

**Building Trust, Reducing Conflict, and Developing Projects to Address Water Scarcity,
Water Quality, and Fish Passage in the Bitterroot Watershed, Montana**

Applicant: Bitter Root Water Forum
Address: 178 S. 2nd Street/PO Box 1247
Hamilton, MT 59840

Project Manager: Andrea Price, Restoration Coordinator
Address: 178 S. 2nd Street/PO Box 1247
Hamilton, MT 59840

Email: andrea@brwaterforum.org
Telephone: 406-375-2272

Building Trust, Reducing Conflict, and Developing Projects to Address Water Scarcity, Water Quality, and Fish Passage in the Bitterroot Watershed, Montana

Table of Contents

1. Executive Summary 4

2. Background Data 4

3. Project Location 6

Map 1. Project Area: The Bitterroot Watershed of western Montana 6

4. Technical Project Description and Milestones 6

Applicant Category 6

Eligibility of Applicant 7

Goals 7

Approach..... 8

Task A: Watershed Group Development..... 8

Task B: Watershed Restoration Planning 8

Task C: Watershed Management Project Development 9

5. Evaluation Criteria 9

Evaluation Criterion A 9

Sub-criterion No. A1 9

Sub-criterion No. A2..... 11

Map 2. Geographic Extent 12

Evaluation Criterion B 13

Sub-criterion No. B1 13

Sub-criterion No. B2 15

Evaluation Criterion C 16

Sub-criterion No. C1 16

Sub-criterion No. C2..... 18

Evaluation Criterion D..... 21

Appendices	
1	Project Budget
2	Environmental and Cultural Resources Compliance
3	Required Permits and Approvals
4	Letters of Support
5	Official Resolution

1. Executive Summary

Date: November 13th, 2019

Applicant: Bitter Root Water Forum (BRWF)

City/County/State: City of Hamilton, Ravalli County, Montana.

The Bitterroot Watershed in western Montana holds the oldest water rights in the state and one of the most complex water delivery systems, with more than 30 irrigation districts and ditch companies, 26 back-country dams, and thousands of individual diversions and ditches. The watershed also supports ESA-listed Bull Trout and is a draw worldwide for fishing and recreation. The activities outlined in this proposal support the development of local solutions to water scarcity, water quality, and fish passage, each identified as primary limiting factors to local water resources. They are based on the culmination of several watershed assessments and plans from agency, local government, and irrigator partners. The applicant, Bitter Root Water Forum (BRWF), is a grass-roots organization that brings the community together to steward water resources through on-the-ground projects and education. For this proposal, BRWF has partnered with Trout Unlimited (TU) to add capacity and technical support in irrigation infrastructure, water rights, and project development. This grant will allow BRWF and TU to engage with existing partners and increase participation from affected stakeholders through targeted outreach with irrigators and resource professionals. It will also support project design for our highest priority projects. Our goals for this grant are to:

- 1) Reduce conflict between irrigation and ESA-species and/or water quality,
- 2) Improve our understanding of water supply management needs in the Bitterroot,
- 3) Strengthen relationships and build trust with major irrigators,
- 4) Identify local solutions that improve water delivery for irrigation while benefitting water quality and/or fisheries, and
- 5) Develop “shovel-ready” projects to improve water quality, quantity and/or fish passage in priority streams.

This project will be executed in the two years following receipt of funds; thus, the estimated completion date is late 2022. The proposed project is located in the Bitterroot Watershed which includes significant area of National Forest; some project activities may occur on these lands.

2. Background Data

The Bitterroot Watershed in western Montana (HUC: 17010205) occupies an area of 2,899 square miles within Ravalli and Missoula Counties, including a portion of the city of Missoula. It is formed by the Bitterroot mountains to the west and the Sapphire mountains to the east. With a wide valley and meandering channel, it flows northward nearly 75 miles to its confluence with the Clark Fork River in Missoula, MT.

The Bitterroot valley holds the oldest water rights in the state of Montana. Established in the late 1800's, the irrigation system is made up of several irrigation districts and is one of the largest and most complex in Montana. In addition to substantial ditch and canal systems from the mainstem Bitterroot River and thousands of tributary diversions, water is primarily supplied and managed by 26 back-country dams; many of which were built prior to Forest Service

establishment. These reservoirs are largely managed by private entities, and their potential capacity and infrastructural integrity is not well documented. Painted Rocks Reservoir and Lake Como (a Bureau of Reclamation project) are both managed for irrigation and in-stream flow, and offer a substantial boost to the Bitterroot river during peak irrigation season.

While irrigation is currently the largest influence on water use, the Bitterroot Valley is also one of the fastest growing regions of Montana, exerting additional demand on groundwater resources and further fragmenting aquatic habitat through housing and road development. Tourism has also grown in recent years. The Bitterroot is among the most heavily fished rivers in the state, with a substantial number of anglers traveling from out of state. The shifting economy and high growth rates of Ravalli County, as well as the continued growth and development of the city of Missoula, could change the primary water usage of the Bitterroot Watershed in the future.

The headwater streams that eventually flow into the Bitterroot River begin on Forest Service land, and generally support the cold, clean, connected stream habitat required for native aquatic species, including ESA-listed Bull Trout and Westslope Cutthroat Trout, a State Species of Concern. Limiting factors in these upland forests include excess sediment from logging and roads, fire impacts, and fish passage barriers from road systems. As these streams flow into the valley bottom, they encounter new challenges: irrigation withdrawals, agricultural and municipal run-off, loss of riparian cover, and stream habitat fragmentation.

When assessing the main impediments to stream and fishery health in the Bitterroot, there is broad consensus among managers and the scientific community: water quality, water quantity, and fish passage barriers rank among the highest challenges. The primary nonpoint source pollution issues in the Bitterroot Watershed, based on the Montana DEQ's assessment of Total Maximum Daily Loads, are temperature, sediment, and nutrients. Temperature impairments are directly related to dewatering from irrigation or loss of riparian shade. Excess sediment is delivered from roads or eroding streambanks where riparian vegetation has been limited, and nutrient exceedances stem from both agricultural and wastewater sources.

Water quantity issues are best documented in Montana Fish Wildlife and Parks' list of chronically dewatered streams (MFWP 2015, see Map 2). These are streams that regularly run dry due to irrigation withdrawals, preventing fish movement, and creating lethal temperatures in remaining wetted areas.

Fish passage barriers relate both to upstream migration barriers, generally formed by undersized road culverts or full-spanning irrigation diversions, as well as entrainment in ditches, considered a downstream migration barrier. Upstream barriers reduce the habitat available to fish that rely on a migratory life history, while downstream barriers generally reduce fish populations by entraining juvenile and young-of-year as they travel to larger river systems.

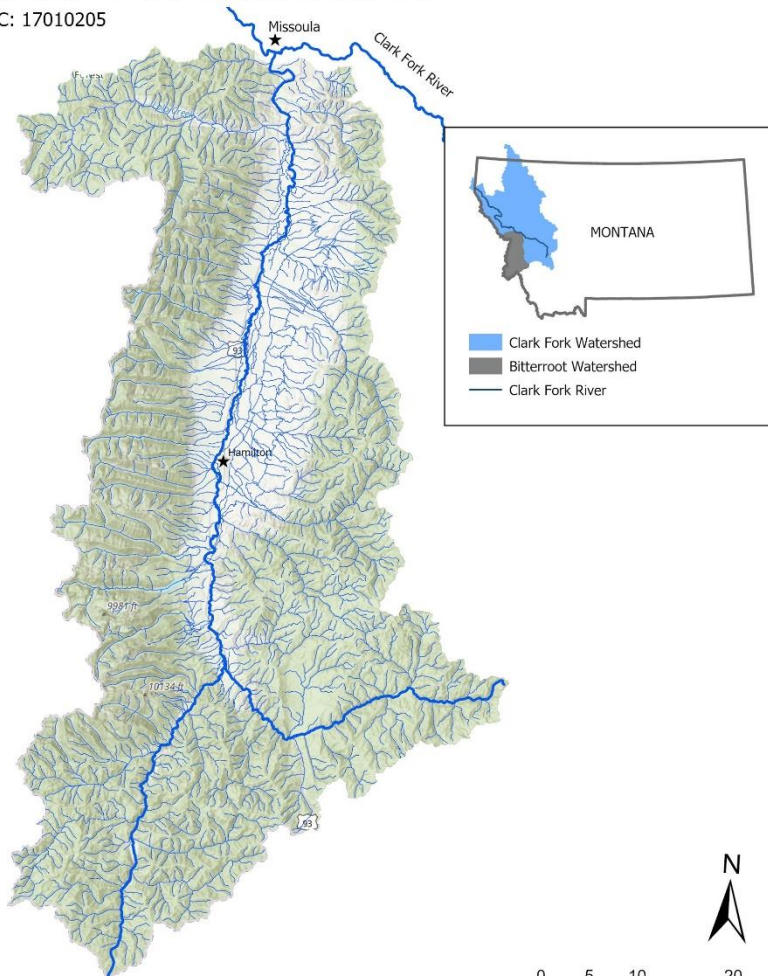
BRWF and TU have been successfully combating the water quality, quantity and fish passage issues in the Bitterroot Watershed for decades through community outreach and direct project implementation.

3. Project Location

The Bitterroot Watershed (HUC 17010205) is a subbasin of the Clark Fork Watershed in the Northern Rocky Mountains of western Montana. The Bitterroot River flows south to north, originating in the Bitterroot and Sapphire Mountains and ending at its confluence with the Clark Fork River in Missoula, MT. The watershed contains all of Ravalli County and a portion of Missoula County, draining an area of 2,889 square miles.

Bitterroot Watershed

HUC: 17010205



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Map 1. Project Area: The Bitterroot Watershed of western Montana

4. Technical Project Description and Milestones

Applicant Category. BRWF is an Existing Watershed Group. The group was established in 1993 by concerned citizens and a Montana State University Extension Agent, who all recognized the need to better understand and steward local water resources. The group has since expanded to include hydrologists, biologists, agricultural producers, outfitters, and other representatives of the

watershed community. BRWF brings the community together to protect, enhance, and restore the watershed on which the communities and wildlife of Ravalli and Missoula Counties rely. This is achieved through restoration projects and watershed education made possible through partnerships with private landowners, collaboration with the Forest Service, and funding from grant programs and community fundraising efforts. The BRWF has a long history of successful restoration projects achieved through these partnerships. These include riparian restoration and fencing to reduce temperature, sediment and nutrient delivery to impaired streams, as well as road reclamation projects on the Bitterroot National Forest. Through collaboration with local stakeholders, we have completed a myriad of planning documents, including the Bitterroot Subbasin Plan for Fish and Wildlife Conservation and the Bitterroot Watershed Restoration Plan.

BRWF has recently dedicated organizational resources to create a Restoration Coordinator position. This newly filled position will increase BRWF's capacity to develop and implement projects deemed as priorities during past planning efforts. This staff member will develop projects alongside private landowners and agency partners and manage these projects to ensure their short- and long-term success.

BRWF has also partnered with Trout Unlimited on this proposal to add additional capacity and expertise. Trout Unlimited has a long history working in the Bitterroot watershed and has been involved in many projects to mutually benefit fisheries and irrigators. These include: improving reservoir storage for instream flow and irrigation; replacing undersized culverts and diversions that limit fish passage; installing fish screens in priority ditches; and reducing cattle impacts to riparian habitat. Trout Unlimited will offer technical support and capacity in project development, knowledge of irrigation infrastructure and upgrades, and legal expertise to assess the water rights implications of potential projects.

Eligibility of Applicant. BRWF is an existing watershed group that is grassroots, non-regulatory, and addresses water quantity and quality issues within the Bitterroot watershed of western Montana. With over 25 years of continued operation, BRWF has demonstrated its ability to promote the sustainable use of water resources in the Bitterroot watershed and to make decisions on a consensus basis. BRWF represents and partners with a diverse group of stakeholders including agricultural operators working in livestock grazing and irrigated agriculture, private property owners, members of the fishing and recreation/tourism industries, municipal water supply managers, as well as Federal, state, and local governments.

Goals. BRWF is a community driven non-profit organization dedicated to supporting the traditions of agriculture, community, and recreation by protecting, enhancing, and restoring the Bitterroot Watershed through on the ground restoration projects and watershed education. Using the watershed approach, BRWF brings the community together to find local solutions to watershed stewardship.

The goals outlined below are based on the culmination of several watershed assessments and plans that identify water scarcity, water quality, and fish passage as the primary limiting factors to the water resources of the Bitterroot Watershed. These goals will be achieved through the

successful completion of the tasks outlined in the Approach section of this application. They include:

1. Reduce conflict between irrigation and ESA-species and/or water quality;
2. Improve our understanding of water supply management needs in the Bitterroot;
3. Strengthen relationships and build trust with major irrigators;
4. Identify local solutions that improve water delivery for irrigation while benefitting water quality and/or fisheries;
5. Develop “shovel-ready” projects to improve water quality, quantity and/or fish passage in priority streams.

Approach. BRWF and TU have a successful record of engaging the Bitterroot community and resource professionals to develop locally-based solutions to challenging water management problems. Since the BRWF was formed in 1993, developing trust across a wide range of stakeholders was vital to better understanding the factors limiting water resources. This proposal builds upon recommendations from multiple resource assessments and prioritizations from State, Federal, and private entities. All point to the need for improved water management to benefit water users, water quality, and native fish. Specific tasks include:

Task A: Watershed Group Development

No proposed activities

Task B: Watershed Restoration Planning

B1. Water Supply Management Working Group: BRWF and TU will initiate a working group of irrigators and natural resource professionals to discuss Bitterroot water delivery and management needs. We will focus on answering the following questions:

1. Where are there inefficiencies/challenges in the way that water is diverted and delivered (e.g. aging infrastructure, ditch seepage, unreliable water sources)?
2. What technology, infrastructure improvement or legal support do irrigators need to improve water management?

As a better understanding of the water management needs of irrigators is gained, BRWF and TU will overlay this information with known natural resource needs to identify opportunities to improve water management that will also benefit aquatic resources. Likely projects include: upgrading in-stream diversions to improve water take and open fish passage; ditch lining and other efficiency projects; evaluating opportunities to update existing infrastructure to improve instream flows, including upgrades to backcountry dams or managed recharge using existing canal systems. As broad ideas synthesize towards specific projects, BRWF and TU project managers will begin project scoping and design through Task C1, described below.

B2. Consolidate data on irrigation and streamflow interactions and fisheries impacts:

Numerous assessments have been conducted in the Bitterroot to better understand how water is being used, limiting factors to stream and fishery health, and the interaction between irrigation and streamflow. These include:

1. Bureau of Mines and Geology assessment of irrigation return flows and impacts to the Bitterroot River;
2. Critically dewatered streams (current and target flow rates);
3. Current major irrigation infrastructure (canal systems, major ditches and associated control structures);
4. Bitterroot streams supporting Bull trout (Federally-threatened species) and Westslope cutthroat trout (State species of concern);
5. Back-country dam locations and capacity;
6. Road systems, culverts and passage barrier status (partial barrier, full barrier, unknown).

BRWF and TU will combine the results from these disparate efforts into a series of maps, tables and reports that are understandable by the general public, and summarize current use and management. These materials will be used in stakeholder meetings (Task B1) to identify existing conflicts, data gaps, and potential projects to be pursued as part of Task C1.

Task C: Watershed Management Project Development

C1. Develop projects to improve water management, water quality and fisheries: Through extensive planning and partnership development, BRWF and TU have identified several priority projects to improve water management, water quality, and fisheries. These projects have been identified as priorities, and are at various stages of development. During the first year of the project, CWMGP funds would support the development of these projects including landowner meetings, project scoping, design, and permitting.

We anticipate that several priority projects will also emerge as part of the proposed Year 1 Working Group and Data Consolidation activities (Tasks B1 and B2). Year 2 funds will, therefore, be used to pursue these projects. Potential activities may include: a more detailed assessment of back-country reservoir current capacity and infrastructural integrity; irrigation efficiency projects; or irrigation infrastructure upgrades. BRWF and TU expect to complete much of this project development in-house, through their project managers, but have also allocated \$35,000 from this proposal for contracted services (engineering and design) associated with this task.

5. Evaluation Criteria

Evaluation Criterion A— Watershed Group Diversity and Geographic Scope

Sub-criterion No. A1. Watershed Group Diversity. BRWF is known throughout the Bitterroot as a group that effectively balances resource management with the needs of the Bitterroot's diverse community. While our mission is to advocate for, and protect, Bitterroot Water Resources, we know this is only possible if we represent and accommodate the needs of all community members. This means bringing together diverse users of our water resources - including agricultural producers, local government, anglers, resource managers and residents - to identify

overlapping problems, and common solutions. Our members and partners include a wide range of parties, listed below, and the diversity of support for our efforts is clearly demonstrated in our enclosed letters of support. Some of these entities are existing collaborative relationships, while others are new to our partnership. Task B1 of this proposal is specifically aimed at building relationships with major irrigators in the valley, a group largely under-represented in conversations about natural resource conservation, but with the potential to be a major partner in solutions. Affected Stakeholders include:

- **Agricultural producers:** Agriculture (primarily cattle grazing and haying) has a deep history in the Bitterroot Valley. However, increased demand for housing, increased land prices and challenging agricultural economics have all led to substantial losses in agricultural land. In the 1980's agricultural lands comprised 73% of private land in the valley. By the 2000's, that had dropped to 63%, a loss of over 40,000 acres (Swanson, 2006). BRWF's addition of Agriculture Advisors and hosting of community forums relevant to agricultural producers have helped us build trust among these water users.
- **Irrigation Districts and Private Irrigators:** The Bitterroot has some of the oldest and most complex water rights and water delivery systems in the state. With several major canal systems, thousands of individual diversions and 26 back-country reservoirs, irrigators have the strongest human influence on water resources in the valley. They also have a long history of compromise and ingenuity to maintain the health of the river and fishery. BRWF has started offering educational courses and tours in partnership with irrigators to build trust with this community.
- **Bitterroot Residents:** The BRWF is a community-driven organization with a goal of genuinely engaging residents through public meetings, conservation and education programs. In 2019 (an average representation of annual outreach and citizen participation in events) we hosted: one field tour on irrigation and farming; one continuing-education course on water rights; one film event on fisheries and restoration; four presentations on climate, water supply, and water quality; and a river clean up, directly engaging more than 371 local residents.
- **Public Land & Resource Managers:** The Bitterroot National Forest manages 86% of the land in the Bitterroot watershed including crucial strongholds for threatened species. The National Forest, along with Montana Fish Wildlife & Parks and the US Fish and Wildlife Service, are active partners in the BRWF and guide our conservation priorities.
- **Conservation Groups:** BRWF works closely with Trout Unlimited, Big Sky Watershed Corps, Bitterroot Audubon, Bitter Root Land Trust, and the Clark Fork Coalition.
- **Local Government:** BRWF has, and will continue to, partner with the Bitterroot Conservation District; Ravalli County (Roads, GIS, and Health Departments); City of Hamilton; and Irrigation Districts.
- **Recreation & Tourism:** The Bitterroot's iconic river, mountains and history draw visitors from across the globe and Tourism contributes an estimated \$36 million to the valley each year (Grau, 2019).
- **Fishing and Fishing Industry:** The Bitterroot River is one of the most heavily fished rivers in Montana (MFWP, 2018), and is a primary draw for residents and visitors. Fishing also supports the livelihoods of various recreation industries including fishing guides and fly-fishing shops. BRWF will actively work to include members of the fishing

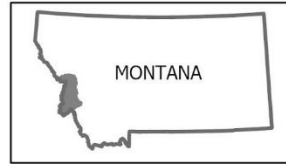
industry in conversations about water management through public forums and targeted outreach materials.

Sub-criterion No. A2. Geographic Scope. The Bitterroot Watershed (HUC: 17010205) is dominated by public land, generally high in the watershed, and private land in the valley bottom. The headwater streams that eventually flow into the Bitterroot River begin on Forest Service land, and generally support cold, clean, connected stream habitat required for our native aquatic species, including ESA-listed Bull Trout. Water resource concerns on Forest Service land are generally related to water quality, (sediment inputs from roads and timber harvest), and aquatic organism passage (undersized culverts). We actively work with Forest hydrologists, fish biologists and rangers to implement priority water resource projects on their land, and on private land adjacent to the Forest (Task C1).

As these streams flow into the valley bottom, they encounter new challenges: irrigation withdrawals, agricultural and municipal run-off, loss of riparian cover, and stream habitat fragmentation. The BRWF and Trout Unlimited have a long history of partnering with private landowners to improve aquatic habitat and water resources. This proposal will allow us to engage with existing partners, increase participation through targeted outreach (Task B1) and develop water quality, quantity and fisheries projects on private land (Task C1)

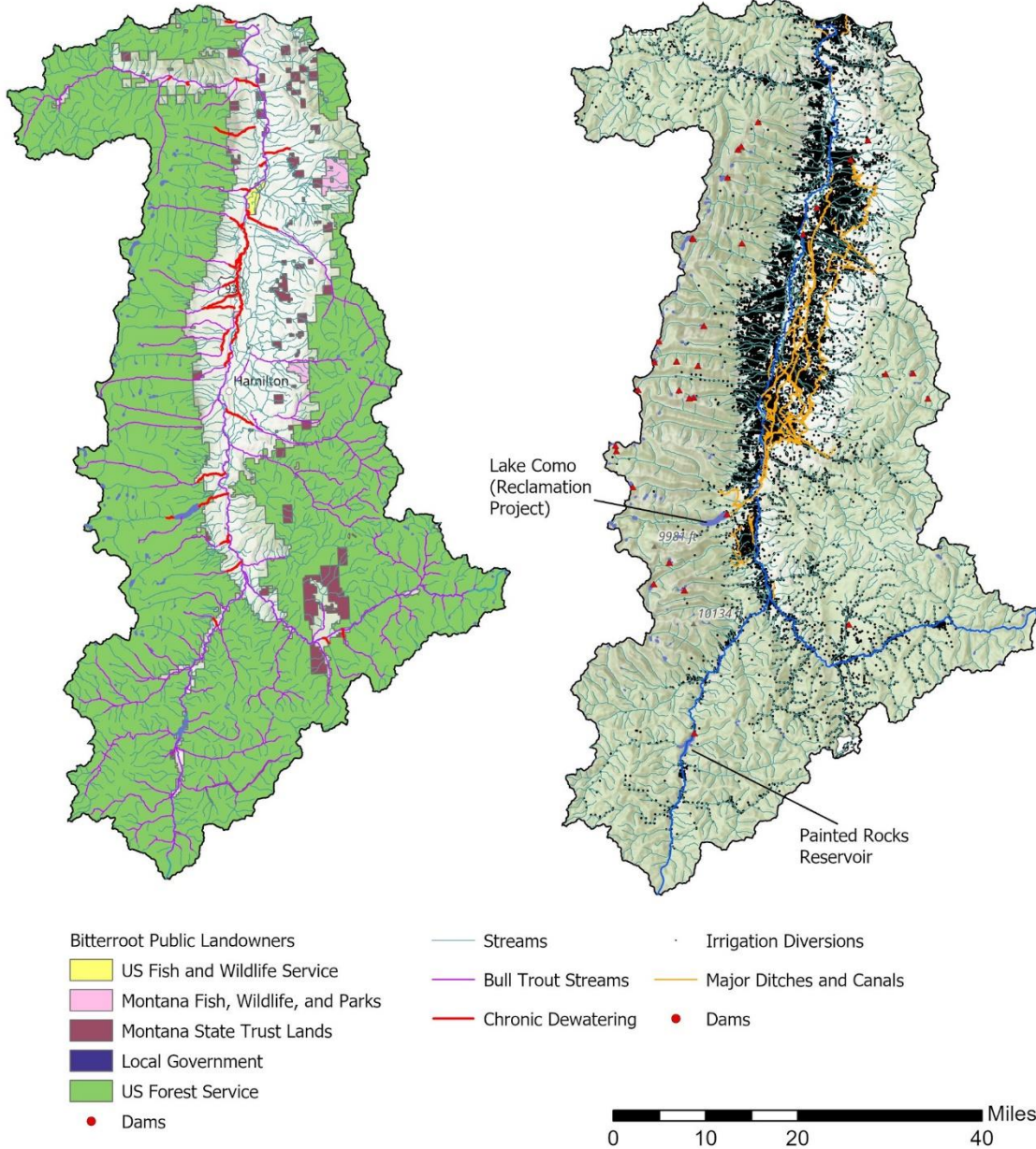
Like most watersheds, there are more potential projects that time and funds allow. We rely on resource professionals and agricultural partners to help us prioritize projects based on resource concerns (dewatered streams, Bull Trout streams, 303(d)-listed streams) and stakeholder buy-in.

Bitterroot Watershed: Geographic Scope



Land ownership and Resource Concerns

Irrigation Infrastructure



Map 2. Geographic Extent: *Left map: Bitterroot headwater streams are generally managed by the Bitterroot National Forest and support Bull trout populations. As these streams enter private land in the valley bottom (white), irrigation results in dewatering, often disconnecting these tributaries from the Bitterroot River. Right map: Irrigation infrastructure (headwater reservoirs, irrigation diversions and major canals) exerts substantial influence throughout the Bitterroot valley (right map) and irrigators are key stakeholders.*

Evaluation Criterion B — Addressing Critical Watershed Needs

Sub-criterion No. B1. Critical Watershed Needs or Issues. The BRWF works closely with resource managers across several agencies to direct organizational priorities. BRWF Projects Committee and Agriculture Advisors include State and Federal biologists and hydrologists, research scientists, land conservation managers, and longtime farmers and ranchers. We seek additional counsel from State and Federal land managers, stockgrowers, irrigators, and agricultural producers, as needed. The priorities outlined below are based on the culmination of several watershed assessments and plans that identify water scarcity, water quality and fish passage as the primary limiting factors to water resources. As part of the Bitterroot community, BRWF and TU know the vital economic and cultural role of agriculture in the Bitterroot valley, and thus are tasked with seeking solutions that support both.

Water Supply:

Concern: The Bitterroot basin is highly overallocated. Bitterroot tributaries and the Bitterroot River are used to irrigate both sides of the valley through an extensive network of canal and ditch systems while additional development in the valley has increased demand for groundwater, which in turn, impacts surface water flow. Many Bitterroot tributaries are chronically dewatered (MFWP, 2015. See Map 2) and are completely dry in their lower reaches during irrigation season most years. The Bitterroot River itself loses about 100 cfs, 20-25% of its total volume, over the 30 miles between Darby and Victor before groundwater and irrigation return flows begin to supplement flow.

Opportunity: Water scarcity is a challenge across the West, and has no easy solutions. However, the Bitterroot already offers several examples of mitigating water shortages. Traditional instream flow leases and irrigation efficiency projects are some of the solutions that have already made a difference in the Bitterroot that BRWF and TU will continue to utilize, but we are also interested in opportunities to use existing irrigation networks and infrastructure to improve streamflow. For example, the valley is home to 26 backcountry reservoirs, mostly privately managed, that could be improved to increase built water storage. There are several examples of reservoir improvement projects that were able to allocate a portion of stored water to instream flow, most notably, 15,000 acre-feet ($\frac{3}{5}$ of total stored water) in Painted Rocks Reservoir and 3,000 acre-feet in Lake Como. Similarly, research on valley hydrology demonstrates that irrigation has a substantial impact on streamflow recharge due to ditch seepage and flood irrigation practices. Task B2 will consolidate existing data on irrigation/streamflow interactions, allowing us to assess the potential of managed recharge in the valley.

Conflicts between agriculture and fisheries:

Concern: The Bitterroot valley is home to Bull Trout (federally threatened), Westslope Cutthroat Trout (State species of concern), as well as suite of nongame and wild trout species with high recreational fishing value. Agriculture can negatively impact fisheries in three distinct ways: reduced streamflow from irrigation results in warmer water temperatures and a physical disconnection between tributaries and rivers, prohibiting

migration; grazing can reduce stream cover and increase bank erosion, resulting in poor water quality; and irrigation infrastructure can prohibit fish migration and entrain fish in ditches.

Opportunity: BRWF and TU have expertise in reducing conflict between agriculture and fisheries. Examples include riparian fencing and planting, upgrading diversions to allow for fish passage, installing fish screens or improving irrigation efficiency to reduce withdrawals. On all of these projects, BRWF and TU seek opportunities to improve the agricultural producer's operation through efficiency or infrastructure upgrades to make management easier. Task B1 and C1 will focus on identifying and developing projects to mitigate conflicts between agriculture and ESA-species.

Water quality:

Concern: Water quality has historically been the primary focus of BRWF. Based on the Montana Department of Environmental Quality's TMDL assessment, the Bitterroot faces several water quality concerns with increased sediment, temperature and alteration of streamside or littoral vegetative cover are the most common water quality impairments. Agriculture, grazing, and roads are the primary sources of these impairments.

Opportunity: Montana DEQ has done a thorough assessment of TMDL's and currently is offering increased financial support to projects in the Bitterroot valley to improve water quality. BRWF has a long history of water quality projects such as riparian fencing, planting and reducing road-stream interactions and has hired a project manager to increase the number and quality of projects we put on the ground. BRWF also recently completed a Watershed Restoration Plan focused water quality improvement. Task C1 will allow us to develop these priority projects in Year One.

Fish passage:

Concern: Fish passage barriers, often associated with irrigation or road systems, are a substantial problem for native Bitterroot fish who rely on migration to reproduce and survive. Passage barriers to upstream migration limit the extent of available habitat and often include undersized culverts and full-spanning irrigation diversions. Barriers to downstream migration are usually associated with entrainment in ditches; fish traveling downstream are inadvertently pulled into a ditch and have no way to return to the stream.

Opportunity: Fish passage concerns, once identified, are fairly simple to address. Culvert and diversion upgrades can eliminate reduce upstream barriers, while fish screens eliminate entrainment of downstream migrants. Because these projects are costly, we will work within existing prioritizations to replace barriers that will benefit the highest number of native, ESA-listed species. Tasks B1, B2, and C1 will all contribute to identifying and developing projects to reduce fish passage barriers.

Declining Ecological Resiliency:

Concern: The cumulative impact of the critical watershed needs listed above is an overall decline in the ecological resiliency of the Bitterroot valley. This is seen in the increased

frequency and extent of drought and dewatering; the severe reduction in Bull Trout and Cutthroat Trout range, and migratory life history; or the landscape-wide shift from wetland/riparian communities to upland communities along streams, due to disconnected water tables.

Opportunity: These broad trends can be addressed by pursuing the opportunities listed above that will improve stream health, reconnect fish passage and modernize irrigation infrastructure to improve management

Sub-criterion No. B2. Developing Strategies to Address Critical Watershed Needs or Issues. The proposed Tasks directly address the concerns and opportunities listed above. Our role as a Watershed Group is to bridge science, best-practices, and outside resources with on-the-ground needs. BRWF and TU will do this through meetings with resource professionals, stakeholder engagement, direct data collection, and project development that is inclusive of all stakeholders.

- **Task B1. Water Supply Management Working Group:**

This task was developed to address water scarcity, conflicts between agriculture and ESA-species, water quality, and fish passage. Through extensive planning, data collection, and advisement from natural resource professionals, BRWF and TU have developed a strong understanding of critical natural resources necessary to protect and restore the Bitterroot Watershed. However, a thorough understanding of how water is currently being managed in the Bitterroot and the needs of Bitterroot irrigators is needed. Through the formation of this Working Group, BRFW and TU plan to engage Bitterroot irrigators in discussions of how they manage their water and where they see opportunities to improve efficiency and delivery, while also sharing the Working Group's understanding of priority habitats and resource concerns. By combining this knowledge, solutions will be devised in partnership with irrigators to resolve these conflicts in a way that meets the needs of all parties. Project prioritization will be an iterative process involving all stakeholders to evaluate a project's benefit vs. cost and feasibility.

- **Task B2. Consolidate data on irrigation and streamflow interactions and fisheries impacts:**

In an effort to inform Task B1, BRWF and TU plan to consolidate all existing, relevant data on resource concerns and water management. The goal is to build off of previous efforts to understand hydrology, habitat use, water management, and maintenance burdens in the valley and combine that information to identify project opportunities and assess priorities.

- **Task C1. Develop Projects to improve water management, water quality and fisheries:**

This task was proposed to move priority projects that address the concerns above, from initial planning to shovel-ready projects ready for implementation. BRWF is currently making contact with private landowners in several TMDL-listed streams to develop bank stabilization and riparian enhancement projects. Similarly, TU has initiated fish passage projects to replace culverts and install fish screens in priority Bull Trout streams. Both of these efforts will require additional capacity for project scoping developing trust with the

landowners and design. Depending on the technical requirements of the project, design may be completed in-house by our project managers (e.g. basic bank stabilization, revegetation, topographic survey or mapping) or subcontracted to an engineering firm (e.g. fish screen or culvert design). The projects developed from Tasks B1 and B2 will follow a similar approach, with a combination of in-house and contracted services to collect relevant data and complete project designs.

Evaluation Criterion C— Implementation and Results

Sub-criterion No. C1—Understanding of and Ability to Meet Program Requirements. The BRWF can comply with all program requirements and timeframes. BRWF staff have experience managing large grants, distributing funds to sub-contractors and sub-recipients, and have budgeted to ensure BRWF has the capacity to comply with administration and reporting requirements. BRWF confirms that all federal procurement standards for subcontracting will be followed. The timelines and milestones presented below outline the proposed plan to complete the proposed activities within this 2-year grant period.

Task B1. Water Supply Management Working Group.	
Timeline: Duration of the contract	
Cost: \$14,500	
Milestone	Timeline
Identify stakeholders and assess stakeholder interest	Year One: 1 st Quarter
Kick-off meeting with all stakeholders to develop goals, assess broad needs.	Year One: 1 st Quarter
Small group meetings with individual irrigation districts	Year One: 1 st & 2 nd Quarter
Follow up meetings with all stakeholders to assess goals, progress, and next steps.	Year One: 3 rd Quarter
Conduct outreach to other watersheds working on basin-scale water management planning	Year One: 2 nd & 3 rd Quarter
Meeting with natural resource professionals to discuss and prioritize potential projects.	Year One: 3 rd & 4 th Quarter
Large group meeting with all stakeholders to determine priority projects and future data needs. Request feedback on results, priorities and process.	Year One: 4 th Quarter

Task B2. Consolidate data on irrigation and streamflow interactions and fisheries impacts.	
Timeline: Year One (1st-4th quarters)	
Cost: \$8,250	
Milestone	Timeline
Compile existing GIS data into basemaps	Year One: 1 st & 2 nd Quarter
Review basin hydrologic studies and follow up with authors to discuss implications	Year One: 2 nd Quarter
Compile consolidated information into maps, tables or short reports that are understandable to the general public. Use as tool for Task B1.	Year Two: 2 nd Quarter
Identify data gaps	Year One: 3 rd & 4 th Quarter

Task C1. Develop Projects to improve water management, water quality and fisheries.	
Timeline: Duration of Contract	
Cost: \$75,500	
Milestone	Timeline
Stakeholder meetings to identify/confirm priority projects for water quality, water management or fisheries benefits	Year One: 1 st Quarter Year Two: 1 st Quarter
Initiate current priority projects (landowner outreach, site visit, define project objectives, scope and design needs)	Year One: 1 st , 2 nd , 3 rd Quarter Year Two: 1 st , 2 nd , 3 rd Quarter
Design projects (In-house or contracted design, develop permit applications)	Year One: 2 nd , 3 rd , 4 th Quarter Year Two: 2 nd , 3 rd , 4 th Quarter

Sub-criterion No. C2—Building on Relevant Federal, State, or Regional Planning Efforts. BRWF has participated in several local planning efforts, including authoring the Bitterroot Watershed Restoration Plan and participating in the Bitterroot Conservation District’s Long-Range Plan. We also rely on the Agency and local government plans listed below to assess resource and community benefits of projects.

Basin-wide Planning Documents		
Planning Document	Author, Year	Relevant Recommendations
Bitterroot Watershed Restoration Plan	Bitter Root Water Forum, 2019	Identifies priority water quality restoration projects, based on TMDL exceedances.
Bitterroot Long Range Plan	Bitterroot Conservation District (in revision)	BRWF and TU are collaborators on this plan which, in its draft form, has identified water quality (riparian mapping, monitoring, improved land use practices, precision agriculture technology) and water quantity (improve measurements, maintain/improve backcountry dams, irrigation efficiency) as planning priorities.
Bitterroot Subbasin Plan for Fish and Wildlife Conservation	Montana Water Trust and Bitter Root Water Forum, 2009	The Subbasin Plan recognizes that, “Most intact wildlife corridors connecting public land and the Bitterroot River are associated with large, contiguous areas of agricultural land, so these lands should be a high priority for conservation”, and recommends work to, “Maintain or increase the number of fish in resident bull trout populations and increase the number of migratory fish”, and “Maintain or increase the total number of genetically pure local populations [of Westslope Cutthroat Trout] and maintain the broad distribution of local populations”.

Water Quality		
Planning Document	Author, Year	Relevant Recommendations

Bitterroot Watershed Total Maximum Daily Loads and Water Quality Improvement Plan	2014	Established water quality TMDL's for Bitterroot waterbodies. Identified locations of TMDL exceedances, sources of impairments, and reduction targets.
2017 Nonpoint Source Management Plan	Montana Department of Environmental Quality, 2017	Recommendations include: "Improve communication on NPS pollution issues among Montana's agricultural community", and "Promote practices and activities that help minimize the impacts of hydrologic modifications."
Bitterroot Temperature and Tributary Sediment Total Maximum Daily Loads and Framework Water Quality Improvement Plan	Montana Department of Environmental Quality, 2011	Provides "Implementation Strategies and Recommendations" for water quality improvement in each of the following categories, "Animal Feeding Operations", "Cropland", "Irrigation", "Unpaved Road BMPs", and, "Culverts and Fish Passage".
Bitterroot River Watershed: Riparian and Wetland Assessment	Montana Department of Environmental Quality, 2019	Uses "potential pollution source data to identify the restoration potential of specific locations where on-the-ground projects may be implemented to improve water quality"

Fisheries		
Planning Document	Author, Year	Relevant Recommendations
Recovery Unit Implementation Plan for Bull Trout	US Fish & Wildlife Services, 2015	Identifies primary threats to Bull Trout in the Bitterroot as: Habitat degradation from roads, logging and grazing; dewatering impacts in the Bitterroot River and its crucial spawning and rearing tributaries; and barriers to migration, primarily from irrigation diversions.
US Forest Service Bull Trout Conservation Plan	USDA, 2013	Identifies restoration strategies, by subbasin, with high significance to Bull Trout (improvements to temperature, pools, sediment or barriers).

Montana State Water Plan	Montana Department of Natural Resources and Conservation, 2015	Recommendations include: “Increase water use efficiency and water conservation”, “Expand efforts to quantify surface water supplies and availability”, and “Increase flexibility to manage available water supplies through storage and rehabilitation of existing infrastructure.”
Aquatic Organism Passage Priorities	Bitterroot National Forest, ongoing	Inventory and prioritization of all passage barriers on Forest lands, and numerous off-forest barriers.
Fish screen assessments and Prioritization	Trout Unlimited, 2017	Inventoried diversions with impacts to Bull Trout and prioritized projects suitable for fish screen installation.

Water Quantity		
Planning Document	Author, Year	Relevant Recommendations
Inflection Point Determination, East Fork Bitterroot River and Tributaries of the Bitterroot River and West Fork Bitterroot River	MFWP, 2011	Identifies 20 flow-limited rivers and streams and recommends minimum instream flow targets for aquatic species, based on physical stream characteristics.
Montana Fish Wildlife and Parks (FWP). FWP Dewatering Concern Areas	MFWF, 2005	Maps stream reaches in that “support important fisheries or contribute to important fisheries that are significantly dewatered by man-caused flow depletions”
Groundwater Surface water interactions (multiple reports)	Montana Bureau of Mines and Geology (ongoing)	Multiple reports and presentations assessing groundwater and surface water interactions, including: irrigation return flows; the impact of development on groundwater resources; groundwater recharge.

Evaluation Criterion D— Nexus to Department of the Interior Initiatives

Utilizing Science to identify best practices to manage land and water resources and adapt to changes in the environment: Our work is guided by scientists and resource managers in State and federal agencies, and the private sector. The activities proposed under this grant are directly guided by recommendations from the U.S. Fish and Wildlife Service (under the DOI) for Bull Trout, a federally-threatened species (see enclosed letter of support).

Restoring trust with local communities: BRWF and TU have, and will continue to, foster dialogue between stakeholders. This includes a project under development on Lee Metcalf Wildlife Refuge (managed by USFWS).

Modernizing Infrastructure: A substantial portion of our work will focus on developing projects to upgrade infrastructure, including irrigation diversions, water delivery systems and water storage. Many of these systems are privately managed but serve the broader public. The Como Lake Dam, a BOR project, is undergoing design for a major valve replacement. While we are not directly involved in this project, we have written letters of support and are involved in community outreach on this effort.

Appendix 1: Project Budget

Budget proposal

Table 1. Total Project Cost Table

Source	Amount
Cost to be reimbursed with the requested Federal funding	\$ 99,892.83
Costs to be paid by the applicant	\$ 0
Value of third-party contributions	\$ 0
TOTAL PROJECT COST	\$ 99,892.83

Table 2. Budget Proposal Table

Budget Item Description	Computation		Quantity Type	Total Cost
	\$/Unit	Quantity		
Salaries and Wages				
Andrea Price, Restoration Coordinator, BRWF	\$19.50/hr	600	Hours	\$11,700.00
Heather Barber, Executive Director, BRWF	\$28.20/hr	219	Hours	\$6,175.80
Christine Brissette, Project Manager, TU	\$27/hr	550	Hours	\$14,850.00
Technician, TU	\$16/hr	100	Hours	\$1,600.00
Fringe Benefits				
Andrea Price, Restoration Coordinator, BRWF	\$11,700.00	46%	% of salary	\$5,382.00
Heather Barber, Executive Director, BRWF	\$6,175.80	46%	% of salary	\$2,840.87
Christine Brissette, Project Manager, TU	\$14,850.00	43%	% of salary	\$6,385.50
Technician, TU	\$1,600.00	43%	% of salary	\$688.00
Travel				
BRWF	\$0.58/mile	1,709	miles	\$991.22
TU	\$0.58/mile	3,500	miles	\$2,030
Equipment				
None	0	0	NA	\$0.00
Supplies and Materials				
Meeting Supplies	\$300	1	Lump Sum	\$300
Data logger (water height & temp)	\$250	2	Per Unit	\$500

Field equipment (survey stakes, flagging)	\$1	300	Units	\$300
Contractual/Construction				
Survey Technician, Engineer or Restoration Consultant*	\$65-\$150/hr;	233-538	Hours	\$35,000
Other				
Printing	\$700	1	Lump Sum	\$700
TOTAL DIRECT COSTS				\$89,443.39
Indirect Costs				
BRWF	10%		% of base	\$6,388.99
TU	15.89%		% of base	\$4,060.45
TOTAL ESTIMATED PROJECT COSTS				\$99,892.83

***See Description in Budget narrative**

Budget narrative

These funds will allow BRWF and TU to take the best next steps to finding local solutions to water supply management, water quality, and fisheries improvements. Without grant funding, these activities will be delayed until such time that BRWF independently raises the needed resources, damaging our ability to make progress in a timely manner. The proposed budget does not include costs to be incurred prior to the award.

Salaries and wages

Salaries and wages of three fulltime employees (two BRWF and one TU) will be based on actual costs incurred. The TU Technician will incur hours on an as needed basis during the two-year timeframe of the project. The hours in Table 2 are approximate, and based on projected salaries and wages for 2020.

Fringe Benefits

Fringe benefits for BRWF fulltime staff will be 46% of grant-funded salary and wages, and 43% for the two TU employees.

Travel

Travel expenses will be based on federal mileage reimbursement rates, currently budgeted at \$0.58/mile. Estimated travel for BRWF is based on site visits to landowners and potential project areas (round trip 60 miles, based on average mileage reimbursement over time), and meetings with stakeholders in Stevensville (42 miles round trip). Estimated Travel for TU is based on 35 round-trip trips between Missoula, MT and Hamilton, MT (100 miles).

Equipment

Grant funds will not be used to purchase equipment as part of the proposed project.

Materials and Supplies

- Meeting Supplies: All necessary items for multiple stakeholder meetings including but not limited to: notebooks, pens, folders, markers, flash drives, etc.
- Data logger (water height & temp)
- Field equipment (survey stakes, flagging)

Contractual

Contractual expenses will be incurred on an as-needed basis for survey, engineer and channel restoration design. Because this proposal includes project identification (Task B1 and B2) which will generate projects requiring contracted services yet unknown, we are not able to provide an exact cost breakdown at this time.

Contracts will be awarded based on competitive rates. Rates are expected to fall within the following ranges: Survey technician, \$65-80/hour; Engineered Design, \$100-150/hour; and Restoration Consultant, \$65-100/hour. This equates to 233-538 hours of contracted services.

Environmental and Regulatory Compliance Costs

There are no costs associated with environmental and regulatory compliance for the proposed project.

Other Expenses

Grant funds will be used to print materials needed to solicit participation for and conduct stakeholder meetings. This will include poster-sized maps, outreach materials, and project design documents such as site plans, surveys, etc. Printing costs are estimated given recent invoices from similar work completed at the local UPS Store.

Indirect Costs

Indirect costs will be applied to applicable budget categories of the proposed budget. BRWF will assess a 10% de minimis indirect rate on all expenses incurred, except for those incurred by TU as a sub-recipient of this award. TU has a federally negotiated indirect rate of 15.89% that will be assessed on all TU direct costs.

Third Party In-kind Contributions

Though BRWF does not, at the time of application submittal, have official commitment in the form of letters of commitment, the following third parties have indicated they will provide in-kind contributions during the lifetime of this project. Based on conversations with partners and previous efforts, it is estimated in-kind contributions to be at a minimum:

Trout Unlimited (TU): \$10,000 (230 hours at \$27/hr plus fringe and benefits). TU expects to spend at least \$5,000 per year (\$10,000 total) on additional staff time dedicated to project development in the Bitterroot Valley.

Montana Fish, Wildlife and Parks: \$1,760 (40 hours at *\$44/hr). It is estimated that MFWP will provide 40 hours of in-kind services through participation in stakeholder meetings (10 hours), and provision of technical assistance and project recommendations (30 hours).

Bitterroot Conservation District: \$954 (18 hours at *\$53/hr). It is estimated that the BCD will provide 18 hours of in-kind services through participation in stakeholder meeting (10 hours), and provision of project recommendations and board participation (8 hours).

Montana Department of Natural Resources and Conservation: \$1,320 (30 hours at *\$44/hr). It is estimated that DNRC will provide 30 hours of in-kind services through participation in stakeholder meetings (10 hours), and provision of technical assistance and project recommendations (20 hours).

Irrigators: \$4,480 (140 hours at *\$32/hour). It is estimated that representatives of the irrigation community (average of eight participants) will contribute 140 hours of in-kind services for this project through participation in stakeholder meetings (10 hours/representative for total of 80 hours), as well as coordination, follow up, and individual meetings with the Working Group (60 hours cumulative for all representatives).

*All costs derived from MDEQ's "Estimating the Value of Volunteer Labor", 2014

Re: Funding Plan and Letter(s) of Commitment

To be successful, the project will include in-kind services from many partners including TU, Montana Fish Wildlife & Parks (MFWP), Bitterroot Conservation District (BCD), Department of Natural Resource Conservation, and irrigators. Since BRWF does not, at the time of application submittal, have official commitment in the form of letters of commitment, these costs are not included in the overall project budget. *There are, however, letters of project support included from MFWP, and BCD, among others.*

Appendix 2: Environmental and Cultural Resources Compliance

The proposed activities are planning in nature, and do not require compliance review. They will not involve earth work or impacts to soil, air, water or habitat. Projects that result from planning efforts may require environmental and resource review, but will occur after this grant agreement has expired and will not be paid for through CWMGP funds.

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

The proposed project will not impact the surrounding environment.

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

No federally-listed or proposed species will be impacted by the proposed activities.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as “Waters of the United States”? If so, please describe and estimate any impacts the proposed project may have.

No wetland impacts will be incurred by the proposed activities.

When was the water delivery system constructed?

Several water delivery systems constructed over the last century will be assessed as part of this proposal, but no changes will be made to them under this grant. These funds are specifically for planning purposes.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

Several water delivery systems constructed over the last century will be considered as part of this proposal, but no changes will be made to them under this grant. These funds are specifically for planning purposes.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.

There are no buildings, structures, or features in the irrigation districts within the Bitterroot Watershed listed on the National Register of Historic Places. There are no known buildings,

structures, or features in the irrigation districts within the Bitterroot Watershed eligible for listing on the National Register of Historic Places.

Are there any known archeological sites in the proposed project area?

No archeological sites will be impacted by the proposed activities.

Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?

No, the project will not have a disproportionately high or adverse effect on low income or minority populations. BRWF works collaboratively with private and public landowners to ensure all restoration projects in the Bitterroot Watershed are mutually beneficial. The project will positively impact residents of all income and ethnicities by forming local solutions to address the water management needs of the landowners and communities within the Bitterroot Watershed.

Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on tribal lands?

No, the proposed project will not limit access to or ceremonial use of Indian sacred sites or result in other impacts on tribal lands. This project does not include plans for restoration on tribal lands or Indian sacred sites.

Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

No, the proposed project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the Bitterroot Watershed.

Appendix 3: Required Permits or Approvals

No permits or approvals are required for the proposed activities.



File Code: 2600

Date: 11/5/2019

To the CWMP Grant Review Committee:

As the North Zone Fishery Biologist on the Bitterroot National Forest, I'd like to express my full support for the Bitterroot Water Forum's application to the CWMGP to help fund water management planning and project development in the Bitterroot Valley.

Although the Bitterroot National Forest's primary focus is the landscape within the boundaries of the Forest, we recognize that these aquatic species on the Forest ultimately depend on an aquatic ecosystem that crosses Forest boundaries. In particular, ESA-listed species such as bull trout and State species-of-concern westslope cutthroat trout require open migratory corridors basis to fulfill their life histories, including migration for spawning, overwintering, and access to refugia during disturbance. To fully restore functioning watersheds that support these species, we seek opportunities to work with others to protect and restore critical watershed processes both on the forest and on adjacent lands where doing so benefits species as a whole.

Improving habitat connectivity bull trout and westslope cutthroat trout is one of the Forests Fishery Program's highest priorities. The Forest has inventoried and prioritized key passage barriers to native fish on Forest land; however, funds available to carry out these projects are typically tied to receipts from vegetation management projects. As a result, areas where no vegetation management projects are proposed or being carried out have little chance of receipt of funds for projects. The CWMGP funds would offer capacity for TU and BRWF to help the Forest make these projects a reality.

Additionally, CWMPG funds would provide support for projects off-Forest that could open migratory corridors between Forest Service and privately owned lands in the Bitterroot Basin. Access to high quality habitats on the Forest could provide clean and cool-water refugia for species currently trapped lower in the basin where habitat quality tends to be reduced. Groups like BRWF and Trout Unlimited play an essential role in building relationships with these private landowners to complete off-Forest projects with direct Forest resource benefits. Bitterroot National Forest would support BRWF and TU in their efforts to remove passage barriers off-Forest by advising on which projects offer the highest native fish benefits.

Projects that could be carried out with CWMP grand funds would also help improve the understanding of the effects of wilderness dams and other irrigation infrastructure located throughout the basin and the on the Forest. There are numerous instances where changes in irrigation-water management as well as improved water delivery efficienc could greatly benefit both habitat conditions downstream of the dam as well as contribute towards reducing dewatering issues in the valley. BRWF and Trout Unlimited have a proven record of working with irrigators to understand their needs and finding ways to adapt water management to ensure



fisheries needs are also met – not an easy task. In addition to building relationships and projects, these groups are highly effective at leveraging funds to see the work through to construction.

I hope you will support these two groups in their efforts to improve the fishery and aquatic resources here in the Bitterroot valley. This is crucial work, and certainly deserving of CWMGP support.

Thank you for your consideration,

Sincerely,



M. Jo Christensen
North Zone Fishery Biologist
Bitterroot National Forest
88 Main Street
Stevensville, MT 59870



November 6, 2019

Reference: Bitter Root Water Forum proposal for Cooperative Watershed Management Grant

To whom it may concern:

I am writing to express my support for the Bitter Root Water Forum's proposal to the Bureau of Reclamation's Cooperative Watershed Management Grant Program. As Montana Fish, Wildlife & Parks (FWP) fisheries biologist in the Bitterroot Valley, I have worked closely with the Bitter Root Water Forum (BRWF) and Trout Unlimited (TU) on several issues impacting our fisheries. Both organizations are adept at not only implementing restoration projects, but also leading the community development and stakeholder involvement required when resources have competing interests.

The Bitterroot Watershed supports a number of important native fish species including bull trout (ESA listed as Threatened) and westslope cutthroat trout (State species of concern), as well as recreationally significant species like rainbow and brown trout. Unfortunately, habitat degradation related to irrigation and land development has had substantial negative impacts on many of the Valley's fisheries. Addressing these problems is often challenging, but the Bitterroot has a long history of finding cooperative solutions among vested users. Notable examples are Painted Rocks Reservoir and Como Lake, which are both managed to provide irrigation water as well as instream flow for fish during critical periods. While we have seen several successful projects like these, there is still substantial work to be done.

FWP staff are often limited in the time we can commit to developing projects. We partner with groups like BRWF and TU to do the landowner outreach, design, fundraising, contracting and construction oversight. If funded, this proposal would help our partners pursue known projects in priority streams. Projects that could make a real difference, especially for native species like bull trout. It would also provide the community outreach to irrigators and water managers to cooperatively develop new project ideas that balance resource and irrigation needs. I look forward to continuing my partnership with these organizations, weighing in on resource concerns and helping to prioritize projects as ideas develop. This proposal embodies the steps we need to take to better manage our water for multiple uses, and I wholeheartedly support it.

Thank you,

Jason Lindstrom

Jason Lindstrom – Fisheries Biologist
Montana Fish, Wildlife & Parks
1801 N. First St.
Hamilton, MT 59840
Ph# (406) 363-7169



United States Department of the Interior

Fish and Wildlife Service

Montana Ecological Services Office

585 Shepard Way, Suite 1

Helena, Montana 59601-6287

Phone: (406) 449-5225, Fax: (406) 449-5339



In Reply refer to:

File: M 29 Montana Trout Unlimited

BOR Grant Application Bitter Root Water Forum

November 7, 2019

Christine Brissette
Special Projects Manager
Trout Unlimited
312 N. Higgins, Suite 200
Missoula, MT 59802

Dear Ms. Brissette

The U.S. Fish and Wildlife Service (Service) reviewed the Bitter Root Water Forum's grant application for the Bureau of Reclamation, Cooperative Watershed Program, and provides the following comments. The Bitter Root Water Forum's application will address several of the primary threats to recovery of the federally listed bull trout (*Salvelinus confluentus*) (USFWS 2015). The proposal aims to reduce the impacts of dewatering, roads, and barriers in designated bull trout critical habitats, and directly responds to several of the primary threats facing bull trout in the Bitterroot River Core Area. Therefore, the Service supports the Bitter Root Water Forum's application.

The Bitterroot River Core Area supports relatively large areas of occupied spawning and rearing habitat. However, bull trout exhibiting migratory life history forms are very limited and in decline. Upland habitat degradation and in-stream barriers have fragmented migratory corridor habitats. The primary focus for bull trout recovery in the Bitterroot River Core Area focus on improving connectivity between known spawning habitats. Protecting and restoring these areas is especially important for the recovery of the migratory life history form.

By addressing these primary threats in the Bitterroot River Core Area, the Bitter Root Water Forum and Trout Unlimited will contribute to the recovery of bull trout in the Columbia River Headwaters Recovery Unit. Please give this proposal your full consideration. We appreciate your efforts to recover threatened and endangered species. If you have questions or comments related to this letter, please contact Dan Brewer, Montana Bull Trout Recovery Coordinator at dan_brewer@fws.gov or (406) 329-3951.

Sincerely,

for Jodi L. Bush
Office Supervisor

Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Darren Olson
P. O. Box 25007
Denver CO 80225

November 8, 2019

Dear Mr. Olson,

I have served as water commissioner for the Bitterroot River for over 15 years. I also work with the Painted Rocks Water Users Association and with Montana Division of Fish Wildlife and Parks in managing release of 25,000 acre feet of water stored in Painted Rocks Reservoir to supplement water used for irrigation and provide additional instream flow. This has made me very familiar with the capability and accomplishments of both the Bitter Root Water Forum and Trout Unlimited. I strongly support the program to develop a Water Supply Management Working Group and other objectives described in their proposal. I have read a short summary of proposed project.

Both groups have already demonstrated the ability to promote cooperation between irrigators, fishing outfitters and other users the Bitterroot River. They have accomplished this through formal educational programs, on the ground restoration work and informal meetings involving the public, irrigators, recreationalists and other River users. Based on my knowledge and direct experience with both organizations, I am confident they can efficiently and effectively manage and perform the work described in their proposal. Improving communications and cooperation between the general public and entities with direct interest in our water resources is very important to wise use of our resources. I believe creation of a Basin wide Water Management Working Group is an important step toward meeting this goal.

The proposed program correctly identifies the need for increased water storage and improved water use efficiency by our agricultural community as key problems in the Bitterroot watershed. Identifying environmentally acceptable options for increasing water storage is needed to mitigate conflicts which have occurred between irrigators and other water users during drought periods. This will help ensure the long-term availability and wise use of water for our community. I believe these and other issues can be effectively addressed through the program and approach proposed by the Bitter Root Water Forum and Trout Unlimited team.

Sincerely,



Al Pernichele

Water Commissioner



Bitterroot Conservation District

1709 North First Street,
Hamilton, Montana 59840
phone: 406-361-6181
e-mail: bc.d@qwestoffice.net

Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Darren Olson
Mail Code: 84-27814
P.O. Box 25007
Denver, CO 80225

November 12, 2019

To Whom It May Concern,

The Bitterroot Conservation District is writing to express support for the Bitter Root Water Forum's Cooperative Watershed Management Program project proposal in partnership with Trout Unlimited. Since 1941, we have been responsible for the wise use, development, and conservation of resources in Ravalli County. We do this through overseeing permitting for construction in stream channels and funding projects that help landowners with conservation efforts.

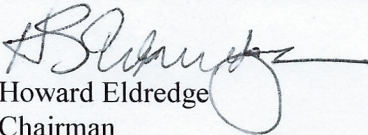
We are particularly enthused about the proposed project for two reasons: 1) the goals and objectives are aligned with our draft Long Range Plan, and 2) it supports and expands upon a recent effort we completed with the Water Forum and Montana Fish, Wildlife and Parks to begin identifying ways to improve the community's ability to respond to variability in water supply. The findings of that recent effort indicated that we need to explore water storage opportunities including dams and natural storage, engage in outreach with landowners to promote efficient irrigation practices, and increase connections between water user groups to better manage water supply. The Bitter Root Water Forum's proposal is a natural continuation of these efforts.

The Bitterroot Conservation District has worked with Bitter Root Water Forum extensively for over 20 years, collaborating on watershed planning efforts, watershed education programs, and providing funding for their River Clean Up and AmeriCorps Member. Based on these experiences, we can attest to their ability to develop and execute projects and programs effectively. You can be sure that they will carry out the activities under the proposed grant in a manner that aligns closely with your goals.

The Bitter Root Water Forum has earned our strongest possible support.

Sincerely,

The Bitterroot Conservation District



Howard Eldredge
Chairman



WHEREAS, the Bitter Root Water Forum is committing to the financial and legal obligations associated with receipt of financial assistance award under the FOA for the WaterSMART Cooperative Watershed Management Program Phase I Grants, it is:

RESOLVED, that the Board of Directors has reviewed and supports the application submitted;

RESOLVED, that the Bitter Root Water Forum will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement;

RESOLVED, that the Board of Directors is hereby authorized and approved to authorize and empower the following individuals to make, execute, endorse and deliver in the name of and on behalf of the Bitter Root Water Forum, for the obligations associated with the WaterSMART Cooperative Watershed Management Program Phase I Grants;

Name: Heather Mullee

Position/Title: Executive Director

Signature: Heather Mullee

Name: Andrea Price

Position/Title: Restoration Coordinator

Signature: Andrea Price

The undersigned certifies that she is the properly elected and qualified President of the Bitter Root Water Forum, a corporation duly conformed pursuant to the laws of the state of Montana, and that said meeting was held in accordance with state law and with the Bylaws of the Bitter Root Water Forum.

This resolution has been approved by the Board of Directors of the Bitter Root Water Forum on November 11, 2019 and goes into effect immediately following signature.

I, as authorized by the Bitter Root Water Forum, hereby certify and attest that all the information above is true and correct.

Sharon Dedmon, Pres.

Sharon Dedmon

11/11/19

Date