

Upper Clark Fork River Basin Fish Passage Improvement Project

Trout Unlimited
1777 N. Kent Street, Suite 100
Arlington, VA 22209
Project Manager: Casey Hackathorn

Casey.Hackathorn@tu.org

406.546.5680

312 N Higgins Ave.

Missoula, MT 59802



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List of Common Abbreviations

CFC	Clark Fork Coalition
DEQ	Montana Department of Environmental Quality
DNRC	Montana Department of Natural Resources
ESA	Endangered Species Act
FWP	Montana Department of Fish, Wildlife & Parks
HUC	Hydrologic Unit Code
NRDP	Montana Natural Resource Damage Program
NRCS	United States National Resources Conservation Service
RC	Rock Creek
TU	Trout Unlimited
UCF	Upper Clark Fork River
UCFRB	Upper Clark Fork River Basin
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WRC	Watershed Restoration Coalition of the Upper Clark Fork

Executive Summary

Trout Unlimited (TU) in Arlington, Arlington County, Virginia submits this WaterSMART Aquatic Ecosystem Restoration Project Task A: Study and Design application on June 1, 2023.

Trout Unlimited is a Category B, non-profit, applicant working in partnership with the Montana Natural Resource Damage Program (NRDP). NRDP qualifies as a Category A partner due to their ownership interests in the Valiton Ditch, one of the project sites in the scope of work. In addition, NRDP will provide non-federal cash match and in-kind services to implement the project.

The Upper Clark Fork Basin Fish Passage Improvement Project, a collaboration of Trout Unlimited, the Clark Fork Coalition, and the Montana Natural Resource Damage Program, will design infrastructure improvements to provide fish and recreational boat passage, screen ditches, and improve water delivery at ten irrigation diversion sites in the Upper Clark Fork River Basin (UCFRB) located in western Montana. The Clark Fork River is home to imperiled populations of native bull trout and Westslope cutthroat trout. Irrigation diversion structures limit fisheries health in the Upper Clark Fork by fragmenting habitat and entraining outmigrants while also posing hazards to floaters and anglers on public waterways. Through this effort, the project team will work with water users and landowners to develop collaborative designs to modernize their infrastructure while caring for the aquatic ecological resources of the UCFRB.

The proposed aquatic ecosystem restoration efforts are focused on designing improvements to irrigation infrastructure on public waterways located on mainly private lands in western Montana. One of the project sites in the scope of work, the Ross Fork 2 Diversion, is located on the Beaverhead-Deerlodge National Forest and necessary regulatory requirements for future work on U.S. Forest Service (USFS) property will be addressed during the planning and design phase of the project.

TU estimates project completion within 2 years, by December 2025.

Project Location

The *Upper Clark Fork Basin Fish Passage Improvement Project* is located in Western Montana, including portions of Deer Lodge, Granite, and Powell Counties within the Flint-Rock Creek drainage (HUC 17010202) and Upper Clark Fork drainage (HUC 10710201) (Figure 1). The project includes 10 irrigation diversion sites within the UCFRB prioritized for fish passage improvements (See Table 1 for locations.). Five of the sites are located on the Clark Fork River upstream and south of Deer Lodge, MT and the remaining five sites are located on Rock Creek and Ross Fork Rock Creek to the west and southwest of Philipsburg, MT.

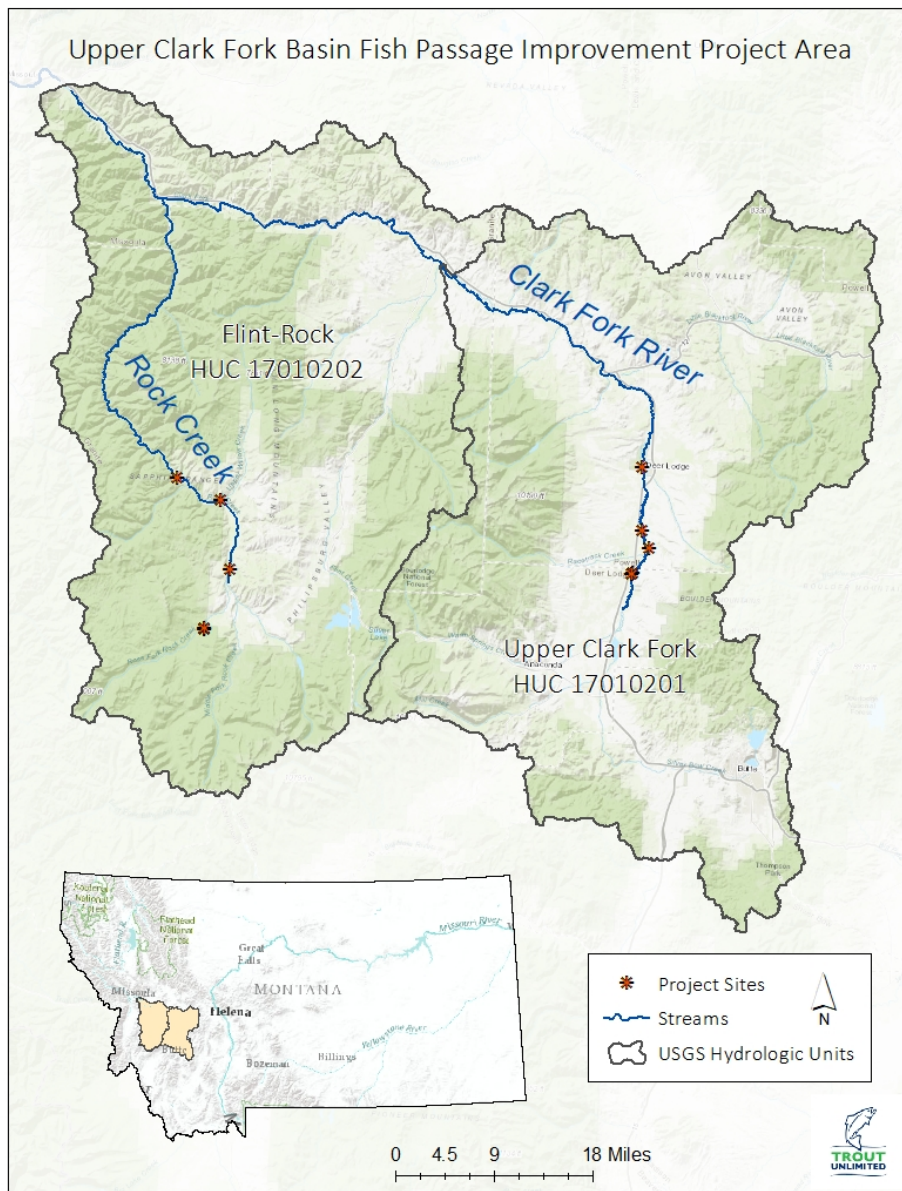


Figure 1. Overview map of the Upper Clark Fork Basin Fish Passage Improvement Project area in Western Montana.

Table 1. Project locations prioritized for fish passage improvements.

Diversion Name	Source	USGS HUC8	Latitude	Longitude	County
Whalen Ditch	CFR	17010201	46.25883	-112.75392	Deer Lodge
Westside Ditch	CFR	17010201	46.26089	-112.75240	Deer Lodge
Valiton Ditch	CFR	17010201	46.29388	-112.72320	Powell
Sager Lane Pumps	CFR	17010201	46.31714	-112.73666	Powell
Kohrs Manning Ditch	CFR	17010201	46.40111	-112.74236	Powell
Breeden- Wilson Ditch	RC	17010202	46.24069	-113.51870	Granite
Rodda Ditch	RC	17010202	46.33115	-113.54293	Granite
Marletto Ditch	RC	17010202	46.35713	-113.62692	Granite
Ross Fork Rock Cr Ditch 1	RFRC	17010202	46.16027	-113.56129	Granite
Ross Fork Rock Cr Ditch 2	RFRC	17010202	46.16105	-113.56189	Granite

Project Description

Trout Unlimited is proposing a *Task A: Study and Design* project to design infrastructure improvements for fish passage and recreational boat passage, to screen ditches, and to improve water delivery at ten irrigation diversion sites in the Upper Clark Fork River Basin located in western Montana. The diversions prioritized for infrastructure improvement design are grouped in two areas within the basin, (1) on the Upper Clark Fork River from Deer Lodge to Anaconda, MT, and (2) in the Rock Creek (RC) drainage near Philipsburg, MT. The fish passage issues, recreational hazards, and entrainment risks identified with the diversions are described below.

Upper Clark Fork River Diversions

Whalen Ditch

The Whalen Ditch diversion is located on the Clark Fork River just upstream of the West Side Ditch near Racetrack, MT. The diversion is constructed of a full-spanning rock and concrete rubble weir. Tarps are occasionally placed across the rocks to improve water delivery into the ditch during low flow conditions. The structure is unlikely to impede upstream fish passage for adult salmonids but poses a seasonal barrier to some species and life stages and some risk of entrainment. The dam is moderately challenging for boat passage, particularly during low flows.



Figure 2. Whalen Ditch diversion, Clark Fork River (CFC photo)

West Side Ditch

The West Side Ditch diversion is a full spanning pin-and-plank style concrete and timber flat weir located on the Clark Fork River near Racetrack, MT. Metal supports (pins) are manually raised seasonally to support check boards which are inserted to form a dam across the entire river. The diversion is supported by a cast-in-place concrete apron and abutments that are very effective at maintaining the water elevation necessary to divert flow through the headgate. Another small tributary, Little Modesty Creek, is spilled directly into the ditch approximately 100 yards down from the headgate. Tarps or plastic are occasionally placed in front of the wood boards to seal off cracks so that all remaining flow in the river can be diverted. The structure is a seasonal upstream fish passage barrier, and the canal entrains fish.



Figure 3. Westside Ditch diversion, Clark Fork River (TU photo)

Valiton Ditch

The Valiton Ditch diversion includes is a full-spanning rock grade control structure in the Clark Fork River and an aging, unscreened headgate structure. The existing structure is not an upstream fish passage barrier but poses significant ditch entrainment risk, particular during

early irrigation season. One of the water users relayed personal knowledge of thousands of fish being entrained in the ditch on an annual basis, which perish when the ditch is turned off. The water right holders, which include NRDP, are interested in considering improvements to this diversion and reducing fish entrapment.



Figure 4. Valiton Ditch diversion, Clark Fork River (CFC photo)

Sager Lane Pumps and Diversion Dam

The Sager Lane pumps and diversion dam are located on the Clark Fork River approximately 6 miles south of Deer Lodge, MT and immediately upstream of the Sager Lane bridge. The dam is a full-spanning pin-and-plank style concrete and timber weir. Metal supports are manually raised seasonally to support check boards that form a dam across the entire river. The dam is supported by a concrete apron and abutments used to check up the water surface for pumps located northwest of the bridge. Tarps are also used to seal the dam during low stream flows which can significantly dewater the river below the diversion. The diversion presents a formidable recreational obstacle when raised and poses a complete seasonal fish passage barrier. The pumps are located about 100 yards down the ditch adjacent to Sager Lane.



Figure 5. Sager Lane Pumps diversion dam and intake, Clark Fork River (TU photo)

Kohrs Manning Ditch

The Kohrs Manning Ditch diversion is a full spanning rock weir on the Clark Fork River within the City of Deer Lodge. The infrastructure associated with this ditch also includes a full channel spanning pin and plank style diversion and canal crossing on Cottonwood Creek. The ditch entrains fish from both the Clark Fork River and from Cottonwood Creek and restricts fish movement during low water. Entrainment from Cottonwood Creek is particularly problematic because this ditch often diverts nearly 100% of the flow of Cottonwood Creek about 50 feet before it enters the Clark Fork. The current structure at Cottonwood Creek also impedes upstream passage of all fish except during exceptional high flows. The Kohrs Manning diversion structure in the Clark Fork River needs annual maintenance, discouraging its use during early season high water if Cottonwood Creek has sufficient flow to satisfy irrigator demand.



Figure 6. Kohrs-Manning Ditch diversion, Clark Fork River (CFC photo)

Rock Creek Diversions

Breeden-Wilson Ditch

The Breeden-Wilson Ditch diversion is located on Rock Creek approximately one-mile downstream of Skalkaho Highway 38 and the convergence of several headwater streams forming mainstem Rock Creek. The Breeden-Wilson diversion consists of a partial channel spanning rock weir and diverts up to 20% of baseflows from Rock Creek. The structure does not impede upstream fish passage but is documented to entrain Endangered Species Act (ESA)-threatened bull trout and native Westslope cutthroat trout of all life stages in the ditch. The diversion is 500 feet downstream of another large irrigation diversion site that is a joint TU-NRDP project currently in the design phase with construction to install a fish screen in the ditch expected in 2024.



Figure 7. Breeden-Wilson Ditch diversion, Rock Creek (TU photo)

Rodda Ditch

The Rodda Ditch diversion is located on Rock Creek west of Route 384. The diversion is constructed of a partial-spanning rock and concrete rubble weir and diverts approximately 5% of the stream. Tarps are typically placed across the stream to improve water delivery into the ditch during low flow conditions. The structure does not impede upstream fish passage but is documented to entrain of hundreds of downstream moving native and wild fish species of all life stages.



Figure 8. Rodda Ditch diversion, Rock Creek (TU photo)

Marletto Ditch

The Marletto Ditch diversion is located on Rock Creek downstream from Windlass Gulch. The structure consists of a rock and earthen wing wall weir diversion on Rock Creek which diverts approximately 10% of the flow in Rock Creek during low flow conditions. The structure does not impede upstream fish passage but is documented to entrain downstream moving native Westslope cutthroat trout and other wild fish species of all ages into the open channel ditch which flows into a 6" pipe 60-feet further down the ditch. The Marletto diversion structure in

Rock Creek needs annual maintenance, requiring the irrigator to bring heavy machinery into the creek to build up the dam structure each year.



Figure 9. Marletto Ditch diversion, Rock Creek (TU photo)

Ross Fork Rock Creek Ditch 1

The Ross Fork Ditch 1 diversion is a full-spanning rock and earthen weir dam. Tarps are typically placed across the rocks to improve water delivery into the ditch during low flow conditions. The structure is unlikely to impede upstream fish passage for adult salmonids but could pose a seasonal barrier to some species and life stages, particularly during low flows. Over 20% of streamflows during baseflow conditions are diverted into the Ross Fork 1 diversion, and entrainment data shows it entrains ESA-threatened bull trout, native Westslope cutthroat trout, and other fish.



Figure 190. Ross Fork Rock Creek 1 diversion, Ross Fork Rock Creek (TU photo)

Ross Fork Rock Creek Ditch 2

The Ross Fork Ditch 2 diversion structure is a partial-spanning rock weir. Tarps are occasionally placed across the rocks to improve water delivery into the ditch during low flow conditions. The structure diverts 10% of streamflows during baseflow conditions into the ditch. The structure does not impede upstream fish passage but entrainment data shows that it entrains ESA-threatened bull trout, Westslope cutthroat trout, and other fish of all life stages in the ditch.



Figure 10. Ross Fork Rock Creek 2 diversion, Ross Fork Rock Creek (TU photo)

Project approach and activities: The project team will consist of TU and CFC staff, with NRDP staff support. The project team will carry out the following activities to accomplish the objectives of the project:

- A. **Stakeholder Coordination and Outreach** – The project team will coordinate with stakeholders and all project partners, landowners, and water right owners associated with the project. The following tasks are anticipated for this activity:
 - Organize and conduct collaborative meetings and phone calls with project partners to complete all project tasks; determine designed flow rate for each diversion site; solicit feedback on site designs; and share project updates with land and water right owners.
 - Attend public meetings and regular watershed meetings in the UCF and Rock Creek basins to share project updates and outcomes of future project implementation/construction, specifically sharing information with members of the community (landowners/neighbors) who may be affected by future project implementation; gather input from the community; address any community concerns.

- B. **Procurement and Contracting for Engineering Services** – The procurement phase includes preparing procurement documents to select qualified engineers to complete

project designs, advertising for and obtaining offers, selecting qualified contractors for the project, and preparing contracts for project designs. The following tasks are anticipated for this activity:

- Develop and complete a competitive bid process to procure technical and engineering services to complete irrigation infrastructure and fish passage improvement surveys and designs at each site including plans for design implementation. A review committee will evaluate all submitted offers and select a firm or firms following all State of Montana and federal procurement rules.
- Prepare and complete contracting with selected engineering firms.

C. Data Collection – The project team will coordinate with water users and procured engineering firms to identify data gaps and develop a plan to collect information needed to support project designs and permitting in the 2024 field season. Planned data collection includes site surveys, measurement of diversion structures, and measurement of ditch volumes and velocities. In addition to pre-project data collection, TU will work with the selected engineer to share existing data and develop a data collection plan that includes LiDAR assessment and topographic surveys to inform decision-making and design.

D. Preliminary Engineering Design and Alternatives Evaluation and Selection – The design engineering firm(s) will compile survey data, complete modeling, and develop preliminary design alternatives. This activity is anticipated to consist of the following tasks:

- Selected engineers will develop design criteria; review and synthesize existing data; perform topographic site surveys and field measurements; complete hydraulic modeling, LiDAR data processing, and mapping necessary for project designs; complete design analysis and field evaluation of design layout; identify outstanding questions and prepare cost estimate for preliminary designs; submit completed design plan set with specifications and outstanding questions to the project team for review and comment.
- The project team will meet with the selected engineers, water users, and landowners to review preliminary design alternatives, gather feedback on design details, and discuss the preferred alternatives for each site.

E. Final Design – The final design phase will be initiated with selection of the preferred alternative for designs at each site. This activity will consist of the following tasks:

- Selected engineer will complete 60% design plans for the selected alternative at each site and submit them to the project team for review and comment; prepare a full project specifications package with any pertinent and required special provisions to facilitate public bidding and construction of the irrigation upgrades and fish screen improvements projects; submit final design plans and specifications to the project team for final review and comment; incorporate received comments and

- prepare the final package for public bid for construction of the irrigation infrastructure and fish passage improvements.
- Project team will coordinate design review with water users and landowners and review and comment on submission of 60% and Final Design Plan Sets.
- F. Water Right Review – The project team instream water specialist and CFC staff will review the irrigation diversion water rights associated with all project sites. This will include tabulation of the water rights appurtenant to each diversion using the DNRC water rights query, determination of the legal maximum diversion rate, and review of any water diversion records to determine the flow rate for diversion and fish screen design. They will also identify whether water right changes will be required before implementation of the final design and will work with the water users and project partners to prepare for the change process.
- G. Grant Administration – Grant administration work for the project will be completed by TU and the subrecipient CFC. Grant administration will ensure project reporting and invoices are completed on time and according to reporting requirements of the Project Agreement. The following grant administration tasks are anticipated for the project:
- Coordinate all grant and financial aspects of the project with the Bureau of Reclamation AERP grant officer and administration staff.
 - Develop and submit progress reports and invoices for approval to the BOR AERP staff.
 - Complete final BOR AERP report.

Evaluation Criteria

Evaluation Criterion A. Project Benefits

Critical issues of concern in the watershed

Water Quality

The Upper Clark Fork River suffers from seasonally elevated water temperatures, metals contamination from historical mining and smelting in upstream communities, and nutrient loading from nearby land-use practices. The Rock Creek watershed also includes several stream segments listed as impaired by nonpoint source sediment and metals pollution by the Montana Department of Environmental Quality (DEQ).

Pollution impairments across the UCFRB are exacerbated by streamflow depletions, and while the project isn't specifically targeting water quality issues, project planning and design processes will seek opportunities to incorporate water conservation into project designs which could have streamflow and water quality benefits. In addition, project designs will assist water

users by reducing the required instream maintenance at each site, reducing sediment loading at the diversion locations.

Aquatic Species of Concern:

The UCFRB supports resident and migratory populations of ESA-listed bull trout (*Salvelinus confluentus*) and native Westslope cutthroat trout (*Oncorhynchus clarki lewisi*), a Montana Species of Concern. Long-term monitoring trends show a decline in bull trout redd counts across the region, and localized water temperature increases are threatening these fish.

According to the USFWS *Columbia Headwaters Recovery Unit Implementation Plan for Bull Trout*, the Clark Fork River is critical migratory habitat for both fluvial and adfluvial bull trout spawning in tributaries through the UCFRB. Furthermore, the entire Rock Creek watershed is designated as a Complex Core Habitat including critical migratory habitat in Rock Creek and over fifteen tributaries designated as critical spawning habitat (USFWS 2015a).

The proposed sites are targeted to reconnect migratory bull trout habitat corridors critical to species recovery in the Upper Clark Fork Basin. Implementation of projects at the five sites on the Upper Clark Fork River upstream of Deer Lodge will fully reconnect the Clark Fork River to Warm Springs Creek, home to the most upstream metapopulation of bull trout in the system. Similarly, the suite of projects proposed for Rock Creek are targeted to improve connectivity for migratory bull trout and Westslope cutthroat trout to spawning habitats upstream and mainstem habitats downstream in Rock Creek and the Clark Fork River (USFWS 2015b).

Regional United States Forest Service (USFS) NorWeST and Coldwater Water Climate Shield regional temperature modeling indicates that several headwater streams in the Upper Clark Fork, including portions of the Rock Creek watershed will maintain the cold-water temperatures needed to sustain both Westslope cutthroat trout and bull trout into the future (Isaak et al. 2016). Reconnecting fisheries habitats in these systems will promote climate resilience by providing access to thermal refugia during critical summertime low-flow conditions.

Water Quantity:

The UCFRB geography is dominated by Rocky Mountain ranges and intermontane agricultural valley bottoms and water quantity is predominately driven by seasonal snowmelt and water use for irrigation. In general, the high-water period begins in April. The irrigation season begins in May or June and extends through September (DNRC 2014). Water for valley bottom irrigation in the UCFRB is supplied by irrigation diversions on nearby streams or reservoirs, many of which are privately owned and maintained by only a few irrigators. Many of the diversion structures and the associated water delivery infrastructure are outdated, which causes inefficient water withdrawals and challenges water managers. High demand for water combined with inefficient water withdrawals causes periods of dewatering in portions of the basin. These events negatively impact agricultural producers and create conflicts between water users and fisheries.

TU and partners will work with water users to consider possible water conservation approaches while developing designs to improve their infrastructure for fish passage and water delivery. Any opportunities to improve and protect instream flow at these sites will be investigated and pursued if feasible.

Fish Passage and Connectivity

The project is focused on improving fish passage and reconnecting priority migratory fish habitats in the Upper Clark Fork River Basin. Developing designs for diversion improvements at the five sites on the Clark Fork River in the Deer Lodge valley will result in fully reconnecting 65.4 miles of Upper Clark Fork River foraging, migration, and overwinter habitats from spawning tributaries in Warm Springs Creek upstream and Flint Creek downstream. Planning and design efforts on Rock Creek will reconnect 15 miles of migratory and spawning fish habitat when implemented at 5 sites. Improved connectivity in Rock Creek will benefit fisheries in the Clark Fork River downstream, as evidenced by recent radio telemetry studies that have documented recruitment of bull trout and Westslope cutthroat trout and other fish to the Clark Fork River from Rock Creek.

The migratory life-history of native bull trout and Westslope cutthroat trout makes them especially vulnerable to the impacts of fish passage barriers as they frequently complete long-distance migrations to spawning or seek thermal refuge in tributaries. Impediments to upstream and downstream migration can reduce population numbers and overall population health. The Columbia Headwaters Recovery Unit Implementation Plan for Bull Trout identifies fish passage barrier removal as a priority recovery action for bull trout (USFWS 2015a). Irrigation diversion structures throughout the Upper Clark Fork have been identified and assessed to impede upstream fish migrations and/or block downstream movement by entraining fish in irrigation ditches. Natural Resource Conservation Service (NRCS), NRDP, Montana Fish, Wildlife & Parks (FWP), and the U.S. Fish & Wildlife Service (USFWS) have prioritized restoration efforts to remove and reduce fish passage barriers in the UCFRB watershed to improve fisheries habitat connectivity for ESA-threatened bull trout and other fish species.

Habitat

In addition to the water quality issues resulting from historical mining and smelting upstream in Butte and Anaconda, riparian and instream habitats in the Clark Fork River have been impacted by streamside deposition of mine tailings and smelter waste in the floodplain. The resulting contaminated environment in the Upper Clark Fork River corridor has impacted riparian vegetation, limited habitat complexity instream, and left the river disconnected from its floodplain. State agencies, including NRDP are leading the effort to cleanup and restore these habitats in the Upper Clark Fork River, but these habitats must be reconnected for the fisheries to receive the full benefit of this investment (NRDP 2019). TU and other conservation and agency partners recognize the need to address fisheries connectivity while cleanup activities

are ongoing. Project partners are taking action to develop projects to reconnect priority habitats by replacing and screening barrier irrigation diversion infrastructure at project sites on the Clark Fork River and Rock Creek.

Conflicts over Water

The combination of water quantity, water quality, and fisheries issues in the Upper Clark Fork River Basin often results in conflicts over water resources. Balancing these issues to stretch water supplies for fisheries and water users (agricultural and/or developers) is a challenge. Irrigation infrastructure upgrade and fish passage projects are a cooperative solution that addresses a priority conflict in the watershed.

Benefits to Aquatic Ecosystems

The project is expected to result in multiple aquatic ecosystem benefits. The primary expected project benefit is fish passage. The project will restore fish passage and improve habitat connectivity in the Upper Clark Fork River Basin by removing barriers to fish passage and reducing fish entrainment through irrigation diversion infrastructure upgrades. The project is intended to benefit two aquatic fish species of concern in the basin: ESA-threatened bull trout and Westslope cutthroat trout. The project benefits these focal species by reconnecting their priority migratory habitats in the Clark Fork River and in Rock Creek. Reconnected migratory habitats will promote genetic and life-history diversity for not only the focal fish species but also other migratory fish. In addition, the upgraded diversion infrastructure to reduce fish entrainment in irrigation diversions will result in reduced mortality of all age class fish and other aquatic organisms.

Other benefits include improved riparian habitats and reduced sediment loads into the Clark Fork River and Rock Creek. Improvements to diversion infrastructure will minimize water management activities that currently disturb riparian vegetation and increase sedimentation. The project also benefits aquatic ecosystems by addressing water availability and instream flows during the irrigation season. Upgraded irrigation diversion infrastructure will increase water users' ability control water delivery and increase the efficiency of irrigation water withdrawals. As a result of improved ability to manage water, water may be conserved instream for the benefit of fish and aquatic ecosystem health.

Multi-Basin Water Resource Management

The project will benefit water resource management and help resolve conflicts between residents, agriculture, and fisheries/water quality at a basin-scale. The project will affect water resources management in two subbasins encompassing the Upper Clark Fork River Basin, Flint-Rock (HUC-17010202) and Upper Clark Fork (HUC-17010201). It is intended to have basin-scale benefits for migratory native fish including bull trout and Westslope cutthroat trout by reconnecting priority mainstem migratory habitats on the Upper Clark Fork River and Rock Creek while providing improved water control and delivery for over 15 major irrigators as well

as multiple water right shareholders on the Westside ditch in the Upper Clark Fork River Basin. (See Figure 1.)

Regional Benefits

The Upper Clark Fork River Basin is aboriginal territory and remains culturally significant to the Confederated Salish and Kootenai Tribes (CSKT). The Tribes have traditional fishing rights across the Upper Clark Fork River Basin and an ongoing interest in maintaining the fishery and protection of instream flows secured through the CSKT Water Right Compact. Improvements to water delivery and fish passage that result from this project will benefit tribal interests in protecting the fishery and streamflow in the Clark Fork River. These also benefit tribal members who exercise their traditional fishing rights in Rock Creek and across the Upper Clark Fork River Basin (Séliš u Qlǐ spé Culture Committee 2019).

The project has the potential to reduce regional water conflicts by providing water users with improved control of their water withdrawals from Rock Creek and the Clark Fork River through irrigation diversion infrastructure improvements to upgrade diversion dams and headgates.

The project will provide regional benefits that include increased public safety for river recreationists through improvements for boat passage at irrigation diversion dams, improved public fishing opportunities, and economic benefits to local communities through employment of contractors and improved fishing recreation and tourism.

Aging Infrastructure

The project will provide a long-term benefit to local agricultural communities through the replacement of aging irrigation diversion infrastructure with new facilities at ten sites.

Status of the Species and Habitat

The project targets benefits for ESA-listed bull trout and Westslope cutthroat trout, a Montana Species of Concern, but the entire native species assemblage and non-native sportfish populations will benefit from the habitat reconnection goals of the project.

Restoration of ESA-listed species

Bull trout are subject to the *Recovery Plan for the Coterminous United States Population of Bull Trout* and associated *Columbia Headwaters Recovery Unit Implementation Plan for Bull Trout* (USFWS 2015b). In addition, the USFS completed the *Conservation Strategy for Bull Trout on USFS Lands in Western Montana* in 2013 (USFS 2013).

The USFWS designated critical habitat for bull trout in 2020. All project sites in this proposal are located within bull trout critical habitat. The proposed action benefits critical habitat by developing designs to fully reconnect fish passage at project sites.

The project will also provide benefits to native Westslope cutthroat trout, by reconnecting migratory habitats in Rock Creek and the Clark Fork River.

Quantification of Specific Project Benefits

- **Species and Habitat Health**

Eleven native fish species inhabit the Clark Fork River, including ESA-threatened bull trout, native Westslope cutthroat trout, as well as wild trout populations of brown trout, rainbow trout, and brook trout (FWP 2019). Bull trout and Westslope cutthroat trout are at low densities in the mainstem Upper Clark Fork River due to multiple factors, including metals contamination and habitat degradation. Recent state led initiatives to remediate and restore these contaminated habitats are increasing habitat suitability for these native fish, but native fisheries are still imperiled and face additional threats from warming stream temperatures and fragmented habitat (FWP and NRDP 2011). The project will bolster ongoing habitat restoration in the Upper Clark Fork River by removing fish passage barriers and restoring 60 miles of habitat connection in the river. Full reconnection of this migratory corridor will benefit bull trout and native Westslope cutthroat trout by providing them restored access to coldwater refugia habitats and spawning tributaries.

Bull trout and Westslope cutthroat trout populations are found in greater densities in Clark Fork River spawning tributary of Rock Creek. Rock Creek has colder water and relatively high-quality habitat (Isaak 2016 and USFWS 2015b). It is biologically connected to the mainstem and helps maintain the fluvial bull trout and Westslope cutthroat trout fisheries in the mainstem river (FWP 2019). Fisheries monitoring in Rock Creek indicates a range of 1000-1500 trout per mile in Rock Creek (FWP and NRDP 2011). The project will remove fish passage barriers and restore 15 miles of habitat connectivity in Rock Creek and a major spawning tributary of Ross Fork Rock Creek, improving access for bull trout and Westslope cutthroat trout to suitable spawning habitat.

The project will also provide benefits to native fish and aquatic habitats by improving irrigation diversion infrastructure and screening ditches to reduce entrainment and mortality in irrigation ditches; reduce sediment loading caused by the current management of irrigation diversion structures; and improve riparian habitat health by improving shade and riparian vegetation at irrigation diversions.

- **Watershed Benefits**

Water quality, ecological function, and ecological resiliency are considered impaired in the Upper Clark Fork River due to the impacts of historical upstream mining and smelting (NRDP 2019). As a result, fish population densities in the Upper Clark Fork River remain on average at 20% of reference conditions (FWP and NRDP 2018). These impacts

are the focus of a large-scale remediation and restoration effort led by DEQ and NRDP that is expected to be completed over the next 15 years. In the meantime, TU and partners are focused on reconnecting tributary and mainstem habitat to ensure that mainstem fish populations have access to the spawning and rearing habitat necessary to complete their life histories and to cold-water refugia to remain resilient to changing climate conditions. In concert, these collective activities are intended to bring the fish populations closer to reference conditions of 500 to 1,500 trout per mile (FWP 2018 and FWP 2019).

The project will assist the overall effort to restore the Upper Clark Fork by providing designs to reconnect priority migratory fish habitat at irrigation diversion sites on the Clark Fork River and Rock Creek. Reconnected habitat will restore ecological function and improve resiliency for fish species including native bull trout and Westslope cutthroat trout. Reconnected habitat will support increased life history diversity improving resilience from the other issues impacting the ecological health of the system such as drought and periodic water quality impairments. In addition, habitat reconnection will improve recruitment by reconnecting mainstem foraging, migration and overwintering habitat with tributary spawning and rearing habitats upstream.

- **Water Supply Benefits**

Upper Clark Fork River aquatic habitats are considered impaired by chronic dewatering (NRDP 2019) and are targeted for instream flow restoration effort by project partners under other parallel efforts. While the project isn't specifically targeting water supply issues in the Upper Clark Fork River Basin, it will assist project partners to address these issues. First, the project design process will provide the opportunity to discuss and possibly include water conservation measures in project designs. Second, designs developed under this project for improved irrigation water delivery infrastructure will assist water users with improved control of water delivery making it easier to manage and participate in potential future water conservation opportunities.

- **Other Quantifiable Benefits**

The existing irrigation diversion structures pose some safety risks for public recreation at multiple sites on the Clark Fork River (CFC and TU 2018) which could limit public access to and enjoyment of the Clark Fork River resource.

The project will include design criteria to improve recreational boat passage while designing for upstream fish passage and screening to ensure that recreationalists in the future will be able to fully enjoy the restored fisheries and river environment.

Evaluation Criterion B. Prior Restoration Planning and Stakeholder Involvement and Support

Prior Planning and Design

Trout Unlimited and the Clark Fork Coalition have been engaged in UCFRB watershed restoration and planning activities since the late 1990s and 1985 respectively. Since then, TU and the CFC have established the community, landowner, partner and agency relationships and local trust necessary to develop and implement projects supporting the identified by agency resource managers in several watershed restoration planning documents (See Table 2. Upper Clark Fork Planning Documents).

During the last nine years, TU and CFC have completed fish passage assessment and other data collection work that assisted NRDP and FWP to develop aquatic priorities throughout the Upper Clark Fork watershed. TU and CFC staff are engaged with landowners, water users and partners in the tributary watersheds and landscapes prioritized for aquatic and terrestrial restoration in the UCFRB Restoration Plans, including the Clark Fork River and Rock Creek.

Previously completed irrigation diversion and fish passage barrier inventories inform the scope of the proposed project. In 2010-2013, TU staff completed an inventory of approximately 200 irrigation diversion structures in the Upper Clark Fork River Basin. Similarly, CFC inventoried fish passage barriers in the Upper Clark Fork River Basin from 2016 to 2017. In 2018, TU completed an inventory and prioritization of irrigation diversions for fish passage in the Rock Creek watershed. The inventories involved coordination with water users and landowners for access and focused on structural measurement of each irrigation diversion, geomorphic measurements of the stream reach, and documentation of ditch capacity, flow rates and velocities at the structure. Pursuant to the field investigation, partners completed fish entrainment monitoring of the ditches and additional discussions with irrigators and agency personnel. TU and CFC coordinated with landowners and agency personnel, compiled existing data and resources on water rights and other relevant information and developed data collection plans to complete the data collection inventory. The Rock Creek Irrigation Diversion Inventory and Prioritization Report (TU 2019) furthermore prioritized specific stream reaches for future fish passage and diversion screening projects based on several criteria and developed jointly by TU and agency partners. That document prioritized upper mainstem Rock Creek and Ross Fork for fish passage improvement efforts in the Rock Creek watershed.

TU partnered with the Granite Conservation District to complete the Watershed Restoration Plan for the Rock Creek Watershed in 2018. The plan was developed with input solicited during several meetings from the community. Fish passage and irrigation diversion upgrades were identified as priority natural resource concerns that when addressed would also result in benefits to water management (TU 2018).

Furthermore, project sites identified in Rock Creek are, in part, a result of planning activities completed under the WaterSMART Cooperative Watershed Management Program *“Building Capacity for Community Engagement in Watershed Restoration Planning in the Flint-Rock*

Watershed of Western Montana” Grant Agreement #R22AP00188. Planning work contributed to identification of the proposed and community supported fish passage barrier removal projects. Sites were identified jointly by the local Granite Headwaters Watershed Group and TU staff through community and landowner outreach and strategic planning efforts to prioritize project opportunities based on landowner willingness and their benefits to natural resources.

Table 2. Upper Clark Fork Planning Documents

Planning Effort or Document, Author, Year	Description	Relevant Scope
Rock Creek Watershed Restoration Plan, TU, 2018	Community-driven, collaboratively developed watershed-scale plan to identify priorities and projects that address water quality and other natural resource concerns and issues	Identifies the removal of fish passage barriers and upgrades to outdated irrigation diversion infrastructure as a priority need
Granite County Long Range Plan, NRCS, 2020	A public process derived plan that identifies natural resource conservation issues and concerns in Granite County, Montana, and a plan to address those issues through NRCS funded projects	Identifies water resource issues, including improving habitat for fisheries through removal of fish passage barriers and fish screens as well as increased irrigation efficiencies
Montana State Water Plan, Montana, DNRC, 2015	A MT state plan developed with input from communities and stakeholders that identifies state-wide priority water resource issues and DNRC supported actions to address identified water issues	Identifies the need and DNRC support for activities that increase water use efficiency and conservation by irrigators as well as coordinated efforts to protect ESA-listed species
USFS Bull Trout Conservation Plan, USDA, 2013	Collaboratively developed plan by resource managers and other stakeholders to restore ESA-threatened Bull Trout by subbasin	Identifies UCFRB as area with high significance to Bull Trout; identifies recovery action to remove fish passage barriers
Columbia Headwaters Recovery Unit Implementation Plan for Bull Trout, USFWS, 2015	Collaboratively developed plan by resource managers and other stakeholders that identifies actions and goals to recovery ESA-threatened Bull Trout in Headwaters of the Columbia River	Identifies specific recovery actions, including removal of fish passage barriers as priority to protect genetic diversity and diverse life histories for Bull Trout in the Upper Clark Fork River, including Flint Creek. Identifies Rock Creek as Core Area for bull trout
Prioritization of Areas in the Upper Clark Fork River basin for Fishery Enhancement, FWP and NRDP, 2018	Jointly developed NRDP and FWP plan based on aquatic fisheries and riparian habitat monitoring and assessment efforts to guide the State’s fishery restoration efforts in the UCFRB funded by natural resource damage settlement funds. Objective of the state’s aquatic restoration efforts in the UCFRB	Identifies the Clark Fork River as priority 1 stream for restoration due to impacts from past mining in the Butte and Anaconda areas; Identifies Flint Creek and Rock Creek as priority 2 streams for restoration due to otolith chemistry and telemetry studies showing high recruitment of fish from both tributaries to

	funded with natural resource damage settlement funds is to restore fishery resources and associated angling opportunities in the Clark Fork River to the baseline condition that would exist absent the release of hazardous substances from historic mining and smelting activities in the Butte and Anaconda areas.	mainstem Clark Fork River and important migratory corridors for native Westslope cutthroat trout and Bull Trout. Restoration actions prioritized include improvements to fish passage through replacement of irrigation diversion infrastructure and constructed fish screens on diversions
An Inventory and Prioritization of Irrigation Diversions in the Rock Creek Watershed Report, TU, 2019 (See Appendix A.)	Prioritizes tributaries for fish passage improvements based on an inventory and assessment of evaluated irrigation diversions and entrainment risk to fish; developed by TU staff with agency resource manager input from USFS, BLM (Bureau of Land Management), FWP, and NRDP staff.	Identifies Rock Creek and Ross Fork Rock Creek as priority tributaries for fish passage improvement efforts; identifies specific priority irrigation diversions on mainstem Rock Creek and Ross Fork Rock Creek, including the irrigation diversion projects in his proposal.
Rock Creek Watershed Priority Bull Trout Recovery Restoration Projects Draft Report, TU, 2020 (available upon request)	Plan requested by and developed for USFWS regional staff by TU staff and based on inventory and assessment activities with input from MFWP staff to identify restoration needs and prioritize Bull Trout recovery project opportunities in the Rock Creek watershed.	Identifies Rock Creek and Ross Fork Rock Creek as priorities for fish passage improvement efforts through fish screens and irrigation diversion upgrades; identifies several of the diversion projects in this proposal as priority projects.
Upper Clark Fork Fish Passage Survey Inventory, TU, 2012	An inventory of irrigation diversion fish passage barriers in major subwatersheds and tributaries to the UCFRB completed by TU staff with input from FWP and NRDP	Identifies priority irrigation diversions blocking fish passage and entraining fish on tributaries to the Upper Clark Fork River; contextualizes connectivity opportunities after mainstem passage is addressed
Montana Statewide Fisheries Management Plan, 2019, FWP, pp 105-128.	Management plan by basin that was developed by Montana Fish, Wildlife & Parks; describes fishery and fishing access, special management issues and habitat.	Identifies increasing recreational use in the UCFRB and Rock Creek as special management issue that increases importance of habitat and fish passage restoration work
Mainstem Clark Fork Project Opportunities to Benefit Streamflow, Fish Passage, and Recreation, TU and CFC, 2018	Memo from TU and CFC to NRDP documenting fish passage, recreation, and streamflow opportunities at UCF diversions.	UCF diversions in this proposal are documented as priorities for passage improvement.

Stakeholder Involvement and Support

The proposed project and associated goals are strongly supported by stakeholders coming from various sectors in the community as illustrated by the collaborative fish passage evaluation and prioritization work discussed previously and as illustrated in the attached letters of support.

The stakeholder support comes from the following:

- **Natural resource agencies:** This application includes letters of support from three state agencies (DNRC, FWP, and NRDP) and one federal agencies (USFS) involved in habitat protection and restoration. NRDP is a Category A partner participating in the design review, stakeholder discussions, community outreach, and provider of a significant cash match. DNRC has offered in-kind support for diversion measurement, if needed. USFWS staff have also been supportive of past work to reconnect bull trout habitat in the UCFRB. The project team will continue to engage with the USFWS throughout the design process to solicit input to ensure project designs are approved for bull trout passage.
- **Conservation organizations:** The Clark Fork Coalition, Granite Headwaters Watershed Group, and the Watershed Restoration Coalition all support the project, as indicated in the attached letters of support. As active partners, they will participate in community meetings and provide feedback on any project updates. In addition, CFC will be a sub-recipient of funds and will be assisting TU with all tasks in the UCF and providing cash match from the Resource Legacy Fund.
- **Agricultural water users and landowners:** Water users who own and maintain the current irrigation diversion structures at the project sites support the project as illustrated by the letters of support. A letter of support for the Breeden-Wilson irrigation ditch off Rock Creek is not included in the proposal; however, the water user expressed verbal support for the project to survey and assess design alternatives to upgrade and screen the irrigation diversion. It is therefore reasonable to include this diversion site in the suite of project sites proposed. The landowners of the project sites and water users will be active participants in the design process through providing access to project sites, reviewing water rights, and providing feedback on preliminary and final design work.
- **Sovereign Tribes:** The Confederated Salish & Kootenai Tribe supports the project as evidenced by the attached letter of support. The CSKT will share information and experience of their efforts addressing fish passage on the Reservation.

In addition to the explicit support from stakeholders who submitted letters, the project team has been and will continue to engage and inform all stakeholders who may be impacted by project design work, including the public with recreation interests on the Clark Fork and Rock Creek waterbodies, neighboring landowners and members of nearby communities.

The combination of explicit support from the State, Federal, nonprofit conservation organizations, and agricultural water users, as well as participation and input from other partner organizations, is critical to ensure the success of the project. There is no known opposition to the proposed project.

Evaluation Criterion C. Project Implementation and Readiness to Proceed

Implementation Plan and Schedule: The proposed implementation is detailed below, with the caveat that the timing of contract awards and engineering design firm availability or other unforeseen events may delay commencement, our estimated timeline spans two calendar years:

Project Tasks and Milestones	Start Date	End Date	Timeline								
			Y1 Q1	Y1 Q2	Y1 Q3	Y1 Q4	Y2 Q1	Y2 Q2	Y2 Q3	Y2 Q4	
Stakeholder Engagement and Coordination	1/01/2024	12/31/2025	█	█	█	█	█	█	█	█	█
Share project updates and outcomes of future implementation with local communities	1/01/2024	12/31/2025	█	█	█	█	█	█	█	█	█
Share project updates with water users and project partners	1/01/2024	12/31/2025	█	█	█	█	█	█	█	█	█
Conduct initial meetings with CFR landowners and partners	1/01/2024	3/31/2024	█								
Conduct initial meetings with Rock Creek landowners and partners	1/01/2024	3/31/2024	█								
Conduct field visits of CFR sites with project partners to gather input on design	4/01/2024	11/15/2024		█	█	█					
Conduct field visits of Rock Creek sites with project partners to gather input on design	4/01/2024	11/15/2024		█	█	█					
Procurement and Contracting for Engineering Services	1/01/2024	06/30/2024	█	█							
Develop competitive bid process for engineered designs of CFR sites	1/01/2024	03/31/2024	█								
Develop competitive bid process for engineered designs of Rock Creek sites	1/01/2024	3/31/2024	█								
Complete competitive bidding process and select engineering firm(s)	4/01/2024	6/15/2024		█							
Complete contracting for engineering services	6/15/2024	7/15/2024		█	█						
Data Collection	1/01/2024	9/31/2024	█	█	█						
Identify data gaps; develop data collection plan to inform decision-making and design	1/01/2024	04/15/2024	█	█							
Collect and share existing data with selected engineer	04/01/2024	9/30/2024		█	█						
Preliminary Design and Alternatives Evaluation and Selection	7/15/2024	9/30/2024			█	█	█				
Complete preliminary design plans for CFR sites	7/15/2024	12/31/2024			█	█					
Complete preliminary design plans for Rock Creek sites	7/15/2024	12/31/2024			█	█					

Conduct preliminary design meeting; evaluate and select preferred alternatives for CFR sites	10/1/2024	12/30/2024																		
Conduct preliminary design meeting; evaluate and select preferred alternatives for Rock Creek sites	10/1/2024	12/30/2024																		
Final Design	1/01/2025	12/31/2025																		
Complete 60% design plans for CFR sites	1/01/2025	06/30/2025																		
Complete 60% design plans for Rock Creek sites	1/01/2025	6/30/2025																		
60% design meeting with project partners to solicit input and feedback on design for CFR sites	4/01/2025	6/30/2025																		
60% design meeting with project partners to solicit input and feedback on design for Rock Creek sites	4/01/2025	6/30/2025																		
Complete final design plan sets for construction of CFR sites completed	7/01/2025	12/30/2025																		
Complete final design plan sets for construction of Rock Creek sites	7/01/2025	12/30/2025																		
Water Right Review																				
Tabulate water rights for CFR sites	4/01/2024	12/31/2024																		
Tabulate water rights for Rock Creek sites	4/01/2024	12/31/2024																		
Identify water right changes necessary for implementation of project design plans and share with project partners	10/1/2024	12/31/2025																		
Grant Administration	1/01/2024	12/31/2025																		
Final BOR Grant Report	10/1/2025	12/31/2025																		

Stakeholder outreach will consist of holding landowner and water right holder meetings to educate about the design process, schedule site access, review preliminary designs, and review and approval for final design. The project team will also participate in ongoing monthly watershed and community meeting to give updates on the status of the project and solicit feedback to identify any community concerns.

The project team will collect ditch measurements on diversions as a preliminary study to determine ditch capacity, where needed. No specific permits or easements are required for this data collection. Water right holders’ letters of support affirm their commitment to the design process, which includes data collection. Additional documentation of site access can be acquired if necessary. Project team members will also conduct a water right analysis to determine the legal diversion limit of the irrigation diversions.

The current design status at all sites is in the scoping and project development stage. Beyond preliminary discussions with project partners on goals at each site, project designs are intended to be fully developed under this effort and will involve the following activities:

- Conduct project kickoff and pre-design meeting with water users, engineer, and project team at each site.
- Complete site surveys at each location to collect all site-specific data required to complete design.

- Develop hydraulic models at each location necessary to predict water surfaces, delivery of irrigation water, provide fish passage, operate fish screens, and meet permitting requirements.

Cost estimates for project designs are based on past projects of similar scope and scale on both the Clark Fork River and Rock Creek. The project area includes regulated FEMA floodplain which will increase project design and analysis cost to satisfy floodplain development permitting.

Evaluation Criterion D. Presidential and Department of Interior Priorities

Climate Change

The 2017 Montana Climate Assessment (MCA) showed that impacts of climate change are anticipated to drastically alter Montana’s hydrologic cycle in the coming decades (Whitlock et al. 2017). The MCA documented declining snowpack since the 1930s, with a greater drop since the 1980s, and predicted warming temperatures during spring leading to reduced snowpack and late-summer water availability.

This project increases resiliency by planning and designing construction projects that will remove fish barriers and improve fish passage, thereby allowing fish to move into cooler, less drought-prone habitats in the face of warming and increasingly dewatered streams in the Clark Fork watershed. In addition, construction of projects implemented as a result this design and planning project will protect genetic and life-history diversity for native priority and threatened fish species by reducing entrainment and mortality of fish in irrigation ditches. The project helps rural communities in the project area respond to drought by upgrading infrastructure to improve irrigation water delivery control. During periods of water shortage, improved control of irrigation water will help keep irrigators whole.

Resilience to drought

The project will promote long-term drought resiliency in the UCFRB in several ways. It is expected that the benefits provided by the project will continue for at least 50 years and over the lifetime of the improved infrastructure:

- **Habitat Connectivity:** Previously completed inventories of fish passage barriers in the UCFRB indicate that the removal of the 10 proposed fish passage barriers will reconnect over 60 miles of mainstem Clark Fork River habitat. Improved mainstem habitat connectivity secures native fish and other aquatic organisms improved access to coldwater habitat refugia in high elevation headwater streams and isolated pools or coldwater patches that remain wet or cooler during drought conditions. Access to coldwater habitat refugia is particularly important for the survival of native, coldwater sensitive trout species, reducing mortality and other metabolic impacts caused by drought-induced stress.

- **Native Species Migration and Genetic Diversity:** Previously completed inventories of fish passage barriers in the UCFRB indicate that the removal of the 10 proposed fish passage barriers will reconnect over 75 miles of fragmented habitats in the Clark Fork River and Rock Creek watershed, including full reconnection of the Upper Clark Fork River. Removal of these barriers will improve the ability of migratory fish to access spawning and rearing habitats during drought conditions to fulfil their life histories. Furthermore, these fish passage improvements will increase long-term resilience of native fish populations. Improved connection between migration corridors and spawning habitats in the UCFRB will increase gene flow and promote genetic variability. Genetic variability is critical to species survival, allowing species to adapt to changes in environmental conditions such as drought.

- **Collaborative Water Management:** This project requires collaboration among water users and other stakeholders, which may lead to a broader understanding and collaborative effort to protect streamflows and fish passage while also fostering cooperative water management practices that consider both agriculture and fisheries needs. TU and other conservation led efforts that are similar in scale and scope have resulted in positive results for natural resources and local agricultural communities.

- **Recreation and Economy:** FWP creel survey results from 2017 indicated that Rock Creek and the Upper Clark Fork River offered more than 60,000 angler days, and recreational use has increased despite increasing regional water temperatures (FWP 2018). Removing fish passage barriers can help to improve fish populations in the Clark Fork River and Rock Creek withstand drought. Sustaining healthy fisheries during drought conditions will increase resiliency of the many local community economies that rely on the recreation and angling in Rock Creek and the Clark Fork River.

Disadvantaged or Underserved Communities

The following tracts within the project area have been identified as disadvantaged or underserved communities according to the Council on Environmental Quality’s interactive Climate and Economic Justice Screening Tool.

- Tract No. 30093000600 – Silver Bow County, MT; Pop. 4,362 meeting burden thresholds for legacy pollution and water and wastewater, along with the associated socioeconomic threshold.
- Tract No. 30093000100 – Silver Bow County, MT; Pop. 5,114 meeting burden thresholds for health, housing, legacy pollution, workforce development, and water and wastewater, along with the associated socioeconomic threshold.
- Tract No. 30023000300 – Deer Lodge County, MT; Pop. 2,872 meeting burden thresholds for climate change, energy, health, and housing, along with the associated socioeconomic threshold.

- Tract No. 30023000400 – Deer Lodge County, MT; Pop. 3,008 meeting burden thresholds for climate change, health, and housing, along with the associated socioeconomic threshold.

The project benefits rural and underserved communities by designing projects that will provide financial assistance to low-income communities through improved infrastructure upgrades for agricultural operations and may improve agricultural productivity and increase household income. The project will also result in future community benefits through the creation of local construction jobs for future construction of projects designed in this project, increase recreational access through improved boat passage, and improve recreational fishing opportunities with benefits to the fish populations, upon construction of the designed projects. Therefore, the success of this project will have long-term benefits to the local economy.

Tribal Benefits

The Clark Fork River flows through an area of ancient and continuing importance to the CSKT. Flint was used from Flint Creek for making tools, arrowhead, knives, and scrapers; major horse trails were located along the river; and food was cached near Deer Lodge. The Hellgate Treaty of 1885 endowed the Tribes with off-reservation hunting and fishing rights in across their historic territory, which includes the UCFRB (Séliš u Qlì spé Culture Committee 2019). The CSKT has an ongoing interest in efforts to restore the CFR fishery to sustain the resource for continued exercise of off-reservation fishing. In addition, as part of the water compact with the State of Montana and the Federal government, the CSKT holds instream flow rights in the Clark Fork River. Restoring fish passage in the Clark Fork will add ecological value to the CSKT instream water rights.

Project Budget

The total project cost is \$914,318. Proposed sources of non-federal cost share funds (\$320,011) have been secured as of the time of the application and are detailed in Tables 3 and 4 below.

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

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. NRDP (State of Montana)*	\$ 220,012
2. Resource Legacy Fund (via CFC)	\$ 100,000
Non-Federal Subtotal	\$ 320,011
REQUESTED RECLAMATION FUNDING	\$ 594,306

*NRDP will provide up to \$320,011 in non-federal match if CFC match is not secured (see Appendix D.)

Table 4. Total Project Costs

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal Funding:	
Personnel	\$36,378
Fringe	\$19,523
Travel	\$3,234
Contracts and sub-awards:	\$464,015
<i>Engineering design for UCF diversions</i>	\$292,500
<i>Engineering design for RC diversions</i>	\$146,250
<i>Clark Fork Coalition (subaward)</i>	\$25,265
Indirect Charges (NICRA)	\$71,156
<i>Subtotal, costs reimbursed with requested Federal funds</i>	\$594,306
Costs to be paid by the applicant:	
Personnel (NRDP)	\$19,588
Fringe (NRDP)	\$10,513
Travel (NRDP)	\$1,742
Contracts and sub-awards	\$249,854
<i>Clark Fork Coalition (sub-award-RLF)</i>	\$13,604
<i>Engineering Design for UCF diversions (RLF)</i>	\$86,396
<i>Engineering Design for UCF diversions (NRDP)</i>	\$71,104
<i>Engineering Design for RC diversions (NRDP)</i>	\$78,750
Indirect Charges (NICRA -NRDP)	\$38,315
<i>Subtotal, costs to be paid by applicant</i>	\$320,011
TOTAL project cost	\$914,318

Budget Narrative

Please see the *Budget Detail and Narrative* spreadsheet and attachments, submitted with this application.

Environmental and cultural resources compliance

Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? There will be no earth disturbing work associated with this study and design project, nor any work that will affect the air, water, or animal habitat in the project area.

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? The diversion sites associated with this project are located within the designated critical habitat for Federal threatened bull trout. The outreach and design work associated with this project will not affect bull trout.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as “Waters of the United States”? The outreach and design work associated with this project will not impact wetlands and surface waters inside the project boundaries.

When was the water delivery system constructed? The water delivery systems associated with this project were first constructed in the late 1880’s to early 1920’s and have been replaced and modified over time as needed. This design project will not alter any water delivery systems. TU will address any issues identified during the historic preservation consultation process before the construction phase.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? The design and outreach work associated with this project will not result in any modifications of, or effects to, individual features of an irrigation system.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? There are no known buildings, structures, or features associated with project sites that are eligible for listing on the National Register of Historic Places.

Are there any known archeological sites in the proposed project area? There are no known archeological sites at the proposed project sites.

Will the proposed project have a disproportionately high and adverse effect on low income or minority populations? The project will not have a disproportionately high and adverse effect on low income or minority populations.

Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on tribal lands? The proposed project will not limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on tribal lands.

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? 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 area. Invasive species prevention best management practices will be followed when collecting monitoring data, and during site surveys.

Required Permits or Approvals

No agency permits or approvals are required for this design project. TU will acquire all necessary permits for future any related Task B construction projects.

Overlap or duplication of effort statement, conflict of interest disclosure, and uniform audit reporting statement

Please see Appendix B

SF-LLL

Please see form submitted with application.

Letters of support

Please see Letters of Support in Appendix C, which have been submitted by the following partners and stakeholders (entities who are contributing match are indicated with an asterisk):

- Broken Circle Ranch (Whalen Ditch water rights holder)
- Clark Fork Coalition*
- Confederated Salish & Kootenai Tribes (Eric sending Tuesday)
- Granite Headwaters Watershed Group
- Hesse, Tyler (Ross Fork Ditch 1 and 2 water rights holder)
- Kelley, Kailee (Sager Lane Pump Diversion water rights holder)
- Kohrs and Manning Ditch Company (Kohrs-Manning Ditch water rights holder)
- Marletto Family Ranch (Marletto and Rodda Ditch water rights holder)
- Mel Beck Ranches (Sager Lane Pump Diversion water rights holder)
- Montana Department of Fish, Wildlife & Parks
- Montana Dept. of Justice Natural Resource Damage Program* (Category A Partner and Valiton Ditch water rights holder)
- Montana Dept. of Natural Resources and Conservation
- Two Bar Ranch (Sager Lane Pump Diversion water rights holder)
- US Department of Agriculture Forest Service Beaverhead Deerlodge National Forest
- Vanisko Ranch (Sager Lane Pump Diversion water rights holder)
- Watershed Restoration Coalition of the Upper Clark Fork
- Westside Ditch Company (Westside Ditch water rights holders)

Letter of partnership and commitment

NRDP is the Category A partner and up to 35% non-federal match. See Appendix D.

Official resolution

Please see Appendix E.

References

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- USFWS. 2015a. Columbia Headwaters Recovery Unit implementation plan for bull trout (*Salvelinus confluentus*). Denver, Colorado, and Portland, Oregon.
- USFWS. 2015b. Recovery plan for the coterminous United States population of bull trout (*Salvelinus confluentus*). Portland, Oregon.
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Appendix C - Letters of Support

May 19, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled “**Upper Clark Fork River Fish Passage Project**”

To whom it may concern:

This letter is written in support of the “Upper Clark Fork River Fish Passage” grant application submitted to the Bureau of Reclamation WaterSMART AERP program by *Trout Unlimited* (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) and the Clark Fork Coalition (CFC) to study and design irrigation diversion infrastructure and screens to improve fish passage in the Upper Clark Fork Basin (UCF) of western Montana.

We are water right holders that irrigate from the Clark Fork River at the Whalen Diversion, near Racetrack, MT. Our diversion is aging and requires significant annual maintenance.

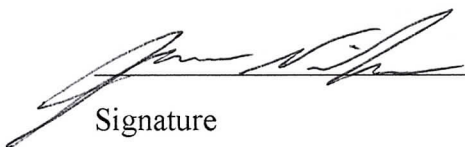
We support this WaterSMART AERP grant proposal and will work with TU, NRDP, CFC and our partners in the UCF to collaboratively identify design options that incorporates fish passage at our irrigation diversion, while also improving the functionality and maintenance requirements.

Sincerely,



Signature

5-23-2023
Date



Signature

5-23-2023
Date

Broken Circle Ranch Company INC
5199 Eastside Road
Deer Lodge, MT, 59722



March 23rd, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled "Upper Clark Fork Basin Fish Passage Improvement Project"

Dear Members of the Application Review Committee,

This letter is written in support of the **Upper Clark Fork Basin Fish Improvement Passage** grant application submitted to the Bureau of Reclamation WaterSMART AERP program by Trout Unlimited (TU). The Clark Fork Coalition (CFC) is a member-based nonprofit (501c3) river conservation founded in 1985 with a mission to protect and restore the 14-million-acre Clark Fork River watershed in western Montana.

Over the past 5 years CFC, TU and the Natural Resource Damage Program (NRDP) have been working together to implement projects on the mainstem Clark Fork River that address fish passage and entrainment issues. To date we have successfully improved 4 irrigation diversion structures with the partners, however there are still a number of large projects to complete.

This project proposal seeks to study and design irrigation diversion infrastructure and screens to improve fish passage for Endangered Species Act-listed bull trout and other native fish species in the Upper Clark Fork Basin (UCF) of western Montana. The CFC is committed to working with the partners to participate in the engineering design process, perform landowner outreach and assist in selecting the preferred design alternatives. In addition, the CFC is seeking \$100,000 in non-federal match from the Resources Legacy Fund to support this effort.

PO Box 7593
Missoula, MT
59807

T: 406.542.0539
F: 406.542.5632

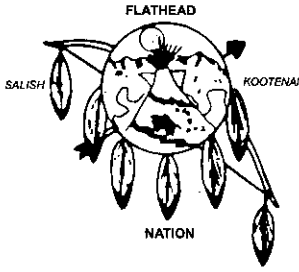
We support TU's WaterSMART AERP grant proposal and will work collaboratively with TU, NRDP and our partners in the UCF to support the objectives identified in the application. The CFC believes that the proposed project will position the project partners and water users to secure funding and implement fish passage projects that will reduce fish entrainment into irrigation ditches and enhance connectivity for long-term benefits to bull trout and other native fishes in the Upper Clark Fork Basin.

We look forward to working with TU to ensure the success of this project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Karen Knudsen". The signature is fluid and cursive, with a prominent initial "K".

Karen Knudsen
Executive Director



A Confederation of the Salish,
Pend d' Oreille
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



A People of Vision

TRIBAL COUNCIL MEMBERS:

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

May 30, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP)
Proposal titled "**Upper Clark Fork Basin Fish Passage Improvement Project**"

To whom it may concern:


This letter is written in support of the "Upper Clark Fork Basin Fish Improvement Passage" grant application submitted to the Bureau of Reclamation WaterSMART AERP program by *Trout Unlimited* (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) to study and design irrigation diversion infrastructure and screens to improve fish passage for Endangered Species Act-listed bull trout and other native fish species in the Upper Clark Fork Basin (UCF) of western Montana.

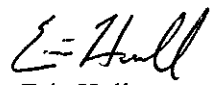
The UCF is within the aboriginal territory of the Confederated Salish and Kootenai Tribes (CSKT), and continues to be a culturally important area. As part of the CSKT-MT Water Compact, CSKT secured instream flow water rights in the UCF to benefit the river ecosystem and fishery. CSKT is supportive of additional projects that contribute to these benefits.

We support TU's WaterSMART AERP grant proposal and will work collaboratively with TU, NRDP, and our partners in the UCF to support TU's objectives identified in the application. CSKT believes that the proposed project will position TU and water users to implement fish passage projects that will reduce fish entrainment into irrigation ditches and enhance connectivity for long-term benefits to bull trout and other native fishes in the Upper Clark Fork Basin.

We look forward to working with TU to ensure the success of this project.

Sincerely,


Seth Makepeace
CSKT Compact Project Officer
seth.makepeace@cskt.org


Eric Hull
CSKT Water Rights Specialist
eric.hull@cskt.org



May 22, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled “**Upper Clark Fork River Fish Passage Project**”

To the AERP Proposal Review Committee:

This letter is written in support of the “Upper Clark Fork River Fish Passage” grant application submitted to the Bureau of Reclamation WaterSMART AERP program by *Trout Unlimited* (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) to study and design irrigation diversion infrastructure upgrades and fish screens that improve fish passage for Endangered Species Act-listed bull trout and other native fish species in the Upper Clark Fork River Basin of western Montana.

Granite Headwaters Watershed Group (GHWG) promotes the responsible use of the watershed’s natural, human, and socio-economic resources to protect and enhance the rural lifestyles valued by our communities within Granite County. This project aligns with our group’s mission and goals, which will benefit our watershed now as well as for the future generations to come.

We support TU’s WaterSMART AERP grant proposal and will work collaboratively with TU and NRDP to align community outreach and education activities with the goals of the grant proposal. Granite Headwaters Watershed Group believes that the proposed project will position TU and water users to implement infrastructure improvement projects with widespread benefits to water managers and irrigators, native fisheries, and enhance long-term ecosystem resiliency and watershed health across the region.

We look forward to working with TU to ensure the success of this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael L. Miller".

Michael L. Miller, President
Granite Headwaters Watershed Group
105 S Holland St, PO Box 926
Philipsburg, MT 59858
406-859-3291 graniteheadwaters@gmail.com

T these
To: Teresa Scanlon

Hi Tess, looks good to me. **Let's proceed with the study and design.** Thank you!

😊 ↶ ↷ ⋮

Tue 5/30/2023 1:50 PM

...

↶ Reply ↷ Forward

TS Teresa Scanlon
To: Tyler Hesse <these@gmail.com>

😊 ↶ ↷ 📅 ⋮

Fri 5/26/2023 5:57 PM

Hi Tyler,

The funding opportunity and proposal that we discussed is due next week. *Please send a signed support letter this weekend* if you want us to include the survey and design for the Ross Fork ditch(es) in the scope of work. I will be there Tuesday to measure the flow in ditches, so you can give me signed letter then.

Thanks again! Reminder, the letter of support does not commit you to implementing any project.

Give me a call if you have any questions,

- Tess

PS- As you know, I think it makes sense to look at both the ditch on the Forest and the ditch on private and possible consolidation of diversions in order to seriously look at addressing the water management issues and the required screening of the ditch on the Forest. Plenty of other questions to answer along the way regarding water right changes and future management/cost. My thought is that we start with feasibility so we can rule it out if not feasible. Everything else can be looked into along the way.



Tess Scanlon / Project Manager
tscanlon@tu.org / (c) 406.552.2168

Trout Unlimited
312 N. Higgins Ave, Suite 200
Missoula, MT 59802
<http://www.tu.org>

...

TS Teresa Scanlon
To: Tyler Hesse <these@gmail.com>

😊 ↶ ↷ ↷ ⋮

Mon 5/22/2023 1:03 PM

TU AERP Funding Opportunity ... 26 KB

TU_AERP Letter of Support .docx 25 KB

2 attachments (51 KB) Save all to OneDrive - Trout Unlimited Download all

Hi Tyler,

May 19, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled "**Upper Clark Fork River Fish Passage Project**"

To whom it may concern:

This letter is written in support of the "Upper Clark Fork River Fish Passage" grant application submitted to the Bureau of Reclamation WaterSMART AERP program by *Trout Unlimited* (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) and the Clark Fork Coalition (CFC) to study and design irrigation diversion infrastructure and screens to improve fish passage in the Upper Clark Fork Basin (UCF) of western Montana.

We are water right holders that irrigate from the Clark Fork River at the Sager Lane Pump Diversion. Our diversion is aging and requires significant annual maintenance.

We support this WaterSMART AERP grant proposal and will work with TU, NRDP, CFC and our partners in the UCF to collaboratively identify design options that incorporates fish passage at our irrigation diversion, while also improving the functionality and maintenance requirements.

Sincerely,

Kailee Kelley

Signature

5/21/2023

Date

Name or Entity

478 Quinlan Rd.

Address

Deer Lodge, MT 59722

Kohrs and Manning Ditch Company
2532 Freezeout Lane
Deer Lodge, MT 59722

May 19, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled “**Upper Clark Fork River Fish Passage Project**”

To whom it may concern:

This letter is written in support of the “Upper Clark Fork River Fish Passage” grant application submitted to the Bureau of Reclamation WaterSMART AERP program by *Trout Unlimited* (TU) in partnership with the Montana Natural Resource Damage Program (NRDP) to study and design irrigation diversion infrastructure and screens to improve fish passage for Endangered Species Act-listed bull trout and other native fish species in the Upper Clark Fork Basin (UCF) of western Montana.

Water from the Kohrs-Manning Ditch has been put to beneficial use for irrigation since 1895. Cooperation for 100+ years among Kohrs-Manning Ditch irrigators has been necessary to keep the irrigation system maintained and operational. Funding opportunities such as the WaterSMART AERP program are necessary for facilitating improvements to the Kohrs-Manning Ditch Company diversions and canal to lessen annual disturbances and threats to aquatic resources and facilitate improved recreational opportunities (enhanced fisheries).

We support TU’s WaterSMART AERP grant proposal and will work with TU, NRDP, and our partners in the UCF to collaboratively identify a design that addresses fish passage at our irrigation diversion. The Kohrs-Manning Ditch Company believes that the proposed project will position TU to help us implement a fish passage project that will reduce fish entrainment and enhance connectivity for long-term benefits to bull trout and other native fishes in the Upper Clark Fork Basin.

We look forward to working with TU to ensure the success of this project.

Sincerely,



William Mosier
1340 Freezeout Lane
Deer Lodge, MT 59722
Cell: 406 498-2328

[Logo or Letterhead Here]

May 12, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled “Upper Clark Fork River Fish Passage Project”

To whom it may concern:

This letter is written in support of the “Upper Clark Fork River Fish Passage” grant application submitted to the Bureau of Reclamation WaterSMART AERP program by *Trout Unlimited* (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) to study and design irrigation diversion infrastructure and screens to improve fish passage and reduce fish entrainment for long-term benefits to water management and fisheries in the Upper Clark Fork Basin of western Montana.

We operate and maintain two irrigation diversions on Rock Creek in order to divert irrigation water for a hay and cattle operation. We support TU’s WaterSMART AERP grant proposal and will work with TU in the process to identify a design that addresses fish passage at our irrigation diversion.

We look forward to working with TU to ensure the success of this project.

Sincerely,



Tony Marletto
Marletto Family Ranch

406-859-0077



Montana Fish, Wildlife and Parks - Region 2
3201 Spurgin Road
Missoula, MT 59804
(406) 542-5500
05-23-2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled *"Upper Clark Fork Basin Fish Passage Improvement Project"*

To whom it may concern:

Fish, Wildlife and Parks (FWP) supports the *"Upper Clark Fork Basin Fish Improvement Passage"* grant application submitted to the Bureau of Reclamation WaterSMART AERP program by Trout Unlimited (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) and the Clark Fork Coalition (CFC). This project is to study and design irrigation diversion infrastructure and screens to improve fish passage for Endangered Species Act-listed species like the bull trout and other native fish species in the Upper Clark Fork Basin (UCF) of western Montana.

FWP aims to conserve and enhance existing populations of native fish, including bull trout and westslope cutthroat trout, in the Upper Clark Fork River (UCFR) and its tributaries. Addressing fish passage and entrainment in the UCFR mainstem and native fish strongholds such as Rock Creek is critical to achieving this goal. The UCF Fish Passage Improvement Project aims to address passage and entrainment issues at many priority locations for native fish within the UCF. Completing the proposed projects will be a benefit to native fish species within the UCF by addressing many outstanding priority projects in the UCFR mainstem and Rock Creek.

We support TU's WaterSMART AERP grant proposal and work collaboratively with TU, NRDP, CFC and other partners in the UCF to support native fish conservation. FWP believes that the proposed project will position the project partners and water users to secure funding and implement fish passage projects that will reduce fish entrainment into irrigation ditches and enhance connectivity for long-term benefits to bull trout and other native fishes in the UCF.

Thank you for your consideration of funding this application. We encourage you to reach out with any questions to Caleb Uerling, Fisheries Biologist, (406) 493-2694, Caleb.Uerling@mt.gov. We look forward to working with TU to ensure the success of this project.

Sincerely,

Randy Arnold
Regional Supervisor, Region 2

May 19, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled “**Upper Clark Fork River Fish Passage Project**”

To whom it may concern:

This letter is written in support of the “Upper Clark Fork River Fish Passage” grant application submitted to the Bureau of Reclamation WaterSMART AERP program by *Trout Unlimited* (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) and the Clark Fork Coalition (CFC) to study and design irrigation diversion infrastructure and screens to improve fish passage in the Upper Clark Fork Basin (UCF) of western Montana.

We are water right holders that irrigate from the Clark Fork River at the Sager Lane Pump Diversion. Our diversion is aging and requires significant annual maintenance.

We support this WaterSMART AERP grant proposal and will work with TU, NRDP, CFC and our partners in the UCF to collaboratively identify design options that incorporates fish passage at our irrigation diversion, while also improving the functionality and maintenance requirements.

Sincerely,

Will Pauling
Signature

5/27/23
Date

Mei Beck Ranches
Name or Entity

2949 Greenhouse RD
Address

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

Water Resources Division

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



GREG GIANFORTE, GOVERNOR

1539 ELEVENTH AVENUE

STATE OF MONTANA

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

PO BOX 201601
HELENA, MONTANA 59620-1601

May 25, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled "**Upper Clark Fork Basin Fish Passage Improvement Project**"

To whom it may concern:

I am writing to express support for the "Upper Clark Fork Basin Fish Improvement Passage" grant proposal submitted to the Bureau of Reclamation WaterSMART AERP program by *Trout Unlimited* (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) and the Clark Fork Coalition (CFC). This valuable project will study and design irrigation diversion infrastructure and screens to improve fish passage for Endangered Species Act-listed bull trout and other native fish species in the Upper Clark Fork Basin (UCF) of western Montana.

As a Regional Water Planner for the Montana Department of Natural Resources and Conservation (DNRC), I work with stakeholders throughout the Clark Fork Basin to implement the [State Water Plan](#) (2015). The UCF is a key focus of my work because of the significant complexity surrounding water management there. The Basin has endured decades of mining operations, which has left a legacy of water contamination and altered stream habitat. In addition, streamflow volumes have dwindled in recent years due to drought and over-appropriation. These management challenges are further compounded by concerns about the implementation of the Milltown Water Right, a senior right co-owned by Montana Fish, Wildlife & Parks and the Confederated Salish and Kootenai Tribes that becomes effective in 2025. Thus, a strategic and coordinated effort is needed to ensure aquatic health is balanced with irrigation demand. This project supports DNRC's goals for the Basin by providing safe passage for native fish while mitigating potential water conflict.

We support TU's grant proposal and will work collaboratively with TU, NRDP, and our partners in the UCF to support the objectives identified in the application; specifically, DNRC will assist with water rights analyses and flow measurements. DNRC appreciates the project goals of reducing fish entrainment into irrigation ditches and enhancing habitat connectivity for long-term benefits to bull trout and other native fishes in the UCF Basin.

We look forward to working with TU and partners to ensure the success of this important project. Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Valerie J. Kurth".

Valerie J. Kurth
Montana DNRC
vkurth@mt.gov; 406-444-6627

May 19, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled “**Upper Clark Fork River Fish Passage Project**”

To whom it may concern:

This letter is written in support of the “Upper Clark Fork River Fish Passage” grant application submitted to the Bureau of Reclamation WaterSMART AERP program by *Trout Unlimited* (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) and the Clark Fork Coalition (CFC) to study and design irrigation diversion infrastructure and screens to improve fish passage in the Upper Clark Fork Basin (UCF) of western Montana.

We are water right holders that irrigate from the Clark Fork River at the Sager Lane Pump Diversion. Our diversion is aging and requires significant annual maintenance.

We support this WaterSMART AERP grant proposal and will work with TU, NRDP, CFC and our partners in the UCF to collaboratively identify design options that incorporates fish passage at our irrigation diversion, while also improving the functionality and maintenance requirements.

Sincerely,

Dana Johnston

Signature

5-19-2023

Date

Two Bear Ranch

Name or Entity

91 Race Track Rd Deer Lodge

Address

May 25, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled “**Upper Clark Fork River Fish Passage Project**”

Dear Bureau of Reclamation WaterSMART Review Committee,

The Beaverhead-Deerlodge National Forest would like to offer strong support for the “Upper Clark Fork River Fish Passage” grant application submitted to the Bureau of Reclamation WaterSMART AERP program by *Trout Unlimited* (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP). For the study and design of irrigation diversion infrastructure and screens to improve fish passage for Endangered Species Act-listed Bull Trout and other native fish species in the Upper Clark Fork River Basin of Western Montana.

The Beaverhead-Deerlodge National Forest and Trout Unlimited have partnered on the replacement of undersized and perched culverts that have prevented aquatic organism passage (AOP). These structures have been replaced with large AOP structures that allow for the full passage of all aquatic organisms. BDNF, TU and other partners have worked throughout the Upper Clark Fork River drainage on fisheries related passage projects. However, there are still numerous fish passage barriers located throughout the Rock Creek drainage. These include structures such as outdated irrigation diversions on both private and public lands.

TU’s Upper Clark Fork River Fish Passage Project proposal aligns with similar project work and ongoing efforts supported by the Beaverhead-Deerlodge National Forest. This fish passage proposal complements other work being completed across the Upper Clark Fork River Basin. This proposal augments the capacity of all the partners working in this area to address region-wide fish passage impairments.

The Beaverhead-Deerlodge National Forest believes that the proposed project will position TU and partners to implement priority fish passage projects. These projects will reduce fish entrainment into irrigation ditches and enhance connectivity for long-term benefits to bull trout and other native fishes in the Upper Clark Fork Basin. Improved infrastructure will furthermore improve water management and increase watershed resiliency to changing climatic conditions in this part of the arid west.

We look forward to working with TU and NRDP to ensure the success of this project.

Sincerely,

A handwritten signature in blue ink, appearing to read 'West Zone Fisheries Biologist', with a long horizontal flourish extending to the right.

West Zone Fisheries Biologist

Beaverhead-Deerlodge National Forest

May 19, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled “**Upper Clark Fork River Fish Passage Project**”

To whom it may concern:

This letter is written in support of the “Upper Clark Fork River Fish Passage” grant application submitted to the Bureau of Reclamation WaterSMART AERP program by **Trout Unlimited** (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) and the Clark Fork Coalition (CFC) to study and design irrigation diversion infrastructure and screens to improve fish passage in the Upper Clark Fork Basin (UCF) of western Montana.

We are water right holders that irrigate from the Clark Fork River at the Sager Lane Pump Diversion. Our diversion is aging and requires significant annual maintenance.

We support this WaterSMART AERP grant proposal and will work with TU, NRDP, CFC and our partners in the UCF to collaboratively identify design options that incorporates fish passage at our irrigation diversion, while also improving the functionality and maintenance requirements.

Sincerely,

Jim Berg
Signature

5/21/23
Date

Kanisko Ranches Inc
Name or Entity

478 Quinlan Rd
Address
Deer Lodge MT.
59722

Watershed Restoration Coalition of the Upper Clark Fork
1109 Main Street Deer Lodge, Montana 59722

May 24nd, 2023

ATTN: Bureau of Reclamation WaterSMART Review Committee

RE: Letter of Support for FY2023 WaterSMART Aquatic Ecosystem Restoration Projects (AERP) Proposal titled “**Upper Clark Fork Basin Fish Passage Improvement Project**”

To whom it may concern:

This letter is written in support of the “Upper Clark Fork Basin Fish Improvement Passage” grant application submitted to the Bureau of Reclamation WaterSMART AERP program by **Trout Unlimited** (TU) in partnership with the Montana Department of Justice Natural Resource Damage Program (NRDP) and the Clark Fork Coalition (CFC) to study and design irrigation diversion infrastructure and screens to improve fish passage for Endangered Species Act-listed bull trout and other native fish species in the Upper Clark Fork Basin (UCF) of western Montana.

The Watershed Restoration Coalition (WRC) is a landowner, conservation district and local government based nonprofit. The WRC is a principal contractor to the Montana Natural Resource Damage Program. WRC has partnered with Trout Unlimited since the WRC’s start up in 1999. The project proposed by TU is important to the continued restoration efforts in the upper Clark Fork.

We support TU’s WaterSMART AERP grant proposal and will work collaboratively with TU, NRDP, CFC and our partners in the UCF to support the objectives identified in the application. The WRC believes that the proposed project will position the project partners and water users to secure funding and implement fish passage projects that will reduce fish entrainment into irrigation ditches and enhance connectivity for long-term benefits to bull trout and other native fishes in the Upper Clark Fork Basin.

We look forward to working with TU to ensure the success of this project.

Sincerely,

Ted Dodge
Executive Director
WRC

Contact information

Ted.dodge516@gmail .com
406-579-3762