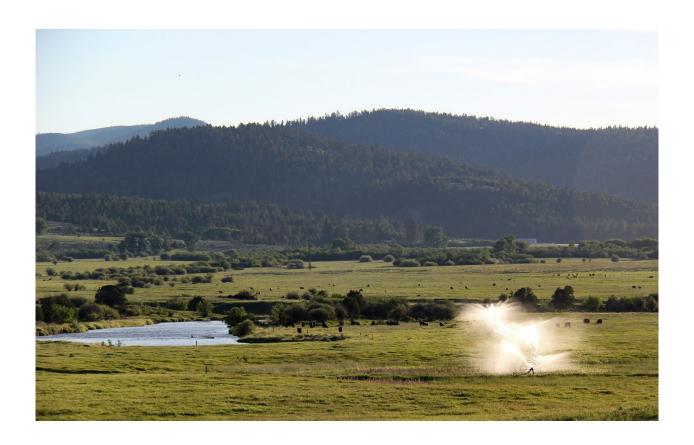
Building Social-Ecological Resilience in the Blackfoot through Watershed Restoration Planning and Project Design



Blackfoot Challenge

Clancy Jandreau, Blackfoot Water Steward
P.O. Box 103
Ovando, MT 59854
406-793-3900
clancy@blackfootchallenge.org
www.blackfootchallenge.org

TABLE OF CONTENTS

Table of Contents	2
Executive Summary:	3
Project Location:	3
Applicant Category:	4
Applicant Eligibility:	6
Project Description:	7
Task 1. Updating the Blackfoot Watershed Restoration Plan (Task Area B)	7
Activity 1 – Identifying Changes in Watershed Condition	7
Activity 2 – Incorporating Tribal Perspectives	7
Activity 3 – Re-informing and Re-assessing Restoration Priorities	8
Task 2. High Priority Restoration Project Design (Task Area C)	9
Activity 1 – Project Selection	9
Activity 2 – Project Assessment and Objectives	10
Activity 3 – Project Design	10
Evaluation Criteria:	10
Evaluation Criteria A: Watershed Group Diversity and Geographic Scope	10
Subcriterion A1 – Watershed Group Diversity	10
Subcriterion A2 – Geographic Scope	11
Evaluation Criteria B: Addressing Critical Watershed Needs	12
Subcriterion B1 – Critical Watershed Needs or Issues	12
Subcriterion B2 – Project Benefits	14
Evaluation Criterion C: Readiness to Proceed	16
Evaluation Criteria D: Presidential and Department of the Interior Priorities	20
Subcriterion E1 – Climate Change	20
Subcriterion E2 – Benefits to Disadvantaged, Underserved, and Tribal Communities	21
Literature Cited	23
Appendix A. Letters of Support	25

EXECUTIVE SUMMARY:

The Blackfoot Challenge, in collaboration with several watershed partners, will update their existing Blackfoot River Watershed Restoration Plan and conduct project design on high priority stream restoration projects. The Blackfoot Challenge is a nonprofit watershed group made up of ranchers, conservation organizations, state and federal natural resource agencies, community leaders, tribal representatives, recreation interests and other diverse stakeholders. We work in the Blackfoot River watershed (HUC 8: 17010203) of Western Montana, to coordinate efforts to conserve and enhance natural resources and the rural way of life for present and future generations. The tasks proposed in this application represent the next step in our decades long effort to build robust, thriving, and resilient ecologies and economies in the Blackfoot watershed. By taking stock of where we have been, incorporating new science and information, and building from new partnerships in the watershed, we will chart a path for strategic investment of watershed restoration efforts that build ecological and social resilience to impacts from climate change. As part of this project, we will complete design work on several high priority restoration projects that will improve habitat conditions for culturally important, imperiled native fish while increasing the sustainability of agricultural economies. Specific project locations will be selected through the planning process but will be on private ranchland along high fishery value tributaries. We expect to complete both phases of the project, planning and design, by the end of 2027.

PROJECT LOCATION:

This project will take place in the 1.5-million-acre Blackfoot River watershed of Western Montana. Covering parts of four counties, Lewis and Clark, Powell, Missoula and Granite, the Blackfoot watershed is home to seven rural communities, which rely heavily on agriculture and outdoor recreation as their economic base. The watershed is bordered to the east by the Continental Divide, to the south by the Garnet Mountains, to the north by the Bob Marshall and Scapegoat Wilderness Areas, and to the west by the Rattlesnake Wilderness. A headwaters tributary of the Columbia River system, the free-flowing Blackfoot River flows 132 miles from its origin near Rogers Pass to its confluence with the Clark Fork River in Bonner, Montana. This river system drains a 2,320-square mile watershed through a 3,700-mile stream network of which 1,900 miles are perennial streams.

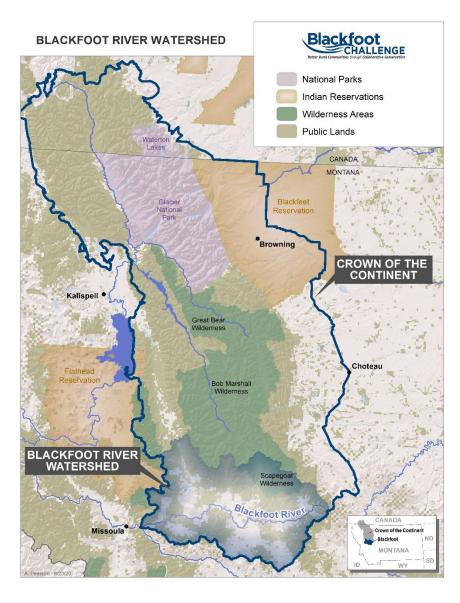
The Blackfoot sits at the southern edge of the Crown of the Continent Ecosystem (COCE) – a 10-million-acre area of the Northern Rocky Mountains that extends north into Canada and includes Waterton-Glacier International Peace Park, Canada's Castle Wilderness, the Bob Marshall-Great Bear-Scapegoat Wilderness Complex, parts of the Flathead and Blackfeet Indian Reservations, Bureau of Land Management (BLM) lands, and significant acreage of state and private lands. The COCE is one of the most intact ecosystems in North America. The Blackfoot watershed provides critical connections between the COCE, the Selway/Bitterroot Ecosystem to the west, and the Garnets/High Divide to the south.

Within the watershed, the Blackfoot River and its tributaries support agriculture, recreation, several rural communities, and a full array of Northern Rockies fish and wildlife (including threatened and endangered species). This region is home to bull trout, grizzly bears, wolves, wolverines, and recently reintroduced trumpeter swans. Agriculture is the predominant economic and private lands use, though this iconic river system attracts thousands of outdoor recreation enthusiasts each year for its fishing, hunting, cycling and boating opportunities.

The updated watershed restoration planning in this proposal will be a watershed-wide effort including all 127 perennial streams that have been analyzed in previous planning efforts and any additional streams identified by project partners. Site-specific project design will happen on priority streams, or stream-reaches, that are identified through the updated restoration planning effort.

APPLICANT CATEGORY:

This proposal is being submitted under the Existing Watershed Group applicant category. The Blackfoot Challenge was officially established in 1993, but its origins reach back to the mid-1970s when a few key landowners and natural resource professionals responded to growing topdown pressure by seeking a non-regulatory approach to conservation on the Blackfoot River. These key individuals were instrumental in creating a voluntary recreation agreement, two walk-in hunting areas that allowed public access on private lands, and the first conservation easement in Montana. Thanks to their vision, an important foundation was established for public and private partners to work together on restoring and protecting habitat, fisheries and wildlife in the Blackfoot watershed. In 1992, the Blackfoot River was listed as one of the 10 most endangered rivers in the United States due



to a century of unsustainable mining, livestock grazing and timber harvest practices. The partnerships that had been created since the 70s stepped up to facilitate collaboration between those who have a stake in the landscape and those who have natural resource decision-making authority, and the Blackfoot Challenge was officially created as a 501(c)(3) nonprofit organization a year later.

Today, the Blackfoot Challenges continues its legacy of conserving natural resources and supporting rural livelihoods through 30 years of partnership building. Specifically, we coordinate

community-based programs to steward and protect working land, conserve water and promote water use efficiency, educate all ages, restore forest health, improve cross-boundary vegetation management, reduce conflicts between predators and people, and promote the values of community-based conservation. The Challenge has established a solid record of effective, collaborative watershed stewardship through programs focused on both water quality and quantity. These programs include drought response, watershed restoration, irrigation efficiency, and water education and outreach. In 2014, the Blackfoot Challenge was awarded a U.S. Bureau of Reclamation Cooperative Watershed Management Program Grant in the amount of \$52,488. Resources from that award were utilized to finalize our first Watershed Restoration Plan and to expand our education and outreach efforts related to the Blackfoot Drought Response Plan. A brief list of recent and/or ongoing watershed planning activities led by the Blackfoot Challenge follows:

Blackfoot Drought Response Plan

Est. 2000

The Blackfoot Drought Plan is based on the premise of "shared sacrifice for shared benefit" with the goal that all Blackfoot water users (agricultural, outfitters, homeowners, businesses, government agencies, conservation groups and others) voluntarily agree to take actions that will result in water savings and/or the reduction of stress to fisheries during critical low flow periods. The plan offers an alternative to traditional enforcement of State- and Tribally-owned water rights and angling restrictions, enabling those who participate in voluntary drought restrictions to continue to use the river in a conservation-focused way. Implementation of the plan is coordinated by the Blackfoot Water Steward and the Drought Response Committee of the Blackfoot Challenge.

A Basin-wide Restoration Action Plan for the Blackfoot Watershed Est. 2005

Created by the Big Blackfoot Chapter of Trout Unlimited, the Blackfoot Challenge, and other public and private partners, the goal of the Basin-wide Action Plan is to define strategies for prioritization, planning and implementation of restoration projects for impaired and dewatered streams in the Blackfoot Watershed. The Plan is also intended to assist project planners in selection and implementation of appropriate monitoring strategies for assessing the effectiveness of restoration projects regarding attainment of restoration goals. The Action Plan serves as a restoration guide for partners by identifying opportunities for cooperative restoration and monitoring efforts, promoting implementation of restoration strategies identified in various programs and directives, promoting restoration monitoring to assess effectiveness; and creating a tracking system for completed restoration projects and associated monitoring.

Blackfoot Subbasin Plan

Est. 2009

The purpose of the subbasin plan is to create a comprehensive strategy for conserving, restoring and enhancing the natural resources and rural lifestyle of the Blackfoot watershed, as subbasin of the Columbia River Basin. The Blackfoot Subbasin Plan is one of more than 50 such plans that have been written for tributaries and mainstem segments of the Columbia River under the leadership of the Northwest Power and Conservation Council. The plan includes a

comprehensive assessment of the threats to natural resources and the rural livelihoods of the Blackfoot Watershed and outlines conservation objectives in order to address those threats.

Blackfoot Total Maximum Daily Load (TMDL) Coordination Est. 2009

The Blackfoot Subbasin Plan identified the voluntary Total Maximum Daily Load (TMDL) planning process as the primary vehicle for addressing water quality impairments in the Blackfoot. Beginning in 2000, the Montana Department of Environmental Quality partnered with the Blackfoot Challenge to develop TMDL plans in the Blackfoot. As of September 2014, 142 TMDLs and associated addendums have been written for the Blackfoot Watershed. These documents identify causes and sources of water quality impairments in 303(d)-listed water bodies and outline conceptual strategies for addressing identified causes and sources of impairment.

Blackfoot Watershed Restoration Plan Est. 2014

The Blackfoot Watershed Restoration Plan aggregates years of community discussions, partnership-based planning, and shared stakeholder priorities. The plan's stated goal is to direct partnership building and public outreach that engages partners and landowners in voluntary, collaborative measures to improve water quantity and water quality throughout the Blackfoot watershed. The plan outlines general restoration approaches and identifies specific near and long-term priority restoration projects. The plan was approved by the Montana Department of Environmental Quality as a qualifying watershed restoration plan which enables the watershed to receive funding prioritized for areas with completed restoration planning.

APPLICANT ELIGIBILITY:

The Blackfoot Challenge is a 501(c)(3) nonprofit organization and meets the definition of an existing "watershed group" as described in Section 6001(6) of the Cooperative Watershed Management Act. Per the definition of a "watershed group", the Blackfoot Challenge Board and committees are made up of ranchers, conservation organizations, state and federal natural resource agencies, community leaders, tribal representatives, recreation interests and other diverse stakeholders. As outlined in its bylaws, the Challenge works in a grassroots fashion, addressing priority watershed issues through community meetings, consensus-based decisionmaking within a committee structure, and widespread community outreach. Within the water program, the Blackfoot Challenge operates several initiatives that involve our communities and stakeholders in promoting the sustainable use of water resources addressing both water availability and water quality issues. These initiatives include the Blackfoot Drought Response, irrigation scheduling and efficiency, TMDL outreach and response, watershed education, and watershed planning and restoration. What separates the Challenge from other watershed groups in the Blackfoot and in the region is our local support. The Challenge responds through our Board of Directors and working committees to the issues that are voiced by watershed stakeholders, resulting in programs and projects based on the needs of the people, communities and resources within the watershed. This structure connects us to people's needs in the watershed and is essential to responding with programs that benefit the Blackfoot watershed's resources and communities. Our consensus model is based on working relationships and building trust with all watershed partners and stakeholders.

PROJECT DESCRIPTION:

Task 1. Updating the Blackfoot Watershed Restoration Plan (Task Area B)

The first phase of this proposed project will be to update our existing Blackfoot Watershed Restoration Plan (WRP) which was first adopted in 2014. The purpose of the WRP is to guide prioritization and implementation of watershed conservation objectives and strategies to ensure the continued health and resilience of ecological and human communities in the watershed. The Blackfoot WRP aggregates years of community discussions, partnership-based planning, and shared stakeholder priorities. Implementation of the Plan was begun with support, in part, from a US Bureau of Reclamation CWMP Phase I award that the Blackfoot Challenge received in 2014. With the support from the WaterSmart Program, the Blackfoot Challenge increased our outreach to landowners on the best management practices they could implement in order to address pressing water quality and quantity concerns. Additionally, the Blackfoot Challenge and the Big Blackfoot Chapter of Trout Unlimited lead efforts to jointly plan and implement multiple projects with private landowners, including irrigation efficiency and stream restoration work. We plan to follow a very similar process to update the WRP that we followed to originally create it including extensive community outreach, stakeholder involvement, and incorporation of diverse sources of information. The work will be coordinated by the Blackfoot Challenge's Water Steward and largely completed by a work group of the Drought Response Committee.

Activity 1 – Identifying Changes in Watershed Condition

This proposed project builds on the initial investment from the WaterSmart program to review and update the WRP which will be ten years old in 2024. While some of the components of the WRP have not changed since 2014 (e.g. watershed characteristics), significant watershed improvement work, new information on growing watershed pressures, and increased tribal involvement in the watershed all contribute to changing watershed conditions and potential changes in restoration priorities. Since 2014, various partners in the watershed have completed at least 70 restoration projects on 35 different streams. These restoration projects have resulted in measured improvements to water quality, water quantity, aquatic habitat, and riparian condition in many areas. In some cases, all or nearly all sources of stream degradation identified for a particular tributary in the existing WRP have been addressed by restoration efforts. Updating the WRP also provides an opportunity to incorporate new information generated by watershed partners and others into the overall assessment of watershed conditions. Watershed partners and stakeholders will work closely together to determine the new information to incorporate but such information may include modeled predictions for stream flow and temperature under different climate scenarios, analysis of stream and wetland permanence trends, fish biogeography data gleaned from expanded genetic sampling, and hydrologic and water balance data collected by various partners.

Activity 2 – Incorporating Tribal Perspectives

Beyond new information, the watershed has also seen growing involvement from the Confederated Salish and Kootenai Tribes (CSKT) in water and fishery-related issues since 2014. Growing CSKT engagement in the watershed stems from the passage of the Confederated Salish and Kootenai Tribes – Montana Water Rights Compact (the Water Compact, hereafter) by the Montana State Legislature in 2015. The Water Compact settles all water rights claims by the CSKT both on and off reservation. As part of the Water Compact, the CSKT became co-owner,

along with Montana Fish, Wildlife, and Parks of an instream flow water right on the Blackfoot River for the purpose of benefiting the instream fishery of the river. Bull trout, or *aay*, are of particular historic and current cultural importance to the CSKT in the Blackfoot River which bears the place name *Naáycčstm Sewlk**s, meaning "bull trout waters" (Smith 2010). This instream flow water right, known as the Milltown Right, has an enforceable priority date of December 11, 1904. A total of 409 water rights in the Blackfoot River basin are junior to the Milltown Right and subject to potential call when flows in the Blackfoot River do not meet minimum instream flow thresholds (MT 2015). Enforcement of the Milltown Right was deferred for 10 years in the Water Compact and is set to begin in April of 2025.

Since the passage of the Water Compact, CSKT and State representatives have engaged in the existing Blackfoot Drought Response Committee coordinated by the Blackfoot Challenge. In close collaboration with the Drought Committee, the CSKT and State have agreed to implement the Milltown Right in the Blackfoot watershed by adapting and expanding the existing Blackfoot Drought Response Plan. The Blackfoot Drought Response Plan invites individuals to voluntarily conserve water in times of drought for the benefit of all water users. Water users that are junior to State- and Tribally-owned instream flow water rights that meaningfully participate in the Drought Plan are protected against call on their junior water rights. CSKT representatives are now permanent and active members on the Drought Committee and consultation with CSKT leadership is a frequent occurrence as we prepare for enforcement of the Milltown Right in 2025.

This new partnership with the CSKT and the changing water rights context in the watershed has significant and immediate consequences for restoration planning. As a major partner in the watershed with an increasingly important role to play, CSKT restoration priorities need to be incorporated into the updated WRP. Furthermore, the changing water rights context alters the incentive landscape faced by water users in choosing to voluntarily participate in the Drought Response Plan. In some cases, water users with little incentive to participate in the Drought Plan before the Water Compact are now significantly impacted. With dedicated engagement by CSKT and State representatives in the Drought Committee process, opportunities to craft win-win solutions that benefit culturally important fisheries while building resilient agricultural practices are emerging and should be considered in any restoration planning moving forward.

Activity 3 – Re-informing and Re-assessing Restoration Priorities

In addition to updating the WRP with changes in watershed conditions since 2014, there is an opportunity to gather and synthesize data to inform an updated project prioritization framework to help guide future strategic restoration investment. Nearly two decades of work has been completed since an initial restoration prioritization framework was formalized in 2005. Known as the Integrated Stream Restoration and Native Fish Conservation Strategy for the Blackfoot River Basin (Restoration Strategy, hereafter)(MFWP 2005), this foundational prioritization framework has served to guide restoration and fish habitat improvement work in the watershed since its creation. The prioritization framework has been a catalyzing force in the watershed, helping to strategically direct more than \$5 million of on-the-ground restoration funding to where it is most needed in terms providing benefits to native fishery and agricultural communities.

The existing WRP uses the Restoration Strategy as the basis for project prioritization. A significant component of updating the WRP will be compiling data necessary to re-assess both progress made and remaining opportunities in the watershed through an updated project prioritization framework. In order to update the prioritization framework, the project team will

compile a tributary by tributary account of all restoration projects completed and their associated monitoring data including any known information on reach-scale improvements to water quality, water quantity, riparian condition, and removal of limiting factors for native fish species. In addition to stream and fishery data, we will also compile known information on irrigation infrastructure, site-specific irrigation operations, and irrigation practices from throughout the watershed. These data will again serve to both synthesize known information on the progress that has been made towards eliminating threats to native fish while improving the effectiveness and efficiency of irrigation systems, and the opportunities that still exist for irrigation improvements. Together, these two datasets, restoration project and irrigation infrastructure, will not only help inform the updated prioritization framework with the WRP but will also feed into an Integrated Hydrologic Model that the State of Montana Department of Natural Resources and Conservation (DNRC) is in the process of developing. We plan work very closely with DNRC model developers to ensure that the data we compile is formatted correctly to help inform their model, and vice versa, that the model they develop will help inform our strategic restoration planning and project prioritization.

Task 2. High Priority Restoration Project Design (Task Area C)

With an updated WRP completed, we will then use the newly informed project prioritization framework to identify high priority projects to move forward with designs. While the specific locations and project details cannot be known at this time, as those will be determined upon completion of the updated plan, projects selected for design will be akin to typical restoration projects that have been pursued in the Blackfoot watershed by a well-established team of restoration partners for nearly two decades. Costs to design individual projects will similarly vary depending on the specific components involved. Given the funding levels of this grant and considering known and expected matching funding, we hope to move forward at least four projects through approximately 60% project design levels. Projects in the Blackfoot follow a typical process that is outlined in the Blackfoot Restoration Strategy first formalized in 2005. This process works by first identifying limiting factors for fish, then by developing objectives that address limiting factors while meeting land managers' goals, designing projects to meet those objectives with win-win solutions, and finally, by implementing projects by collaboratively leveraging partnerships. For more detail on the typical scope and scale of these projects, and the specific components of the restoration design we would include in this proposal, see the Project Benefits in the Evaluation Criteria section below.

Activity 1 – Project Selection

A project team will be formed by the Drought Committee working group in order to select restoration projects and coordinate their design and eventual implementation. At a minimum, the project team will consist of key representatives from Montana Fish, Wildlife, and Parks, the Confederated Salish and Kootenai Tribes, U.S. Fish and Wildlife Service, Big Blackfoot Chapter of Trout Unlimited, Trout Unlimited, and the Blackfoot Challenge. This team will select projects for design by first considering the highest prioritized streams or stream reaches identified for restoration by the updated prioritization framework within the WRP. High priority streams will reflect stakeholder agreement on where restoration efforts should be focused for strategic ecological benefit, but will not necessarily represent projects that are the ripe for action. Within the identified high priority streams, the project team will also have to consider landowner willingness and readiness to proceed with restoration projects. Thus, it is possible that

projects on the highest prioritized streams may not move forward right away if the necessary relationships with all partners including the landowners are not in place. Hence the four or five projects selected to move forward with design will represent the projects on the highest prioritized stream systems that are the most ready to proceed.

Activity 2 – Project Assessment and Objectives

With projects selected, the project team will move on to synthesizing existing data and developing project objectives. If not already known, the project team will conduct and collect initial site assessment information to determine existing conditions and primary concerns relating to riparian health, limiting factors for fish, irrigation operations and opportunities, and other land management considerations. This determination will be made by gathering existing data on fish populations and any known impairments and by conducting onsite observations and landowner interviews. Where the project team has the expertise and capacity, this information will be gathered by the team, otherwise, they may contract with qualified professionals to collect this information. From this initial site assessment, the project team, working closely with the landowner(s) and managers will craft objectives for the project that address, as comprehensively as possible, the identified habitat, water quality, and agricultural management concerns. These objectives will identify the desired outcomes for the project area, but will not yet prescribe solutions to achieve those outcomes.

Activity 3 – Project Design

Once objectives are agreed upon by all parties, the project team will contract with qualified restoration design firms, engineers, and irrigation specialists to complete site-specific design packages which meet the established objectives for each project location. The design package will include a report that documents existing ecological conditions, major design criteria, recommended project elements, planning level drawings, preliminary schedules, and cost estimates. The intent is for the final design package from this proposal to be detailed enough to proceed with project implementation fundraising and with requests for proposals by qualified restoration practitioners. Implementation of projects designed as a part of this proposal will be pursued with funds not associated with WaterSMART's CWMP but may include other federal funding sources.

EVALUATION CRITERIA:

<u>Evaluation Criteria A: Watershed Group Diversity and Geographic Scope</u> <u>Subcriterion A1 – Watershed Group Diversity</u>

The roots of the Blackfoot Challenge story began in the 1970s when private landowners and public managers had the simple idea that we can share resources if we look for common ground through public and private partnerships to work collectively. The Blackfoot Challenge formed in 1993 to follow this inclusive, consensus-based approach to coordinate efforts that conserve and enhance the natural resources and rural way of life in the Blackfoot Watershed. Today, the group remains a cooperative of local landowners, federal and state land managers, local government officials, tribal representatives, corporate landowners and conservation organizations. Our conservation success is possible because we follow a strict process that respects community values, invites participation from all watershed stakeholders, coordinates the conversations and partnerships, and supports these partnerships with good science and fact. In

today's language, we follow a collaborative process.

Alongside landowners, agricultural producers, recreation interests and forestry industry members from all seven Blackfoot Watershed communities, the Blackfoot Challenge Board of Directors includes representatives of the U.S. Fish and Wildlife Service, U.S. Forest Service, Natural Resources Conservation Service, Bureau of Land Management, Montana Fish, Wildlife and Parks, Montana Department of Natural Resources and Conservation, Montana Department of Environmental Quality, and The Nature Conservancy. Community engagement, public outreach and project development take place through a suite of working groups and committees. For the water program, working groups include a Water Committee, a Drought Committee, and a River Recreation Subcommittee all coordinated by the Blackfoot Water Steward. These committees are made up of a broad diversity of 40-50 community stakeholders similar to the Challenge Board. Committees meet regularly to discuss natural resource concerns and set watershed priorities.

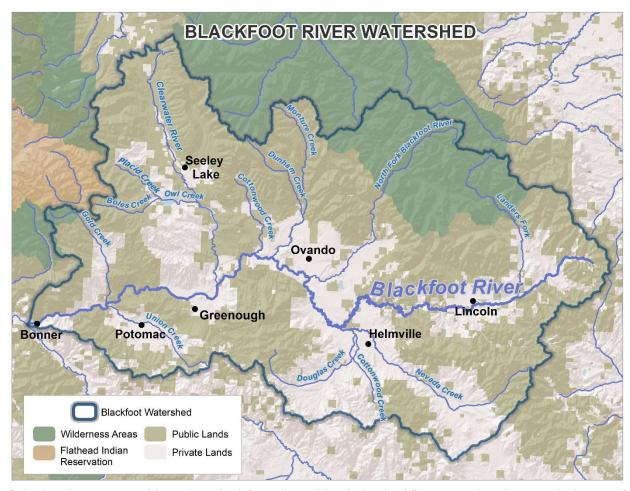
The majority of work related directly to this proposal would be coordinated through the Blackfoot Drought Response Committee and its work groups. This Committee is made up by a diversity of watershed stakeholders and community members including representatives from the Confederated Salish and Kootenai Tribes, Montana Fish, Wildlife and Parks, Montana Department of Natural Resources and Conservation, U.S. Fish and Wildlife Service, Bureau of Land Management, U.S. Geological Survey, University of Montana, Trout Unlimited, the Big Blackfoot Chapter of Trout Unlimited, the Clark Fork Coalition, local fishing outfitters and fly shop businesses, and local ranchers and land managers.

Subcriterion A2 – Geographic Scope

The Blackfoot Challenge works across the entire Blackfoot watershed, from its headwaters at the Continental Divide near Lincoln, Montana, to its confluence with the Clark Fork River near Bonner, Montana. Within the watershed, the Challenge makes every effort to equally engage all seven communities that lie within our boundary, including Bonner, Potomac, Greenough, Seeley Lake, Ovando, Helmville and Lincoln. In addition, the Challenge is increasingly asked to share its best practices and lessons learned with nascent watershed groups throughout Montana and the West.

Our work takes place within a watershed encompassing 1.5 million acres (2,345 square miles) of biologically rich and diverse lands in portions of four northwest Montana counties: Lewis and Clark, Powell, Missoula and Granite. Elevations in the watershed range from 9,403 feet on Red mountain to 3,280 feet near Bonner, Montana where the Blackfoot enters the Clark Fork River. The watershed is characterized by narrow headwater canyons opening to generally rolling terrain at the heart of the watershed and ending in a narrow, stream-cut canyon. The Blackfoot River is ranked as a Tier I Aquatic Conservation Focus Area in Montana's Comprehensive Fish and Wildlife Conservation Strategy. Tier I species, communities, and focus areas are considered by Montana FWP to be of the greatest conservation need in Montana.

The Blackfoot Subbasin is part of the Clark Fork-Pend Oreille River Basin and is identified by the U.S. Geological Survey (USGS) 8-digit HUC number 17010203. The Blackfoot is one of the easternmost subbasins within the Columbia River Basin. The Columbia River Basin Fish and Wildlife Program organizes the subbasins of the Columbia River Basin into 11 ecological provinces, or groups of adjoining subbasins with similar hydrology, climate, and geology. The Blackfoot Subbasin is part of the Mountain Columbia Ecological Province along with the Bitterroot, Clark Fork, Flathead, and Kootenai Subbasins. Although anadromous



fisheries do not extend into the Blackfoot, the subbasin is significant as a headwaters drainage of the Columbia River system.

Evaluation Criteria B: Addressing Critical Watershed Needs

Subcriterion B1 – Critical Watershed Needs or Issues

Long before the Challenge existed, a few Blackfoot residents began to realize the need for collaboration in the 1970s as conflicts brewed between private landowners and recreation enthusiasts attracted to the region's wealth of fish, wildlife, waterways and scenic beauty. In 1992, the Blackfoot River was listed as one of the 10 most endangered rivers in the United States due to a century of unsustainable practices including mining, livestock grazing and timber harvest. Housing development, increased recreational use and the spread of noxious weeds were also beginning to impact the overall health of the river. The impacts to water quality and fisheries of the Blackfoot associated with these land uses generated interest in river management and enforcement via top-down, agency-led planning and decision-making.

Today, the legacy of many of these issues lingers, although our approach to solving problems has changed dramatically. From ranchers to fishing outfitters, the diverse stakeholders who share a stake in the watershed are working to balance their water needs with each other. Because of the river's native fisheries, including threatened bull trout, multiple instream flow rights exist on the Blackfoot that set minimum flow targets to protect the fishery. The need to protect this important fishery led to the development of the Blackfoot Drought Response Plan, in

an effort to balance the sacrifice made by all competing water users. Low flows have triggered drought response measures in 16 of the last 23 years, demonstrating the new reality for river flows with changing climate patterns. At the same time as ranchers and fishing outfitters deal with the economic impacts of drought, local municipalities have their own water concerns. Specifically, based on population projections and water availability, the community of Seeley Lake faces potential water shortages in the future.

Adding to the anecdotal observations of watershed stakeholders, more recent modeling and peer-reviewed research both paint a challenging future for the watershed in terms of balancing water use among municipal, recreational, agricultural, cultural, and ecological needs. According to the 2017 Montana Climate Assessment (Whitlock et al. 2017), two key findings standout as the most pertinent to the future of water availability for the Blackfoot watershed and across the State. First, earlier onset of snowmelt and spring runoff will reduce late-summer water availability in snowmelt-dominated watersheds like the Blackfoot. Second, changes in snowpack and runoff timing will likely increase the frequency and duration of drought during late summer and early fall. The combined effect of these findings is a future with less water availability in late summer, a time when crop water use is highest, fish species are most vulnerable to deadly elevated water temperatures, and recreational use of the river is at its peak. In the Blackfoot watershed specifically, current climate models predict a watershed-wide increase in average August stream temperatures of 3.85 °F and a 324% increase in the number of stream segments with average August stream temperatures above critical thresholds for cold-water dependent fish species (68 °F) by centuries end, 2070–2099, as compared to historic conditions, 1993-2015 (Isaac et al. 2017). In regards to streamflows, current models predict increased winter-time (Dec. Jan, Feb) streamflows between +12% and +152% and decreases in summer time (Jun, Jul, Aug) streamflows by as much as -64% by end of century, 2070–2099, as compared to historic conditions, 1977-2006 (USDA 2022).

These predictions have economic, cultural, and ecological implications for the Blackfoot watershed. Due to the combined effect of lower late season streamflow and higher stream temperatures, optimal cold-water habitat for native bull trout and westslope cutthroat trout may be reduced by as much as 80% in the lower portions of the Blackfoot River by 2080 (Cline et al. 2022). This reduction in habitat could lead to \$100,000 per kilometer in lost angling-related spending each year for the Blackfoot river (Cline et al. 2022). The pervasive nature of climate-related changes to aquatic habitat suitability makes it particularly difficult to affect large-scale ecological improvement for imperiled fish species (Isaak et al. 2022). Implications for the agricultural economy are also serious. While increases in temperature and seasonal precipitation may be favorable for crop production and crop diversification in the short term, higher temperatures will also increase evapotranspiration and water demand for most crops (Whitlock et al. 2017). Higher late-season water demand combined with lower summer streamflow supply means overall less reliable irrigation capacity during the late growing season adding additional stress to an industry with already slim margins (Whitlock et al. 2017).

Adding to the water quantity challenges, water quality has also become a priority concern following completion of the first TMDLs. TMDLs have been written for the Blackfoot River proper as well as a number of tributaries, with sediment, temperature and metals all identified as problems that require a response. The Blackfoot Challenge has made a commitment to find voluntary, incentive-based solutions rather than top-down regulation to water quantity and quality concerns to better ensure community participation in the restoration process.

Subcriterion B2 – Project Benefits

Task B: Watershed Restoration Planning

As periods of drought become the norm, water quality issues persist, and climate forecast portend less reliable water supply, there is a clear need to build socio-ecological resilience in Blackfoot watershed to prepare for these changes. This watershed has benefitted from a grass-roots foundation of landowner involvement and public-private partnerships. Nearly three decades of restoration efforts have brought the Blackfoot river back from once being listed in the top 10 most endangered rivers due to past industrial resource extraction to now once again serving as the economic and ecological lifeblood of the southern Crown of the Continent Ecosystem. Since this work began, key fish populations have increased or stabilized in most reaches (MFWP 2021), and significant social capital to creatively and nimbly adapt to changing conditions has been created through voluntarily mechanisms like the Drought Response Plan and participation in stream restoration efforts. Despite this progress, this watershed will not be immune to further changes and challenges as decreasing late-season water reliability becomes realized.

While the legacy of past industrial extraction still looms large, it is important to look ahead to prepare for the future alongside repairing the past. The watershed restoration planning proposed in this application represents the next step in our decades long effort to build robust, thriving, and resilient ecologies and economies in the Blackfoot watershed. By taking stock of where we have been, incorporating new science and information, and building from new partnerships in the watershed, we will chart a path for strategic investment of watershed restoration efforts for years to come. Key benefits from an updated Watershed Restoration Plan include:

• Better access to diverse and sustainable restoration funding:

The updated WRP will enable the Blackfoot Challenge and partners to pursue restoration funding with renewed focus and purpose. This planning document will become an instrumental part of how we approach funders and how we describe the restoration vision and desired outcomes for the Blackfoot. The WRP will open the door to priority funds within some opportunities such as State-distributed Clean Water Act funding in Montana and potential future WaterSMART funding through USBOR.

• Strengthened stakeholder relationships and trust:

With diverse and robust engagement from community members, watershed partners, and the Confederated Salish and Kootenai Tribes, the process to create an updated WRP will strengthen existing relationships, building widespread buy-in and support for restoration activities. With a renewed social license to operate from, all partners can move forward collaboratively to tackle the pressing issues identified in the plan knowing they have support from the community and from one another.

• More accessible and operational data and information:

The effort to gather and compile known information from decades of restoration work and knowledge of irrigation operations into accessible and readily available datasets will be a major benefit of the WRP process. In addition to their main purpose of informing a new project prioritization framework, this information can be used by a wide variety of watershed stakeholders for other types of project planning, communication and outreach storytelling, or additional research and modeling. Working closely with partners such as the Montana Department of Natural Resources and Conservation and the Montana Department of Environmental Quality, we will ensure the data we compile is useful in supporting the processes they are working on independently including an integrated hydrological model for the State and water quality implementation evaluations,

respectively.

• Increased capacity for community outreach, education, and information dissemination:

Another key component of the updated WRP will be identifying education and outreach strategies to further restoration objectives and leverage impacts across a broader audience and landscape. While restoration partners will necessarily focus their efforts in key locations, targeted outreach and education campaigns can leverage efforts by disseminating information on best management practices that land managers can implement themselves, with minimal technical assistance, to further water quantity and quality goals.

When taken together, the above benefits are intended to synergistically interact to ultimately build natural and social capital within Blackfoot communities to cope with changing conditions in the Blackfoot watershed. Through the strategic restoration of stream systems, we will build natural capital by restoring ecological functions such as floodplain connection, aquifer recharge, water filtration, and nutrient cycling. This natural capital then provides ecological resilience to long term changes in seasonal water availability and short-term, but becoming more frequent, disturbances like drought and wildfires (Fairfax and Whittle 2020; Silverman et al. 2018). We build social capital by strengthening relationships, building trust, creating robust communication networks, and creating mechanisms to adapt to change. This social capital is at the basis of what makes a voluntary drought response plan work and function with enough flexibility to adapt to changes in water rights, partnerships, or long-term water supply. Moreover, social capital is a necessary precursor to building win-win solutions that help working landscapes remain sustainable with improved irrigation or land management infrastructure while restoring ecological function to riparian areas.

Task C: Watershed Restoration Project Design

While it is not possible to describe the specific projects that would be designed through this proposal, general project benefits can be described due to the decades-long history of restoration work that has been completed in the Blackfoot. Over the past three decades, a standard restoration strategy has been crafted and formalized which guides nearly all restoration work in the watershed. Part of the purpose of this proposal is to update this restoration strategy, but its fundamental framework will remain the same.

As outlined in the Restoration Strategy document (MTFWP 2005), the basis for restoration in the Blackfoot is the desire for natural reproduction of wild fish, with particular focus given to imperiled native fish species, including fluvial bull trout (*Salvelinus confluentus*) and fluvial westslope cutthroat trout (*Oncorhynchus clarki lewisi*). In order to attain natural reproduction and recruitment of wild fish, restoration is focused on two primary objectives, quality habitat and stream connectivity.

Quality stream habitat is defined as a stream possessing water of sufficient quantity and quality where an arrangement of physical channel features provides food, cover (security) and space in an environment that allows a population to thrive. Stream connectivity provides the mechanism for fish to move among streams or stream reaches and to complete their life cycle and use a variety of habitats. (MTFWP 2005, pp. 7-8)

Given these objectives, successful stream restoration in the Blackfoot always begins with properly identifying and correcting habitat-related limiting factors for the fish species of interest.

"Limiting factors are defined as any factor that inhibits or limits the population below its full potential (MTFWP 2005, p. 8). Due to the life histories of native fish in the Blackfoot, stream restoration is almost always focused on tributary stream systems, where most spawning and rearing occurs. The majority of habitat degradation to tributary streams of the Blackfoot occur in lower elevations and on private agricultural ranchlands. Thus, understanding the role of private land managers and moreover, gaining the trust and buy-in of land managers, is just as essential to restoration success as understanding the fishery impairments on any given stream reach.

A team of restoration partners including Montana Fish, Wildlife, and Parks, the Big Blackfoot Chapter of Trout Unlimited, US Fish and Wildlife Service, and the Blackfoot Challenge has led the charge in implementing stream restoration in the Blackfoot, guided by the Restoration Strategy, for nearly three decades. Securing and directing a mix of private, state, and federal funds, this team has implemented more than 250 stream restoration projects across at least 100 tributaries in the Blackfoot watershed. While no two projects are the same, all projects follow the same general process and fall within a typical project scope and scale. Due to the complex nature of these projects, including the necessary relational trust among partners and landowners and context-specific designs necessary for each project, a typical project usually involves only one or two landowners and only one tributary stream. The project reach may be short (less than 1,000ft) or may be longer (more than 5,000ft) depending on the limiting factors identified and the willingness of the landowner(s). Specific restoration actions will be contingent upon the limiting factors identified within the project reach but may include such activities as stream channel reconstruction, riparian plantings, addition of in-stream habitat features, removal of fish passage barriers, or installation of fish screens on irrigation diversion structures.

Any project on private ranchland will also include an accompanying grazing management plan to ensure proper infrastructure and management objectives are in place to establish adequate grazing exclusion areas, livestock access points, and appropriate pasture management for the long-term success of the project. As projects most often occur on working agricultural operations, most projects also have irrigation infrastructure components that both facilitate habitat improvements and result in more effective and efficient irrigation operations. Working in close collaboration with the land managers, the restoration team works to design habitat and irrigation improvements that result in win-win outcomes for fish and water users. For example, if fish passage is identified as a limiting factor, a typical project might include updating irrigation diversion structures to make them both more fish-friendly and require less manual labor to maintain.

Some projects may include improvements to irrigation efficiency such as converting open ditches to pipelines, or converting flood irrigated fields to sprinkler systems; however, these practices will only occur when the primary purpose of the conversion is to eliminate or otherwise address a limiting factor identified within the project reach. For example, in a chronically dewatered stream system, a restoration design might include upgrading a diversion structure with a fish screen, piping an open ditch, and converting a flood-irrigated field to an overhead sprinkler irrigation system. The water saved from the resulting improvement in irrigation efficiency can then be protected in-stream through a water lease to provide late-season flow and stream connectivity for fall-spawning bull trout. Irrigation efficiency or infrastructure improvement activities not primarily for the benefit of habitat improvement will not be pursued as part of this watershed restoration initiative.

Evaluation Criterion C: Readiness to Proceed

A brief outline detailing the breakdown of the tasks and activities required to complete the proposed project follows. A summary table including major tasks, activities, responsible parties, and timeline for completion is included below.

Year 1:

Task 1, Activity 1: Convene a working group of the Blackfoot Challenge Drought Response Committee tasked with leading and coordinating efforts to update the Blackfoot Watershed Restoration Plan. Work Group members will include a diverse selection of Committee members representing federal, state, and local agencies, the Confederated, Salish, and Kootenai Tribe, non-profit restoration partners, and local landowners. The Work Group will be coordinated by the Blackfoot Water Steward.

Task 1, Activity 2: The Watershed Restoration Planning Work Group (Work Group, hereafter) will meet to develop and seek agreement on an action plan which identifies the steps necessary to update the Watershed Restoration Plan, assigns roles and responsibilities to each step, and establishes timelines for major milestones.

Task 1, Activity 3: The Work Group will host a series of community meetings and listening sessions with watershed partners to gather input and identify areas where updates are needed to the existing 2014 WRP. Community meetings will be held in a variety of locations throughout the watershed and advertised broadly across multiple media sources in order to capture the full diversity of watershed interests. In addition to community open house like meetings, the Work Group will also host in-depth listening sessions with key stakeholders such as the Confederated Salish and Kootenai Tribes and Montana Fish, Wildlife, and Parks.

Task 1, Activity 4: The Watershed Restoration Planning Work Group, with support from outside contractors where needed, will begin identifying and gathering needed data to inform an updated project prioritization framework. This work will include inventorying existing datasets, compiling existing information, re-formatting data as needed, and synthesizing data from different sources into a single dataset. Key sources for exiting data will include the Big Blackfoot Chapter of Trout Unlimited, Trout Unlimited, Montana Fish, Wildlife, and Parks, and the Blackfoot Challenge. The Work Group will use a combination of internal staff capacity and external contractors to complete this work.

Task 1, Activity 5: Using the data gathered, the Work Group will begin drafting an updated prioritization framework for priority project selection. Multiple working sessions of the Work Group will be necessary to find agreement of the draft prioritization framework.

Year 2:

Task 1, Activity 6: Using the input from community members and watershed stakeholders, the Work Group will write an initial draft updated WRP. The Blackfoot Water Steward, or another Work Group designee, will be primarily responsible for writing the updated plan while all Work Group members will be responsible for giving feedback and seeking agreement on its content.

Task 1, Activity 7: Once a draft WRP is completed the Work Group will host additional community meetings and listening sessions with stakeholders to seek feedback on the draft WRP from community members and partners.

Task 1, Activity 8: While seeking feedback from community members, the Work Group will also incorporate findings and any new data from anticipated partner-created tools and models into the prioritization framework. One example is the integrated hydrologic model being developed by the Montana Department of Natural Resources and Conservation that is expected to be completed in the next couple of years.

Task 1, Activity 9: After soliciting feedback and incorporating any pertinent new information, the Work Group will work to refine the draft WRP towards a final plan.

Task 1, Activity 10: The final WRP will be brought through the proper channels for review and adoption by the Blackfoot Challenge organization. The process will begin with Work Group, continue to the Drought Response Committee, and move to final adoption through the Blackfoot Challenge Board.

Task 1, Activity 11: The final adopted plan will be submitted to applicable state agencies, such as the Montana Department of Environmental Quality (DEQ) for their review and approval. While DEQ approval of the plan is necessary in order to open access to some funding opportunities, State approval is not necessary to allow project design to move forward.

Task 2, Activity 1: Using the updated prioritization framework, a project team of the Drought Committee will begin to select top priority projects to advance to the design phase. Projects selected to move forward with design will represent the projects on the highest prioritized stream systems that are the most ready to proceed.

Task 2, Activity 2: The project team will gather known information to assess existing conditions in selected project locations. From that assessment, the project team will work with applicable land managers to develop project objectives that meet the needs of landowners and restoration goals.

Task 2, Activity 3: The project team will solicit bids and award contracts with qualified restoration project design firms to develop 60% design drawing and specifications for selected high priority projects.

Year 3:

Task 2, Activity 4: If need be, the project team will continue its project selection process to select additional projects for design funding.

Task 2, Activity 5: The project team will gather known information to assess existing conditions in selected project locations. From that assessment, the project team will work with applicable land managers to develop project objectives that meet the needs of landowners and restoration goals.

Task 2, Activity 6: The project team will solicit bids and award contracts with qualified restoration project design firms to develop 60% design drawing and specifications for remaining selected high priority projects.

Task 2, Activity 6: The project manager will complete final grant closeout actions and final reporting.

Table 1. —Summary Tasks and Project Timeline

Milestone / Task / Activity	Primary Responsible Parties	Start Date	Completion Date
Task 1, Activity 1 – Convene Planning Work Group	Coordinated by: Blackfoot Water Steward Implemented by: Blackfoot Drought Committee	Upon award	April 2025
Task 1, Activity 2 – Develop an Action Plan	Coordinated by: Blackfoot Water Steward Implemented by: Planning Work Group	April 2025	May 2025
Task 1, Activity 3 – Solicit and gather community and partner input	Coordinated by: Blackfoot Water Steward Implemented by: Planning Work Group	May 2025	October 2025
Task 1, Activity 4 – Gather and centralize needed data to inform prioritization process.	Coordinated by: Blackfoot Water Steward Implemented by: Planning Work Group and Contractors	May 2025	May 2026
Task 1, Activity 5 – Use data gathered to draft an updated prioritization framework for priority project selection	Coordinated by: Blackfoot Water Steward Implemented by: Planning Work Group and Contractors	September 2025	December 2025
Task 1, Activity 6 – Draft an updated WRP from gathered input and updated prioritization framework	Blackfoot Water Steward or other Work Group designee	January 2026	March 2026
Task 1, Activity 7 – Seek feedback on draft WRP from community members and partners	Coordinated by: Blackfoot Water Steward Implemented by: Planning Work Group	April 2026	June 2026
Task 1, Activity 8 – Incorporate findings and any new data from anticipated partner-created tools and models into prioritization framework	Coordinated by: Blackfoot Water Steward Implemented by: Planning Work Group and Contractors	January 2026	August 2026
Task 1, Activity 9 – Refine draft WRP with feedback and any new data	Coordinated by: Blackfoot Water Steward Implemented by: Planning Work Group	August 2026	September 2026

Task 1, Activity 10 – Bring final WRP for review and adoption through the Work Group, Drought Response Committee, and Blackfoot Challenge Board	Coordinated by: Blackfoot Water Steward Implemented by: Planning Work Group	September 2026	October 2026
Task 1, Activity 11 – Submit adopted WRP to applicable state agencies for their review and approval	Blackfoot Water Steward	November 2026	December 2026
Task 2, Activity 1 – Use prioritization framework to select top priority projects to advance to design phase	Coordinated by: Blackfoot Water Steward Implemented by: Project Team	October 2026	February 2027
Task 2, Activity 2 – Asses existing conditions and develop project objectives for selected project locations	Coordinated by: Blackfoot Water Steward Implemented by: Project Team and Contractors	November 2026	March 2027
Task 2, Activity 2 – Solicit bids and award contracts with qualified restoration project design firms to develop 60% design drawing and specifications for selected high priority projects	Coordinated by: Blackfoot Water Steward Implemented by: Project Team and Contractors	December 2026	September 2027
Task 2, Activity 3 – Grant closeout and final reporting	Blackfoot Water Steward	October 2027	December 2027

Project Budget:

Please see the attached Budget Detail and Narrative document for detailed information on the proposed budget. Below is a summary of total project costs and funding sources for a brief overview.

Table 2. —Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
Non-Federal Subtotal	\$0
REQUESTED RECLAMATION FUNDING	\$300,000

Evaluation Criteria D: Presidential and Department of the Interior Priorities Subcriterion E1 – Climate Change

Addressing the impacts of climate change is at the heart of this proposal. A primary intended goal common to both Tasks within this proposal is to build social and ecological resilience to the impacts of climate change. According to Folke 2006, resilience in social-ecological systems is defined by three core attributes: an ability to resist or absorb disturbance, the capacity to self-organize, and the capacity to learn and adapt. The purposed watershed planning and project design builds this resilience in both ecological and human communities. The pervasive and widespread impacts of climate change on both aquatic and terrestrial ecosystems necessitates that actions be targeted and strategic if any progress is to be made (Isaak et al. 2022). Through strategic selection of stream restoration projects and designs targeted to key impairments, we will restore ecological function in important aquatic habitats. Much of the increased ecological resilience is tied to restoring proper floodplain connectivity and function. Properly functioning floodplains help buffer stream systems against potential flooding caused by more frequent winter rain events, bolster late summer flows by raising water tables and

increasing groundwater storage, and protect against catastrophic wildfire by increasing vegetation productivity along riparian areas. By relying on natural ecological function, rather than human intervention or infrastructure, we are also restoring the natural system's capacity to adapt to changing conditions.

In a similar vein, this proposal advances social resilience to climate change as well by investing in the social capital of our communities. Through the collaborative watershed planning process and continued implementation of restoration projects outlined in this proposal, we will build and strengthen community relationships, trust, mutual learning, and collaborative decision-making capacity. These intangible social connections are invaluable components of a community's ability to adapt to change and form the basis of our communities' resilience to climate change. Ensuring robust participation in voluntary adaptation mechanisms like the Drought Response Plan and the Watershed Restoration Program, is essential for continued progress in increasing resilience to climate change in the Blackfoot. Robust participation will not be possible without a foundation of trust and social connection that is created through the types of planning and outreach efforts like those outlined in this proposal.

Subcriterion E2 – Benefits to Disadvantaged, Underserved, and Tribal Communities

The 1.5-million-acre Blackfoot watershed is home to about 9,000 people living in seven rural communities. These communities are largely dependent on the health of our natural resources driving an economy dominated by agriculture and outdoor recreation. Over the last few decades, the Blackfoot has experienced waves of boom and bust related to economies once founded on mining and timber extraction – industries that have largely evaporated from the valley. Today, the population is aging, many Blackfoot schools are experiencing declining enrollment, and families are facing economic challenges in retaining traditional ranching operations. According to the Climate and Economic Justice Screening Tool, communities in Lewis and Clark County as well the Confederated Salish and Kootenai Tribes are considered disadvantaged. In addition to low income within Lewis and Clark County, burdens identified in the Blackfoot watershed include high energy costs, high prevalence of heart disease, presence of abandoned mines, high projected wildfire risk, and high expected population loss due to natural disasters.

The Blackfoot Challenge and diverse partners represented in this proposal have worked together over the last 30 years to ensure that Blackfoot communities can thrive and build a more resilient agricultural economy. Stream restoration, community-led drought management plans, irrigation efficiency, and regenerative agriculture are some of the many strategies applied by the project partners to not only sustain rural agricultural families but help raise their profitability. This proposal reflects continued commitment to that cause by project partners. The watershed restoration planning proposed in this application will help catalyze projects that improve public health and safety by addressing water quality concerns, contribute to more reliable water supply, and help create sustainable and resilient agricultural economies.

The Blackfoot watershed also sits within the ancestral lands of the Confederated Salish and Kootenai Tribes (CSKT), who have become an important partner in the stewardship of Blackfoot water resources. As part of their water compact agreement passed by the Montana State Legislature in 2015, CSKT acquired co-ownership of an in-stream flow water right in the Blackfoot River to protect native fisheries. This water right forms the foundation for the Blackfoot watershed's voluntary drought management process – engaging producers and other landowners in water conservation practices to help preserve in-stream flows during drought and

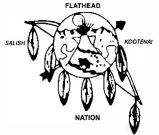
thereby protect culturally significant fish species for the CSKT. Tribal staff sit on the Blackfoot Drought Response Committee, helping to make decisions about implementing drought actions during low-water years. CSKT staff members also provide technical resources to the Blackfoot to support water measurement and hydrological studies and to advise on long-term conservation measures that can cultivate improved drought resilience. This collaborative water stewardship between local stakeholders and tribal partners produced benefits that flow in both directions. The individual conservation plans, and stream restoration projects such as those included in this proposal, create improvements in water management that benefits and protects the offreservation treaty rights and cultural significance of the Blackfoot River for current and future tribal members. These projects also provide Blackfoot producers an alternative to traditional water rights enforcement – allowing them to develop custom individual water conservation plans that typically allow continued limited use of their irrigation water during drought. Because of this, Blackfoot producers have less worry about potential catastrophic losses during a drought year. The partnership and voluntary conservation approach to drought helps all landowners and partners collectively to protect Blackfoot water resources and fisheries – critical legacies to the CSKT members based on their historic hunting and fishing grounds – while also providing a model that the CSKT can apply in other watersheds where they have ownership or water rights interests.

LITERATURE CITED

- Blackfoot Challenge (BC). 2005. A Basin-wide Restoration Action Plan for the Blackfoot Watershed; Prepared for: Montana Department of Natural Resources and Conservation Renewable Resource Grant & Loan Program and The Blackfoot Watershed Restoration and Monitoring Partners. Prepared by: the Blackfoot Challenge in Partnership with the Big Blackfoot Chapter of Trout Unlimited, Montana Fish, Wildlife and Parks, Hydrometrics Inc., and other partners.
- Blackfoot Challenge (BC). 2014. Blackfoot River Watershed Restoration Plan: A water quality addendum to the Blackfoot Subbasin Plan; prepared for the Montana Department of Environmental Quality. Prepared by the Blackfoot Challenge.
- Blackfoot Challenge and Trout Unlimited (BC/TU). 2009. Blackfoot Subbasin Plan; prepared for the Northwest Power and Conservation Council; prepared by the Blackfoot Challenge and Trout Unlimited.
- Cline, Timothy J., C. Muhlfeld, R. Kovack, R. Al-Chokhachy, D. Schmetterling, A. Lynch. 2022. Socioeconomic resilience to climatic extremes in a freshwater fishery. *Science Advances* 8(36): DOI:10.1126/sciadv.abn1396
- Fairfax, E., and Whittle, A. 2020. Smokey the Beaver: beaver-dammed riparian corridors stay green during wildfire throughout the western USA. *Ecological Applications* 30(8): e02225. 10.1002/eap.2225
- Folke, C. 2006. Resilience: The emergence of a perspective for social-ecological systems analyses. *Global Environmental Change* 13.pp 253-267
- Montana Fish, Wildlife and Parks (MFWP). 2005. An Integrated Stream Restoration and Native Fish Conservation Strategy for the Blackfoot River Basin. By Montana Fish, Wildlife and Parks, Helena.
- Montana Fish, Wildlife and Parks (MFWP). 2021. Fisheries Investigations in the Blackfoot River Watershed, 2016-2020. By Montana Fish, Wildlife and Parks, Helena.
- Isaak, D., S. Wenger, E. Peterson, J. Ver Hoef, D. Nagel, C. Luce, S. Hostetler, J. Dunham, B. Roper, S. Wollrab, G. Chandler, D. Horan, S. Parkes-Payne. 2017. <u>The NorWeST summer stream temperature model and scenarios for the western U.S.: A crowd-sourced database and new geospatial tools foster a user community and predict broad climate warming of rivers and streams.</u> Water Resources Research, 53: 9181-9205. https://doi.org/10.1002/2017WR020969.
- Isaak, D., M. Young. D.Horan, D. Nagel, M. Schwartz, K. McKelvey. 2022. Do metapopulations and management matter for relict headwater bull trout populations in a warming climate?. *Ecological Applications*. 2022:e2594. https://doi.org/10.1002/eap.2594

- Silverman, N.L., Allred, B.W., Donnelly, J.P., Chapman, T.B., Maestas, J.D., Wheaton, J., White, J. and Naugle, D.E., 2018. Low-tech riparian and wet meadow restoration increases vegetation productivity and resilience across semi-arid rangelands. Restoration Ecology. DOI: 10.1111/rec.12869
- Smith, T. 2010. *aay u sqélix**: A history of bull trout and the Salish and Pend d'Oreille people. Written in conjunction with *Explore the River: Bull Trout, Tribal People, and the Jocko River* (Pablo, Montana: Confederated Salish and Kootenai Tribes, 2011), an educational project of the Natural Resource Department, Confederated Salish and Kootenai Tribes.
- USDA Forest Service Office of Sustainability and Climate. 2022. Streamflow in a Changing Climate: Flow Metric Map Exporter. Retrieved from https://storymaps.arcgis.com/stories/6a6be7d624db41638a24b659305af522 (last accessed 6/5/2023).
- Whitlock C., Cross W, Maxwell B, Silverman N, Wade AA. 2017. 2017 Montana Climate Assessment. Bozeman and Missoula MT: Montana State University and University of Montana, Montana Institute on Ecosystems. 318 p. Available online http://montanaclimate.org. Accessed 9 May 2020. doi:10.15788/m2ww82.

APPENDIX A. LETTERS OF SUPPORT



A Confederation of the Salish. Pend d' Orcille and Kootenai Tribes

THE CONFEDERATED SALISH AND KOOTENAI TRIBES OF THE FLATHEAD NATION

P.O. BOX 278 Pablo, Montana 59855 (406) 275-2700 FAX (406) 275-2806 www.cskt.org



TRIBAL COUNCIL MEMBERS:

Tom McDonald - Chairman Len Twoteeth - Vice Chair Martin Charlo - Secretary Ellie Bundy - Treasurer Carole Lankford James "Bing" Matt Jim Malatare Mike Dolson Jennifer Finley Terry Pitts

December 4, 2023

To: U.S. Department of the Interior, Bureau of Reclamation, Water Resources and Planning Office

ATTN: WaterSMART CWMP Application Review Committee

Re: WaterSMART Cooperative Watershed Management Program Phase I for FY 2023-24

Funding Opportunity Number: R23AS00362

Letter of Partnership for the Blackfoot Challenge project application, Building Social-Ecological Resilience in the

Blackfoot through Watershed Restoration Planning and Project Design

Dear Review Committee Member,

This letter is written to demonstrate the Confederated Salish and Kootenai Tribes (CSKT) support for the Blackfoot Challenge WaterSMART grant application under the program noted above. The Blackfoot Challenge application will assist in leading an effort to update the Blackfoot Watershed Restoration Plan and completing designs for high priority projects identified in the Plan.

The Blackfoot watershed is within the aboriginal territory of the CSKT, and continues to be a culturally important area. As part of the CSKT-MT Water Compact, CSKT secured instream flow water rights in the Blackfoot River to benefit the river ecosystem and fishery. CSKT is supportive of additional projects such as this one proposed by the Blackfoot Challenge that contribute to these benefits.

As a result of this project, the updated Watershed Restoration Plan will reflect changes in watershed condition since 2014 and will include a reassessment of stream prioritization. The updated Plan will also incorporate new information from other models currently in progress such as the Blackfoot Integrated Hydrologic Model, under development by the Montana Department of Natural Resources and Conservation. With an updated Plan and newly informed stream prioritization framework, Blackfoot Challenge will then identify high priority projects to move forward with project design.

We are excited to support the Blackfoot Challenge's WaterSMART Cooperative Water Management Program proposal and will work collaboratively with Blackfoot Challenge and our partners in the watershed to ensure that our goals are aligned with the goals of the grant proposal.

Sincerely,

Seth Makepeace

CSKT Compact Project Officer Seth.makepeace@cskt.org

th V. Ma Kepiace

CSKT Water Rights Specialist

eric.hull@cskt.org



P.O. BOX 1 • OVANDO, MT 59854-0001

November 30, 2023

US Bureau of Reclamation WaterSMART
Cooperative Watershed Management Program Phase I

To whom it may concern:

The Big Blackfoot Chapter of Trout Unlimited would like to express our support for the application being submitted by the Blackfoot Challenge aimed at upgrading our collaborative Blackfoot Watershed Restoration Plan and completing important restoration design work benefiting native trout species across a watershed scale.

BBCTU's mission is to conserve and restore the cold-water fishery of the Big Blackfoot River and its many tributaries. Having a guiding document to lead our efforts and strategically focus on streams and projects that will benefit the native trout fishery has been the foundation of the restoration program dating back to 1987. This work builds on decades of collaborative efforts across the watershed to systematically improve the critical components of habitat: cold, clean, connected, and complex environments, while also supporting local communities, economies, and private landowners.

We thank you for the opportunity and consideration of this important work,

Sincerely,

Jim Stutzman Board Chair

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

Water Resources Division

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



GREGGIANFORTE, GOVERNOR

1539 ELEVENTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE: (406) 444-2074 FAX: (406) 444-2684 PO BOX 201601 HELENA, MONTANA 59620-1601

December 4, 2023

To: Department of the Interior, Bureau of Reclamation, Water Resources and Planning Office Attention: WaterSMART Grant Application Review Committee

Re: WaterSMART Cooperative Watershed Management Program Phase I
Letter of Support for Blackfoot Challenge's proposed project: Building Social-Ecological Resilience in the
Blackfoot Through Watershed Restoration Planning and Project Design

Dear Members of the Review Committee,

I am pleased to support the Blackfoot Challenge's proposed project, *Building Social-Ecological Resilience in the Blackfoot Through Watershed Restoration Planning and Project Design*. As a Water Resource Planner for the Montana Department of Natural Resources and Conservation (DNRC), I frequently collaborate with the Challenge on water management activities in the Blackfoot Basin.

The Challenge is proposing to update their Blackfoot Watershed Restoration Plan by incorporating the Milltown Water Right and compiling a comprehensive suite of watershed data. The pending enforcement of the Milltown Right in the Blackfoot Basin (April 2025) could have significant implications for irrigators, so cooperation among water users and the water right holders (Montana Department of Fish, Wildlife & Parks and the Confederated Salish and Kootenai Tribes) is imperative for success. As a long-standing, trusted organization, the Challenge has a unique ability to bring these stakeholders together and develop collaborative solutions. By integrating the perspectives of the Tribes with input from the State in the WRP, they can better collaborate with water users to craft management solutions that benefit the Blackfoot River.

The Challenge is also proposing to compile and synthesize a wide range of data from the watershed, including irrigation practices and infrastructure. These data will be invaluable to DNRC's current effort to develop an integrative statewide hydrologic modeling framework, and we are excited to partner with the Challenge on the Blackfoot Basin model. DNRC completed synoptic measurements on the Blackfoot River over the last two seasons, so pooling our resources and data will expedite model development. In addition, DNRC is currently exploring an opportunity to provide a statewide data repository for watershed groups through the Montana State Library, which will facilitate the compilation and storage of the Challenge's watershed data.

This project supports the mission of DNRC Water Resources Division by promoting the sound utilization of the State's waters. It also implements several key recommendations of the forthcoming Montana Drought Management Plan, including investment in statewide hydrologic modeling and improving drought coordination and communication across Montana. We are prepared to support the Challenge by coordinating on the data compilation and providing technical assistance as needed. Thank you for considering this valuable project.

Sincerely,

Valerie J. Kurth, Ph.D. Water Planning Section Supervisor Water Resources Division

FWP.MT.GOV



THE OUTSIDE IS IN US ALL.

Region 2 Headquarters 3201 Spurgin Road Missoula, MT 59804 Phone 406-542-5500 November 21, 2023

Cooperative Watershed Management Program c/o Ms. Robin Graber Bureau of Reclamation Water Resources and Planning Office Mail Code: 86-6300 P.O. Box 25007

P.O. Box 25007 Denver, CO 80225

RE: Blackfoot Challenge - WaterSMART Cooperative Watershed Management Program Application

Dear Application Review Committee:

I am writing in support of the "Building Social-Ecological Resilience in the Blackfoot through Watershed Restoration Planning and Project Design" application submitted by the Blackfoot Challenge. The Blackfoot Challenge has been instrumental in facilitating drought planning and water conservation actions throughout the watershed for several decades. This watershed group represents the diverse interests of the watershed's stakeholders while providing a forum for collaborative decision making, project implementation, and coordinated watershed management efforts across public and private lands. This proposal will complement the success of ongoing conservation and restoration efforts.

The Blackfoot River is a valuable social and economic resource for the region and supports an important fishery. The basin has an extensive history of stream habitat restoration, including irrigation efficiency and water conservation actions. The Blackfoot Challenge spearheaded the development of the local Drought Committee in 2000 and their leadership has been critical to the success of the Blackfoot Drought Response Plan. Collectively, the myriad stream habitat, riparian restoration, and grazing management projects implemented by the Blackfoot Restoration Partnership have created measurable improvements to aquatic resources.

The existing watershed restoration plan that Montana Fish, Wildlife & Parks and partners use to guide and prioritize restoration efforts was developed in 2014. As such, this proposal will enable a timely update to the existing plan by incorporating valuable monitoring results and data collected over the last decade. This will improve the relevancy of the watershed restoration plan and ensure that the coalition of agencies and NGOs are well-positioned to continue implementing effective projects.

Your investment will contribute to restoring the Blackfoot River and facilitate the implementation of water conservation efforts. This work advances our broader fisheries management and conservation objectives in the watershed.

Please contact Patrick Uthe, Fisheries Biologist, at (406) 542-5532, or Patrick.Uthe@mt.gov for any questions on this project. Thank you very much for consideration of this funding application.

Sincerely,

Randy Arnold

Fish, Wildlife & Parks

Regional Supervisor, Region 2

rarnold@mt.gov

(406)542-5504



United States Department of the Interior



FISH AND WILDLIFE SERVICE Partners for Fish and Wildlife Program Upsata Lake, 196 Lower Lake Side Lane P.O. Box 66 Ovando, MT 59854

November 30th, 2023

Cooperative Watershed Management Program c/o Ms. Robin Graber
Bureau of Reclamation Water Resources and Planning Office P.O. Box 25007
Denver, CO 80225

RE: Support for the Blackfoot Challenge's application to the WaterSMART Cooperative Watershed Management Program

Dear Application Review Committee,

On behalf of the U.S. Fish and Wildlife Service (Service) Montana Partners for Fish and Wildlife Program, I am writing to express our support for the Blackfoot Challenge's application to the WatertSMART Cooperative Watershed Management Program Phase I funding opportunity. The Service strongly endorses projects that support our mission to conserve and manage federal trust and at-risk species, such as bull trout (*Salvelinus confluentus*) and westslope cutthroat trout (*Oncorhynchus clarkii lewisi*). The Blackfoot Challenge's proposal titled "Building Social-Ecological Resilience in the Blackfoot through Watershed Restoration Planning and Project Design" will support efforts to prioritize and implement high-quality restoration projects to enhance water quality, water quantity, and aquatic and riparian habitat conditions, which are integral to maintaining healthy and resilient native fish populations.

The Service's Partners for Fish and Wildlife Program has a long history of working with private landowners and local watershed groups such as the Blackfoot Challenge and the Big Blackfoot Chapter of Trout Unlimited to restore the native trout fisheries in the Blackfoot Watershed. The Blackfoot River and associated tributaries are a very high priority watershed for the Service, and the funding through this grant will advance the community's efforts to address large-landscape conservation issues with a locally led collaborative and inclusive approach. We are excited to support the Blackfoot Challenge proposal and continue to work in this landscape.

Sincerely,

Rebecca Reeves

Partners for Fish and Wildlife U.S. Fish and Wildlife Service

Rebecca A Revel



December 1, 2023

U.S. Department of the Interior
Bureau of Reclamation
Water Resources and Planning Office
Attn: WaterSMART CWMP Application Review Committee

Re: WaterSMART Cooperative Watershed Management Program Phase I for FY 2023-24
Funding Opportunity Number: R23AS00362
Letter of Support for the Blackfoot Challenge project application, Building SocialEcological Resilience in the Blackfoot through Watershed Restoration Planning and Project Design

Dear Committee:

Trout Unlimited (TU) supports the Blackfoot Challenge (Challenge) WaterSMART Cooperative Watershed Management Program proposal "Building Social-Ecological Resilience in the Blackfoot through Watershed Restoration Planning and Project Design".

Trout Unlimited has been working in the Blackfoot River basin for over two decades and has recently identified the larger area of the Upper Clark Fork River as a Priority Watershed in Montana for TU strategic action to care for and recover the native and wild trout fisheries in the watershed. Our Clark Fork River Basin strategic action plan specifically calls for reconnecting critical migratory habitat, improving instream flow and water temperatures in mainstem habitat and key tributaries, restoring habitats and water quality, and protecting quality riparian, aquatic habitats, and watersheds – in alignment with the 2014 Blackfoot Watershed Restoration Plan.

The strong partnerships and community support that were the foundation of the Challenge in the 1990s have led to many conservation successes and reduced conflict over natural resources. With that progress, the Challenge and partners are well situated to update restoration plans, consolidate data, and prioritize projects to address the new challenges in the face of a warming climate, changing demographics, and implementation of the Confederated Salish and Kootenai Tribes Compact.

Trout Unlimited fully supports the Challenge's proposal. We look forward to working with our partners in implementation of the project. Thank you for your consideration.

Respectfully,

Morgan Case

Instream Flow Specialist

Trout Unlimited

Morgan Case