. Where streams dewater, water temperatures tend to be higher, which is a form of poor water quality. Erosion caused by irrigation and fluctuating stream flows contributes to turbidity and nutrients in the water. By identifying sources of erosion or high sediment affecting water quality, SRWG may also find opportunities to improve water management to reduce fluctuation or excess flows, which would be likely to conserve water as well.

Activity C1: PER for Willow Creek/Floweree Canal Water Management and Habitat Project

The Broken O Ranch is one of the largest water users in the Sun River watershed with some of the oldest year-round water rights. The current head gate that allows water into the ranch through the Floweree Canal is antiquated: the head gate itself is operated manually and can be difficult to access and adjust, and the push-up dam that forces water into the canal requires frequent maintenance. This causes a few problems contributing to the crucial needs described above (water supply, water quality, and fish habitat):

- If the head gate is open and river flows bump up dramatically, such as in a rain storm, spring runoff, or when water managers are trying to send more water downstream to reach irrigators, more water enters the Floweree Canal than is intended. This has a negative effect on the river, as water ends up going into the canal instead of the river.
- When too much water goes into the Floweree Canal instead of to downstream irrigators as intended, those downstream irrigators have to open their headgates wider, drawing even more water from the river. This often occurs during summer when fish populations are already stressed from warmer water temperatures and are least able to tolerate lower flows.
- The push-up dam often requires maintenance, which makes the river turbid, activating sediment and reducing water quality.
- The push-up dam is a barrier to fish movability, especially during low flows.

This project will enable SRWG to hire an engineer to create a PER to fully describe the problem, assess multiple alternatives, and create a preliminary design for the preferred alternative that SRWG can use to pursue funds to implement. The goal will be to allow for more accurate management of the Floweree Canal headgate (through an automated headgate, for example) and remove or alter the push-up dam so it is no longer a barrier to fish passage. This project will improve water supply by improving water management. It will also improve water quality by eliminating the need for sediment-disturbing maintenance of the push-up dam and temperature impairments created by low flows. And, it will improve fish habitat and access to various types of habitat by removing or altering the push-up dam that is currently a barrier. A full description of this project and benefits can be found in Attachment D.

[E.1.3. Evaluation Criterion C – Readiness to Proceed](#)

The preliminary schedule for work proposed in the Project Description, including major tasks, milestones, details, dates, and responsible parties is presented below. To meet the page number limit, a more detailed version of this schedule is available as Attachment J. The detailed budget and narrative can be found in the budget section of this proposal and the attached Budget Narrative Form. *The timeline described here assumes funds for this project are available December 31, 2024. This schedule can be adjusted if that timeline changes.*

Activity A1 – Groundwater Irrigation Information Gathering

Task 1 – Consultant Selection

Milestones	Start Date	Complete Date	Responsible Party
Form Technical Advisory Committee (TAC)	01/2025	01/2025	ED, WQWG
Release Request for Qualifications	2/2025	2/2025	ED, TAC
Review submissions, make selection	3/2025	4/2025	ED, TAC
Contract selected consultant	4/2025	4/2025	ED

Task 2 – Report Development

Milestones	Start Date	Complete Date	Responsible Party
Hold kick-off meeting	5/2025	5/2025	ED, TAC, Consultant
Collect, analyze, and interpret data	5/2025	7/2025	Consultant
Draft report on findings	8/2025	8/2025	Consultant
Review and comment on report	8/2025	9/2025	ED, TAC
Incorporate comments, finalize report	9/2025	10/2025	Consultant
Release Report	10/2025	12/2025	ED

Activity A2 – Arnold Coulee Project Tour and Workshop

If tour and workshop are determined to be held separately, workshop will follow the same schedule as below, but in 2026.

Task 1 – Organize Tour

Milestones	Start Date	Complete Date	Responsible Party
Site visit to assess conditions	3/2025	3/2025	ED, PC
Plan workshop/tour	4/2025	6/2025	PC
Outreach for event	5/2025	7/2025	PC

Task 2 – Hold Tour

Milestones	Start Date	Complete Date	Responsible Party
Tour/workshop	8/2025	9/2025	PC/ED
Write-up for LT-PBR Program	10/2025	12/2205	PC, ED

Activity A3 – LT-PBR Program

Task 1 – Develop Program

Milestones	Start Date	Complete Date	Responsible Party
Draft program outline	3/2025	1/2026	PC
Finalize program outline	9/2027	12/2027	PC, ED

Task 2 – Execute Project

Milestones	Start Date	Complete Date	Responsible Party
Plan LT-PBR Project	1/2026	9/2027	PC

Secure permits	3/2026	7/2027	PC
Execute Project	3/2027	12/2027	PC

Activity A4 – Outreach and Events

Task 1 – Hold outreach events

	Start Date	Complete Date	Responsible Party
Milestones			
Hold at least 2 events for existing programs per year	5/2025	12/2027	ED, PC
Hold at least 1 event for new programs per year	5/2025	7/2025	PC

Task 2 – Other outreach activities

	Start Date	Complete Date	Responsible Party
Milestones			
Update interactive map	1/2027	12/2027	Consultant
Attend workshops and events	1/2025	12/2027	ED, PC
Develop new outreach materials	1/2025	12/2027	PC, ED

Activity A5 – Update Outreach & Fundraising Plan

Task 1 – Update Plan

	Start Date	Complete Date	Responsible Party
Milestones			
Draft updates to Plan	4/2025	1/2027	ED, PC
Seek board feedback on plan	1/2027	7/2027	ED
Finalize and have board approve final plan	7/1017	12/2027	ED

Activity B1 – Stakeholder Survey

Task 1 – Survey Stakeholders about events and programs

	Start Date	Complete Date	Responsible Party
Milestones			
Email survey	4/2025	12/2025	ED, PC
In-person surveys	4/2025	12/2025	ED, PC
Follow up	4/2025	12/2025	ED, PC

Activity B2 – Review Water Quality Program

Task 1 – Review Water Quality Program

	Start Date	Complete Date	Responsible Party
Milestones			
Review current WQ program	4/2025	1/2026	PC
Seek WQWG feedback	1/2026	10/2026	PC
Review draft changes	11/2026	1/2027	PC

Task 2 – Release Updated WQ Program

	Start Date	Complete Date	Responsible Party
Milestones			
Finalize updated plan	2/2027	10/2027	PC

Activity C1 – Preliminary Engineering Report

Task 1 – Consultant Selection

Milestones	Start Date	Complete Date	Responsible Party
Form Technical Advisory Committee (TAC)	4/2025	5/2025	ED, WMWG
Release Request for Qualifications	6/2025	7/2025	ED, TAC
Review submissions, make selection	8/2025	9/2025	ED, TAC
Contract selected consultant	11/2025	11/2025	ED

Task 2 – Report Development

Milestones	Start Date	Complete Date	Responsible Party
Kick-off meeting	1/2026	1/2026	TAC, ED, Consultant
Collect project information	2/2026	6/2026	Consultant
Draft PER	7/2026	8/2026	Consultant
Review and comment on PER	8/2026	9/2026	ED, TAC
Incorporate comment and finalize report	9/2026	10/2026	Consultant

Task 3 – Report release

Milestones	Start Date	Complete Date	Responsible Party
Share final report	10/2026	12/2026	ED

Abbreviations: ED – SRWG Executive Director; PC – SRWG Project Coordinator; WQWG – Water Quality Working Group; WMWG – Water Management Working Group.

New Policies and Administrative Actions required to implement activities in this Proposal:

SRWG will be hiring a second full-time employee (for the first time in our history) to help implement the activities described in this proposal. To prepare for this (prior to the implementation of this Project), our Employee Handbook will undergo legal review to make sure internal policies and procedures comply with federal, state, and local laws. SRWG will develop a hiring procedure, create a job description and work plan, and will hire this employee in 2024 – prior to the execution of funds requested in this Proposal. Most of the activities in this proposal will be largely the responsibility of this new employee, and this is an important opportunity and next step in growing our capacity to serve the resources and communities in the Sun River watershed.

For Task C, SRWG will procure an engineering consultant using a competitive procedure following federal and state requirements. SRWG has experience in this area, having competitively hired consultants for past projects.

E.1.4. Evaluation Criterion D – Presidential and Department of the Interior Priorities

E.1.4.1. Climate Change

This project will address impacts of climate change and combat the climate crisis by improving water security. This includes improving water use efficiency and water quality through our Task C activity. Our outreach and education efforts will help stakeholders learn more about water conservation, including workshops like the Rain Barrel event that will help them conserve at home and reduce strain on municipal water supplies. It's important not just to conserve and secure access to water, that water must be clean and useable. The water quality program helps SRWG learn where to direct projects and programs to improve water quality throughout the watershed. Programs like our proposed LT-PBR project will help improve groundwater storage, which combats drought and other symptoms of the climate crisis, and helps reduce erosion, which results in better water quality.

Many of the activities in this proposal will help improve stream flows, which combats the climate crisis. Streamflows help recharge ground water, so that water is available late in the summer, mitigating drought. Warmer air temperatures that come with climate change typically result in warmer water temperatures, especially where stream flows are minimal. Projects that improve stream flows help keep water cooler, which is good for fish and other aquatic life. As climate change induces drought, our projects to improve stream flows also help maintain habitat connectivity so fish can move through different parts of the stream to access food, cover, thermal refugia, and spawning habitat.

As SRWG hosts events and distributes outreach materials about our programs, stakeholders will learn more about water conservation, use efficiency, and water quality. An educated public will be an important tool in mitigating climate change and drought.

E.1.4.2. Benefits to Disadvantaged, Underserved, and Tribal Communities

According to the Interactive Climate and Economic Justice Screening Tool, portions of the watershed to be served by this project are considered “disadvantaged”, including:

- Portions of Teton County
- Portions of Lewis & Clark County
- The City of Great Falls

Activities associated with this project will improve water quality and water conservation, which will improve the reliability of adequate water to avoid additional economic hardship (through loss of food production capability if irrigation water were insufficient or through diminished recreation/angling income if water supply in the river were insufficient to support fish, as agriculture and recreation income are important to this region).

This project does not directly benefit a Tribe *at this time*. However, the [Little Shell Tribe of Chippewa Indians of Montana](#) was recognized as a tribe in 2019 and includes members living in the Sun River Watershed (Great Falls). The Tribe has expressed an interest in other projects occurring in our watershed due to historic tribal activity, and SRWG hopes to work on understanding the tribe's historic area and use and how we might support that.

Project Budget

Figure 3. Summary of Non-Federal and Federal Funding Sources.

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
DNRC – Planning Grant, Floweree Project	\$30,000.00
In-kind non-federal board member support	\$9,716.76
Non-Federal TAC participation	\$4,318.56
Water Quality Program Revision	\$2,399.20
Weed Control Program Donations	\$1,700.00
Other non-match support not shown above is described below	
Non-Federal Subtotal	\$48,134.52
REQUESTED RECLAMATION FUNDING	\$297,366.00
PROJECT TOTAL	\$345,500.52

Details from Figure 3:

Because this funding will be awarded at least a year from now, these estimates are rough. Though there is no matching requirement, we wanted to show that there is strong stakeholder support for this work.

DNRC – Planning Grant, Floweree Project. In 2024, SRWG will apply for funding for additional support for the Floweree Habitat Project described in this proposal. This funding will help further the design for the preferred alternative to get the project closer to construction-ready and more fund-able when we are ready to pursue construction dollars.

In-kind non-federal board member support – This reflects board member time at board meetings, which will be key to keeping this project moving forward. This number is based on 3 years of funding * 4 meetings per year * average 3 hours per meeting * 9 board members attending * federal average volunteer rate (\$ 29.99).

Non-Federal TAC participation – This reflects the two projects for which SRWG will assemble Technical Advisory Committees (Floweree Habitat and Groundwater/Irrigation Report). We estimate 3 non-federal employees participating on each TAC and estimate based on: 2 projects * 3 non-federal employees * 24 hours of time per person * \$29.99 federal average volunteer rate. This is probably grossly underestimated as people who volunteer for the TAC likely have a much higher pay rate.

Water Quality Program Revision – Most of the people who support this effort are federal employees, but we anticipate 2 representatives from Montana State University’s Water Quality program and at least 3 other non-federal Water Quality Working Group members will help with this revision. We estimate all 5 water quality professionals spending at least

16 hours each on this effort. We used the federal volunteer rate of \$29.99, though actual value of their time is probably much higher.

***Other support not shown in Figure 3:

SRWG receives financial contributions from partner organizations and donations from the public which aren't shown in Figure 3. These funds will be used to match other grants, so SRWG did not want to show them as match here, but it is important to show that we do have broad support that will help us accomplish our work. Some of these contributions are targeted towards specific programs, such as stream gages or habitat improvements, and all go towards furthering our mission. SRWG's annual financial support from partners typically includes:

Conservation Districts:	\$10,000
Irrigation Districts:	\$10,000
County Commissioners:	\$3,000
Flood District:	\$2,000
Private Ranches:	\$5,500
Other NGOs:	\$9,000
SRWG annual fundraising campaigns:	\$14,500
SRWG Board Members:	\$3,550
Total average annual support (non-federal, not from grants)	\$48,640

SRWG also receives annual support from federal sources. For example, we have an annual award through BLM that supports aquatic habitat and helps fund stream gages and water quality work. We also receive annual funds from DEQ that supports lab analysis for water quality data. SRWG also applies for federal and non-federal funds to support specific projects and programs as needed.

Environmental and Cultural Resources Compliance

Not applicable. This project does not include on-the-ground construction.

For the Task C activities, Environmental and Cultural Resources Compliance will be completed as part of the Construction phase.

Required Permits or Approvals

This project does not require any permits. SRWG has permission to access water quality and stream gage sites that might be visited through the course of the activities in this Proposal. SRWG will seek landowner permissions for any additional site access required to complete activities in this proposal.

Overlap or Duplication of Effort Statement

This proposed project does not overlap or duplicate any other active or proposed projects by SRWG. SRWG has other work that is complementary to this project and we are careful to track expenses and staff time such that it is completely separate. We are able to provide proof of such separation and lack of duplication.

Conflict of Interest Disclosure Statement

SRWG is not aware of any actual or potential conflicts of interest.

Uniform Auditing Report Statement

SRWG has not previously been required to undergo an audit and does not spend \$750,000 or more in Federal awards during our fiscal year. We are aware of this requirement and will track funds and have an audit if so required.

SF-LLL: Disclosure of Lobbying Activities

Not applicable. SRWG does not participate in lobbying activities to any degree.

Letters of Support



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
Lewistown Field Office
920 NE Main Street
Lewistown, MT 59457
<http://www.blm.gov/montana-dakotas>

October 5, 2023

US Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber
PO Box 25007
Denver, CO 80225

**RE: 2023 Sun River Watershed Cooperative Watershed Management Grant– NOFO
R23AS00362**

Dear Ms. Morgan and Committee:

The U.S. Department of Interior, the Lewistown Field Office of the Bureau of Land Management (BLM) is writing in support of the Sun River Watershed Group's (SRWG) WaterSMART Water Strategy Proposal to develop "Expanding Collaborative Programs and Projects in the Sun River Watershed".

A key element of this proposal is to develop new SRWG programs to expand their ability to improve natural resources and support local communities. One potential program SRWG will consider is low-tech process-based stream restoration (LTPBR). BLM partnered with SRWG to implement a LTPBR project in 2022-2023. The goals of this project were to reduce sediment, aggrade an incised channel, improve groundwater storage, and expand riparian vegetation. The project also served as a training opportunity for SRWG staff so they could assess the process, amount of time, funding, and effort involved in these types of projects. This project has already started achieving the ecological goals, and the SRWG staff was eager and engaged throughout the process. The WaterSMART Water Strategy program would be a valuable tool for SRWG and partners to help restore ecosystem services across the watershed using low-tech and cost-effective methods.

BLM has worked closely with SRWG for close to two decades, largely on aquatic habitat improvements and water quality monitoring; and we participate in the Water Quality Working Group. In our experience, SRWG is a valuable voice for conservation and restoration in the Sun River watershed. They are well-respected by partners and any effort to expand their capacity to further serve communities and resources will have long-ranging benefits.

The SRWG is comprised of a diverse array of stakeholders including agencies, private landowners, state and local governments, and other entities concerned with the resources of the watershed. Over the past 29 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. The SRWG's mission to protect and restore water resources aligns closely with BLM's multi-use mission. BLM 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 our natural resources.

BLM supports this project because it leverages local partnerships, is inclusive in meeting land management needs, and overall will have a lasting impact on critical landscapes. Please contact me if you have any specific questions regarding our support of the SWRG and this proposal. Thank you.

Sincerely,



Bonny Richard
Hydrologist
Lewistown Field Office



Lewis and Clark Conservation District

790 Colleen Street, Helena MT 59601 406.389.3895 <https://lewisandclarkcd.org>

October 31, 2023

US Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber
PO Box 25007
Denver, CO 80225

RE: 2023 Sun River Watershed Cooperative Watershed Management Grant- NOFO R23AS00362

Dear Ms. Graber and Committee:

Lewis & Clark Conservation District (LCCD) supports the Sun River Watershed Group's (SRWG) WaterSMART Water Strategy Proposal to develop "Expanding Collaborative Programs and Projects in the Sun River Watershed".

LCCD works closely with SRWG – SRWG's staff regularly attend our meetings and events, and a supervisor from LCCD is appointed to the SRWG board. Because of this close relationship, LCCD has witnessed SRWG's successful stakeholder outreach and execution of projects and events that address resource needs.

LCCD has worked with SRWG to host events, such as a rain barrel workshop and annual river cleanup, and we value SRWG's ability to engage stakeholders and garner their support and participation in events. Enabling SRWG to expand their programs through this CWMP grant will have watershed-scale benefits to natural resources and local communities. There are many potential projects that could be realized in LCCD with the aid of this funding.

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 29 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. LCCD 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 our natural resources.

Please contact me if you have any specific questions regarding our support of the SWRG and this proposal. You may contact me at 406-389-3884 or by email at chris@lewisandclarkcd.org. Thank you.

Respectfully,

LEWIS & CLARK CONSERVATION DISTRICT

A handwritten signature in black ink, appearing to read "Chris Evans", written in a cursive style.

Chris Evans
District Administrator

SUN RIVER WATER MANAGEMENT WORKING GROUP

October 31, 2023

US Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber
PO Box 25007
Denver, CO 80225

RE: 2023 Sun River Watershed Cooperative Watershed Management Grant– NOFO R23AS00362

Dear Ms. Graber and Committee:

The Sun River Water Management Working Group (WMWG) supports the Sun River Watershed Group's (SRWG) WaterSMART Water Strategy Proposal to develop "Expanding Collaborative Programs and Projects in the Sun River Watershed". The WMWG is comprised of agency representatives, water managers, fish biologists, hydrologists, private citizens, and many others who have an interest in responsible management of Sun River flows to support agriculture, fish and wildlife, municipal, recreation, and other uses.

A key element of this project is to develop a plan to improve infrastructure surrounding the Floweree Ditch and Willow Creek Outlet in a way that improves the ability of managers to deliver the irrigation water they need while leaving adequate flow in the river to protect aquatic resources. For many years now, the WMWG has identified rehabilitating the Floweree Canal Headgate, diversion dam, and Willow Creek Reservoir outflow canal as a major opportunity for improving water management of the middle Sun River, including decreasing river dewatering especially during times of drought. The Floweree Canal diversion dam is a rock structure and it is difficult to control the water surface elevation at the dam and subsequent diversion down the canal through the headgate. Also, outflows from Willow Creek Reservoir, which are made to offset diversion at the Floweree Canal as well as the Fort Shaw Canal further downstream, enter the Sun River right at the diversion dam. This substantial inflow of water at the dam causes difficult hydraulic conditions which compound the problem of regulating diversions down the Canal. In addition to addressing the problems with the diversion dam, the project also would include automation of the Floweree Canal headgates, which likewise would contribute to more timely and precise adjustments of Floweree canal diversions.

During the peak irrigation season, the Watershed cooperators struggle to maintain a 130 CFS minimum flow needed to maintain aquatic life in the middle sections of the Sun River. Because diversions demands for the Floweree Canal can be half or more of the total flow in the Sun River at that location, a more precise means of controlling diversions down the of Floweree Canal would help to consistently meet instream flow needs for ecological benefits. Better management of the diversion at the Floweree Canal also would result in more efficient use of the stored water in Willow Creek Reservoir, and associated benefits to the reservoir fishery. Even small errors in operations in this section of the river can result in *less-than-ideal flows in the river, which can*

SUN RIVER WATER MANAGEMENT WORKING GROUP

have adverse impact on aquatic life. On the other hand, releasing more water from Willow Creek Reservoir than is needed can lead to shortages later in the season or lower reservoir levels going into the winter, which can be damage reservoir fisheries and lessen the chance of refilling the reservoir before the next irrigation season.

The multi-disciplinary Sun River WMWG would like to express our support for the proposed site assessment, data-driven recommendation, and design for a preferred alternative to improve the irrigation infrastructure at the Floweree Canal Headgate, Diversion Dam, and Willow Creek Reservoir outflow project described through this Sun River Flow Restoration Planning Project Proposal. Though this project is part of a larger plan for SRWG and partners to improve water reliability and drought preparedness in the watershed, **this project has the potential to have the greatest impact to water reliability** in the middle section of the Sun River. Inefficient use of stored water from Willow Creek Reservoir or higher than intended diversions from the Floweree Canal can lead to dewatering in the middle portions of the Sun River. Even if this dewatering only occurs for a short period of time before the operators can readjust, *the fisheries and aquatic life have been impacted and the recovery time can be long.* Benefits to improving irrigation efficiency and water supply reliability in this section will extend throughout the watershed. For instance, more efficient management of this middle section of the Sun River could lessen overall demands on Gibson Reservoir and leave more water in storage for when and where it's critically needed. The Sun River Water Management Working Group includes representatives from:

- Broken O Ranch
- Cascade Conservation District
- Fort Shaw Irrigation District
- Greenfields Irrigation District
- Healthy Rivers Consortium Initiative
- Lewis & Clark Conservation District
- Montana Department of Natural Resources & Conservation
- Miscellaneous public citizens
- Missouri River Flyfishers Chapter of Trout Unlimited
- Montana Fish, Wildlife & Parks
- Montana Trout Unlimited National Weather Service
- Natural Resources Conservation Service
- Northwestern Energy
- Sun River Watershed Group
- Trout Unlimited
- US Bureau of Reclamation
- USGS

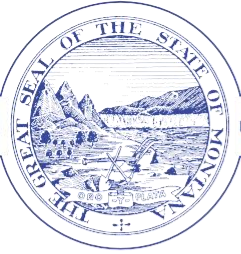
Thank you for considering this grant request.

Larry Dolan
Committee Chairman
Sun River Water Management Working Group

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

Water Resources Division

1424 9th Ave, Helena, MT 59620-1601 Phone: (406) 444-6601 Fax: (406) 444-0533



GREG GIANFORTE, GOVERNOR

1539 ELEVENTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE: (406) 444-2074
FAX: (406) 444-2684

PO BOX 201601
HELENA, MONTANA 59620-1601

US Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber
PO Box 25007
Denver, CO 80225

November 20, 2023

RE: 2023 Sun River Watershed Cooperative Watershed Management Grant– NOFO R23AS00362

Dear Ms. Graber and Committee:

The Department of Natural Resources and Conservation (DNRC) strongly supports the Sun River Watershed Group's (SRWG) WaterSMART Water Strategy Proposal to develop "Expanding Collaborative Programs and Projects in the Sun River Watershed".

A key element of this project is to develop a plan to improve resources surrounding the Floweree Ditch and Willow Creek Outlet. Currently, this area is not ecologically functional and is of concern to DNRC for multiple reasons. We support SRWG's proposal to develop designs to better control the amount of water leaving the Sun River through the Floweree Canal. DNRC looks forward to serving on the Technical Advisory Committee for this project so we can ensure goals of the project are to better control the amount of water leaving the Sun River (therefore, the amount of water left in the river for ecological purposes) and the re-design of the push-up dam that facilitates water conveyance to the canal.

DNRC also supports SRWG's intention to grow existing and new programs. Funding from this project can only improve the impact SRWG is able to have on the watershed ecosystems. This project will help SRWG pull in diverse stakeholders and educate the public about this important work and project outcomes. DNRC and SRWG have partnered on many projects for many years. SRWG has proven to be successful at stakeholder engagement and implementing projects and programs with long-term, watershed-scale benefits.

Please don't hesitate to contact me if you have any specific questions regarding our support of the SWRG and this proposal.

Respectfully,

Michael

Michael Downey
DNRC – Drought Program Coordinator



October 10, 2023

US Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber
PO Box 25007
Denver, CO 80225

RE: 2023 Sun River Watershed Cooperative Watershed Management Grant– NOFO R23AS00362

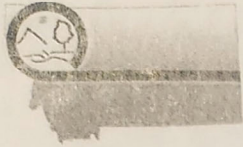
Dear Ms. Graber and Committee:

Montana Watershed Coordination Council (MWCC) supports the Sun River Watershed Group's (SRWG) WaterSMART Water Strategy Proposal to develop "Expanding Collaborative Programs and Projects in the Sun River Watershed". MWCC has provided funds for several SRWG efforts, supporting both on-the-ground projects and capacity-building. SRWG has a proven track record of delivering projects on time and within budget. SRWG is a leader in stakeholder outreach and implementing projects and events to address stakeholder concerns and natural resource issues. MWCC applauds SRWG's ability to identify a need and take action. Examples include improving organizational effectiveness through developing project identification and prioritization tools, updating guidance documents like the Watershed Restoration Plan, and breaking new ground to find creative solutions. For example, SRWG was the first local watershed group to implement Rain Barrel events to engage urban stakeholders, educate them about nonpoint source pollution and water conservation, and empower them to be a part of the solution. SRWG has implemented much of this work through the Big Sky Watershed Program, which provides mentorship to newly graduated college students, engaging them in careers in natural resources. We believe funding through this proposal will enable SRWG to grow, reach more stakeholders, and address natural resource concerns more deeply.

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 29 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. MWCC shares SRWG's desire to support healthy watersheds and thriving communities, and MWCC is confident SRWG has the ability and capacity to carry out this project and that the project will have long-term, watershed-scale benefits to Montana's natural resources.

Respectfully,

Amy Seaman
Executive Director, Montana Watershed Coordination Council



TETON CONSERVATION DISTRICT

Ross Salmond, Chair
Clay Crawford, Vice-Chair
Dean Pearson, Treasurer
Vicki Baker
Nancy Moorhouse, Admin

1102 Main Avenue N. Choteau, MT 59422

406 466-5722 x103

tetoncd@yahoo.com

Mark Larson
Tony Clark
Spencer Richins
Lee Dahlman, Associate

November 14, 2023

US Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber
PO Box 25007
Denver, CO 80225

RE: 2023 Sun River Watershed Cooperative Watershed Management Grant– NOFO R23AS00362

Dear Ms. Graber and Committee:

The Teton Conservation District was established in 1947 to work cooperatively with local landowners for ensuring the wise management of our natural resources in a responsible and efficient manner. This includes soil and water conservation best practices on agricultural lands.

Teton Conservation District (TCD) supports the Sun River Watershed Group's (SRWG) WaterSMART Water Strategy Proposal to develop "Expanding Collaborative Programs and Projects in the Sun River Watershed".

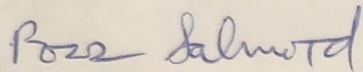
TCD works closely with SRWG and witnesses their successful stakeholder outreach and execution of water quality, water management, and weed control programs. SRWG recently implemented a Low-Tech, Process-Based Restoration project in Teton County as an effort to show local stakeholders inexpensive but effective techniques for stream restoration. SRWG also held a Bear Aware education event this summer to help residents and visitors to Sun Canyon learn to avoid contact with black bears and grizzlies. Additional stakeholder outreach includes the various weed pulls throughout the area to minimize the spread of noxious weeds. These examples demonstrate SRWG's meeting stakeholder needs and addressing needs in a realistic, publicly accessible way.

TCD believes this funding opportunity could help SRWG further identify stakeholder needs and build up existing programs and new ones to benefit the public and natural resources in our region.

Sun River Watershed Group 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. Teton Conservation District has worked closely with the Sun River Watershed Group in the past and is confident the organization can carry out this project creating long-term, watershed-scale benefits to water quality and our natural resources.

Teton Conservation District continues to partner and support SRWG as they work to implement a sustainable, resilient solution. Please contact me if you have with questions at 406-466-5722 x103.

Sincerely,

A handwritten signature in blue ink that reads "Ross Salmond". The signature is written in a cursive style with a large, sweeping "S" at the beginning.

Ross Salmond
Chair
Teton Conservation District

Troutwest Fly Fishing

To: US Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber
PO BOX 25007
Denver, CO 80225

Re: 2023 Sun River Watershed Cooperative
Watershed Management Grant– NOFO R23AS00362

Dear Ms. Morgan and Committee:

TJ Laviolette of Troutwest supports the Sun River Watershed Group's (SRWG) WaterSMART Water Strategy Proposal to develop "Expanding Collaborative Programs and Projects in the Sun River Watershed".

A key element of this project is to develop a plan to improve resources surrounding the Floweree Ditch and Willow Creek Outlet. Currently, this area is not ecologically functional and is of concern to Troutwest for multiple reasons. I support SRWG's proposal to develop designs to better control the amount of water leaving the Sun River through the Floweree Canal (therefore, the amount of water left in the river for ecological purposes) and the re-design of the push-up dam that facilitates water conveyance to the canal. The current structure is likely a barrier to fish habitat connectivity and should be modified or removed. I also support improvements to stream-side vegetation and other factors that will improve aquatic habitat and connectivity.

Troutwest has been a partner on many SRWG projects and planning efforts, and sees SRWG as a valuable partner capable of carrying out such projects.

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 29 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. Troutwest has worked 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 our natural resources.

Please contact me if you have any specific questions regarding our support of the SRWG and this proposal. Thank you

Respectfully,

TJ Laviolette



Troutwest Fly Fishing
Owner and Outfitter

Troutwest Fly Fishing

(406) 223-2473

troutwest.mt@gmail.com

troutwestflyfishing.com



Patrick Byorth
Director, Montana Water Program

November 21, 2023

US Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber
PO Box 25007
Denver, CO 80225

**RE: 2023 Sun River Watershed Cooperative Watershed Management Grant– NOFO
R23AS00362**

Dear Ms. Graber and Committee:

Trout Unlimited (TU) supports the Sun River Watershed Group’s (SRWG) WaterSMART CWMP Proposal to develop “Expanding Collaborative Programs and Projects in the Sun River Watershed”. Trout Unlimited is a national organization dedicated to protecting, reconnecting, restoring and sustaining trout and salmon habitat. In addition to being a member and supporter of the SRWG for well over 20 years, Trout Unlimited has worked closely with the SRWG in the past and is confident the organization can carry out this project and that the project will have long-term, watershed-scale benefits to stream flows, irrigation needs, and aquatic species. 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 29 years, SRWG has worked hard to improve water reliability and management in the Sun River watershed and has a proven track record of developing collaborative approaches to watershed improvements.

This project includes the goal of crafting a plan to address and improve resources for the Floweree Ditch intake and the Willow Creek outlet on the Sun River. These two features impact trout populations, degrade the ecological functionality of this stretch of the river, and are ripe for upgrading. Improvements to these two diversions will improve control over the allocation of water from the Sun during the irrigation season, thereby augmenting flows and connectivity for aquatic species. The proposal will also improve fish passage by mitigating a longstanding barrier at the Floweree Canal intake.

TU also hopes to serve on the Technical Advisory Committee for this project, so that our staff can help ensure that the project’s aim—to support irrigation withdrawal efficiency and bolster instream flows—has sufficient support over the project’s duration. TU staff can also provide support and recommendations for the fish passage, revegetation, and other technical components of the project in this capacity.

This proposal will also benefit SRWG’s existing programs and priorities. Funding from this proposal will expand the impact SRWG is able to have on the ecosystems and communities

surrounding the Sun River and will help SRWG pull in diverse stakeholders and educate the public about its work. TU looks forward to the benefits this project will provide to the river, the fishery, and water users throughout the watershed.

Please contact me if you have any specific questions regarding TU's support of the SWRG and this proposal.

Respectfully,

A handwritten signature in blue ink that reads "Patrick Byorth". The signature is fluid and cursive, with the first name "Patrick" and last name "Byorth" clearly legible.

Patrick Byorth
Director, Montana Water Program



4600 Giant Springs Road
Great Falls, MT 59405
September 28, 2023

Re: Sun River Watershed Group Grant Proposals R23AS00362, R23AS00226, R23AS00109

To whom it may concern,

Montana, Fish Wildlife and Parks (FWP) supports the Sun River Watershed Group's (SRWG) proposals that aim to improve the Sun River. The Sun River ecosystem is impaired by chronic dewatering, thermal stress, and sediment pollution. SRWG has been working on solutions to these problems for past 25 years and Montana Fish, Wildlife and Parks appreciates the strategic planning process SRWG has followed to identify and prioritize projects that may address these issues.

Projects identified within SRWG's 2019 Strategic Plan and the Muddy Creek Restoration and Resiliency Project aim to address and repair the continual degradation of the Sun River. FWP looks forward to SRWG implementing projects that will result in improved in-stream flows including cooperative, actionable drought resiliency plans. We encourage SRWG to conduct monitoring to evaluate and report on the success of these projects. Specifically, monitoring should be completed to evaluate if the projects are successful in improving habitat quality, water quality, and water quantity.

Regional FWP fishery biologists benefit from SRWG's assistance in removing communication barriers among water users across the Sun River watershed. Their work has generated new avenues for collaboration among private landowners, state agencies, water managers, and conservation districts across multiple counties. FWP has worked closely with the Sun River Watershed Group in the past and is confident the organization will continue to implement projects that have long-term, watershed-scale benefits to the natural resources and communities in the watershed.

Thank you,

Jason Rhoten
Regional Supervisor
Montana Fish, Wildlife and Parks

Official Resolution



RESOLUTION of the SRWG BOARD OF DIRECTORS September 5, 2023

In regards to a project funding proposal by the Sun River Watershed Group (SRWG) to the Bureau of Reclamation in response to Notice of Funding Opportunity No. BOR-R23AS00362 Cooperative Watershed Management Program:

WHEREAS the mission of SRWG is to collaboratively restore and protect the resources of the Sun River watershed and its communities;

WHEREAS the proposed activities in the prepared proposal support the mission of SRWG;

WHEREAS the Board of SRWG has reviewed the above-mentioned application;

WHEREAS SRWG has the staff capacity and broad support from members and partners to carryout the direct and indirect tasks proposed in this proposal;

Be it resolved:

1. SRWG is in full support of the proposal entitled "Expanding Collaborative Programs and Projects in the Sun River Watershed" to the WaterSMART CWMP Grant, a program of the US Bureau of Reclamation;
2. SRWG Executive Director Tracy Wendt is authorized to submit this Proposal and act as (or appoint) Project Manager on behalf of SRWG; and,
3. SRWG board and staff will work with Reclamation to meet all established deadlines for entering into a grant or cooperative agreement and necessary for the completion of proposed activities.



Erling A. Juel, P.E., SRWG Board of Directors



Date

PO Box 7312
Great Falls, MT 59406
www.sunriverwatershed.org

(406) 214 2868
tracy@sunriverwatershed.org