

Project Title:

Purgatoire River Fish Passage

*Project Being Submitted To:
Bureau of Reclamation WaterSMART
Environmental Water Resources Projects for Fiscal Year 2023
Funding Opportunity Announcement No. R23AS00089*

Applicant:

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TECHNICAL PROPOSAL AND EVALUATION CRITERIA
(must be limited to 35 pages)

I. Executive Summary

The Purgatoire Watershed Partnership is a non-profit conservation watershed group based in the City of Trinidad and Las Animas County in Colorado, and submits this grant application in support of the *Purgatoire River Fish Passage Project* on March 28, 2023.

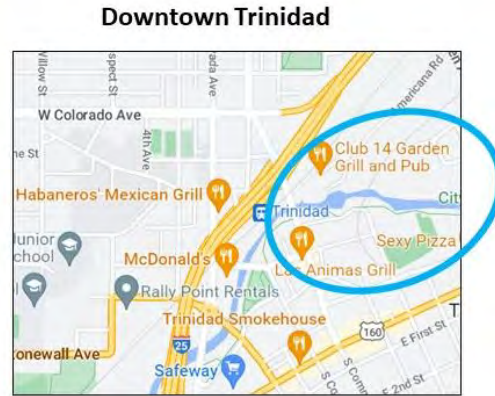
The Purgatoire Watershed Partnership, working closely with a host of partners including Colorado Parks & Wildlife, US Fish & Wildlife Service, Trout Unlimited, Purgatoire River Water Conservancy District, local ditch companies, City of Trinidad, Fishers Peak Outfitters, Purgatoire River Run Company, local Kip Hampden developers and The Youth Club of Trinidad will conduct this collaborative project on the downtown stretch of the Purgatoire River in Trinidad, Colorado. This project will provide important passage for all fishes (native and sport) up and over the Baca-Picketwire diversion dam, significantly improving aquatic access and connectivity and contributing directly to the overall sustainability and resiliency of our local fish populations, including native priorities such as the flathead chub (*Platygobio gracilus*, a Colorado species of special concern) and central stoneroller (*Campostoma anomalum*), and target trout species for our expanding trout fishery. This project will also accomplish other important recreational, agricultural, and municipal goals. The selected ‘natural riffle’ fish passage design will also provide passage for boaters down and over the existing agricultural diversion dam, significantly improving boater safety and enhancing recreational boating opportunities. These ecological and recreational enhancements in the downtown river area will provide multiple benefits for our community members of all ages, and is expected to draw more community members and visitors to our downtown area and small businesses, in a small rural town that is working hard to develop a more sustainable economic base that includes recreational tourism after a long history of economic booms and busts tied to the natural resource extraction industry.

Project partners and watershed stakeholders are excited for the implementation of this on-the-ground watershed management project collaboratively developed and prioritized by watershed stakeholders through the development of our Purgatoire River Management Plan. This project will begin in December 2023 and will be complete by December 2026. The proposed project is not located on a Federal facility or Federal lands.

II. Project Location

The proposed project – the *Purgatoire River Fish Passage Project* - is located in Colorado in Las Animas County in the center of downtown Trinidad. The project latitude and longitude is 37° 10'23" N, 104° 30'27" W. The Purgatoire River is an important tributary of the larger Arkansas River Basin. *See Project Maps below.*

Overview of Project Area



Closeup of Diversion Dam and Associated Project Components



III. Technical Project Description

This project focuses on the installation of fish passage into the Baca-Picketwire Diversion Dam, and directly associated project components.

The project components include:

- Component 1 - Overall Project Coordination & Administration
- Component 2 - Final Fish Passage Construction Design
- Component 3 - Construction – Installation of Fish Passage
- Component 4 - Monitoring - Pre-Project Monitoring & Short Term (6-months) Post-Project Monitoring (e.g. fish capture/tagging with CPW)

With separate non-federal funding and resources, we will also conduct long term post-project monitoring, community engagement, education and stewardship (e.g. community engagement in Citizen Science for fish monitoring, youth and adult fish ecological education and angling, webcam installation, community stewardship keeping area clean)

Component 1 - Overall Project Coordination & Administration

This task will be conducted by the Purgatoire Watershed Partnership Watershed Coordinator, and include all project coordination including partner coordination, communication, and collaboration; hiring, management and coordination with all contractors; and all other activities associated with successful project management, implementation, and reporting. It is important to note that because this is a COLLABORATIVE watershed project, this project continues to require extensive partner coordination and communication for all project aspects, including a community engagement component as the project progresses.

Project Manager/Watershed Coordinator

The Watershed Coordinator will serve as the Project Manager. Watershed Coordinator activities in support of this project will include:

- Project coordination of all project partners, stakeholders, and contractors
- Ensuring all project tasks are completed and project is completed successfully
- Conducting regular meetings with all project partners and all interested stakeholders to ensure project is proceeding to satisfaction of partners and stakeholders, and discussing and resolving any project issues to ensure project success
- Conducting public outreach and community engagement to address any other public issues and ensure ongoing community support of project
- Conduct and coordinate pre-project monitoring efforts with partners for tracking project success
- Conduct and coordinate additional preparation for post-project monitoring with partners (e.g. marking fish for tracking movement through fish passage)
- Work with partners to hire contractors to implement project work and conduct engineering oversight
- Hold initial meeting with hired contractors and all project partner staff providing critical oversight on project to ensure clear contractor understanding of project designs, functionality needs, requirements for water rights protection, and adherence to all other relevant regulations and guidelines; also to establish clear lines/means of communication for all parties to consult with each other and watershed coordinator as needed; and to

determine contractor estimated timeline and to schedule check-ins/meetings with contractors to track progress and address any issues.

- Conduct all project tracking and reporting
- Work with Project Engineer to address any issues with project
- Work with Partner staff conducting oversight of project to ensure all relevant project components are being completed correctly and in full alignment with partner needs and associated water rights and regulations
- Work with all partners and contractors to ensure successful implementation and completion of project components
- Work with partners and Project Engineer to conduct final signoff on all relevant project components
- Conduct and coordinate with partners for post-project monitoring for tracking project success (not funded through this grant)
- Develop and submit final report

Project Partner Oversight

As we have a diverse set of project partners, we also have a diverse set of partner needs, associated water rights concerns, and different rules and regulations that must be complied with for this project. As such, this will require significant oversight and participation from project partners to ensure that all needs are met and all rules and regulations are complied with. Project partners have committed staff time to this project (see in-kind contributions) to guarantee that staff will be available to provide critical project oversight to ensure all relevant project components are being completed correctly and in full alignment with partner needs and associated water rights and regulations.

Component 2 - Final Fish Passage Construction Design

This task will include the following project subcomponents:

- Hiring of Design Contractor
- Coordination With All Project Partners Through to Final Design
- Permitting & Compliance
- Completing Final Designs

The Watershed Coordinator will work with project partners to hire the design contractor and coordinate with all project partners through to completion of the final design. The design work will be conducted by a design firm (hired contractor) and include developing final design and construction documents in preparation for fish passage construction.

Through extensive collaborative discussions with project partners and community members, we have already completed a 30% fish passage concept design (**See attached**). In particular, we have been working closely with Colorado Parks & Wildlife, US Fish & Wildlife Service, Trout

Unlimited Local Chapter/Purgatoire River Anglers, Purgatoire River Water Conservancy District, and the local ditch companies to develop a fish passage design that is acceptable to everyone and would pass both native and sport fishes. We have also been working with the local boating community as it relates to the dual role of this ‘natural riffle’ design as a safer way of moving boats down and over the Baca-Picketwire diversion dam.

As noted above, it is important for funders to understand that because this is a COLLABORATIVE watershed project, this project continues to require extensive partner coordination and communication for all project aspects, including ensuring that all partners continue to be engaged and approve of design components through to final design. *This requires a significant amount of time and back and forth with designers and partners; this is reflected in the budget. It feels important to note this as sometimes it is not always well understood how much extra labor COLLABORATIVE projects require in order to ensure successful communication and collaboration with partners, and securing the approval of all key partners at each critical project stage.*

Component 3 - Construction – Installation of Fish Passage

This task will include:

- Hiring of Contractors
- Construction Observation, Oversight and Quality Control
- Preparation of Site for Construction
- Construction
 - Diversion Dam Modifications & Sluice Gate
 - Rock Riffle Engineered Fill
 - Channel and Overbank Grading
 - Revegetation and Reclamation
 - General Conditions
- Post-Construction Review and Sign Off

The Watershed Coordinator will be responsible for the hiring of contractors, and working closely with these contractors on all project aspects. Construction Observation, Oversight and Quality Control will be conducted by the project engineer (hired contractor). Permitting & Compliance will be conducted by the design firm (hired contractor) in close coordination with the project engineer and Watershed Coordinator. The project engineer, working closely with the design firm and the construction firm (hired contractor), will lead and oversee the Preparation of the Site for Construction, and Construction efforts. The Post-Construction Review and Sign Off will be conducted by the project engineer.

However, it is important to note that we are working very closely with the ditch companies and a host of other partners as mentioned, to ensure that ALL partners sign off on each step of this project process. So our partners will be involved in all items above at some level.

All project steps will be approved by the ditch companies before the project can move on to the next step. Colorado Parks & Wildlife and USFWS will also be working closely with us on each project step.

This project component will include providing as-built drawings and photographic documentation of the completed structure.

Fish Passage Technical Details Tied to Construction Budget Line Items

Diversion Dam Modifications and Sluice Gate

Fish passage improvements at the Baca-Picketwire Diversion will include some modifications to the existing diversion dam and sluice gate. The diversion crest will be left in place at existing elevation. A small trapezoidal low flow fish passage channel 1-foot deep with a 6-foot bottom width and 1:1 (v:h) side slopes will be cut into the concrete to accommodate a small low-flow fish passage channel. The low flow fish passage channel will be about 98 feet to the right of the existing ditch entrance gate to prevent fish from entering the ditch.

The existing dam has a short, steep sediment sluice adjacent to the ditch entrance. This works with the steep existing diversion structure but will not work with the proposed fish passage riffle. The proposed rock riffle is approximately 195 feet long at approximately 5% grade. To pass sediment around the riffle a new concrete sluice channel approximately 256 feet long at approximately 2.2% grade will be constructed to pass fine sediment and debris away from the ditch intake discharging at the downstream end of the fish passage riffle.

Rock Riffle Engineered Fill

The fish passage improvements at the Baca-Picketwire Diversion dam will consist of a Rock Riffle Ramp Structure built from composite “Engineered Fill” material. The purpose of the engineered fill is to provide bulk to the existing channel and raise the bed (at the downstream face of the existing dam) to design elevations in a manner that mimics the Purgatoire River’s native streambed and associated hyporheic flow. The design gradation of the Engineered Fill will be based on the “Fuller-Thompson” developed by the USFS for mimicking natural streambeds. This process requires importation and mixing of a wide range of material components (Ranging from boulders to dirt/silt) on-site to minimize the interstitial void space between material components immediately upon installation. This mixing process ensures a well graded assortment of component materials and emulates the well sorted characteristics of natural stream bed materials. The estimated construction costs associated with Construction Task 2 includes the Purchase and Delivery, On-site Mixing and Handling, and Placement of the Engineered Fill specified in the Design.

Channel and Overbank Grading

The costs associated with Construction Task 3 include grading of the channel and overbank upstream, immediately adjacent to, and downstream of the existing diversion dam. This work is based on design decisions to provide boater passage over the dam, meet hydraulic conditions conducive to fish passage of target species, improve in-channel habitat during the wide range of flows typical of the Purgatoire River, and improve riparian/overbank characteristics in support of

revegetation efforts. The work accomplished in this task will improve channel dimensions to support more effective sediment transport through the project reach.

Revegetation and Reclamation

Following the completion of the Rock Riffle and Channel/Overbank grading, work associated with Task 4 will involve revegetation with native plants and reclamation of all disturbed areas. As part of the final engineering design process, a revegetation plan will be developed to include list of plant species, determination of type/# of plants, soil augmentation requirements (if necessary), and a planset showing planting zones and approximate locations of specific plants. Planting zones will be designed based on the relative elevation to the channel and will consist of an assortment of plant species intended to mimic un-disturbed vegetation communities.

General Conditions

The General Conditions budget item includes costs associated with management and coordination aspects of the project, along with insurance bonding costs. All costs associated with the mobilization of heavy equipment, personnel, and other construction equipment will fall under general conditions as well. Necessary regulatory components of the project not covered in the design phase, such as local or state construction permits (I.e. stormwater management, dewatering, etc.) and erosion control measures will fall under this budget item, along with care-of-water plans and efforts. Finally, surveying during construction and post-construction (to complete as-built survey) will be covered under the general conditions budget item.

Component 4 - Monitoring – Pre-Project Monitoring & Short-Term (6-months) Post-Project Monitoring

The Watershed Coordinator will work with partners to ensure monitoring is conducted at the times, locations, and manner that is determined is needed. We will be conducting both pre-project monitoring and short term (6-months) post-project monitoring. For the pre-project monitoring, we will (1) establish a monitoring and data management plan and (2) install necessary equipment to monitor progress and conservation outcomes. Post-project monitoring will include 6 months of post-implementation monitoring activities of conservation outcomes after implementation of the on-the-ground project, primarily focused on fish tagging and capture to determine utilization and success of fish passage. These efforts will include working closely with project partners – particularly Colorado Parks & Wildlife, US Fish & Wildlife Service, Trout Unlimited Local Chapter/Purgatoire River Anglers, and The Youth Club of Trinidad – as well as all interested community members engaging in our local Citizen Science efforts.

Colorado Parks & Wildlife already conducts annual fish collection and tracking efforts; as such we will be tying in our new fish passage-associated monitoring with those efforts.

IV. Applicant Category and Eligibility of Applicant

The Purgatoire Watershed Partnership is a Category B applicant. We are a non-profit conservation organization and watershed group as defined in the Cooperative Watershed Management Act, Section 6001(6). We are a grassroots, non-regulatory entity that addresses water availability and quality issues within the relevant watershed, is capable of promoting the sustainable use of water resources in the watershed, makes decisions on a consensus basis, and represents a diverse group of stakeholders representing different water use sectors, including hydroelectric producers; livestock grazing; timber production; land development; recreation or tourism; irrigated agriculture; the environment; municipal water supplies; private property owners; Federal, State and local governments: Tribes; and disadvantaged communities.

We will be acting in partnership with multiple Category A partners. Our primary Category A partner is the Purgatoire River Water Conservancy District. The PRWCD is a water conservancy district created pursuant to Colorado statutes. The PRWCD has contract authority and obligations to deliver Trinidad Project waters to the Baca-Picketwire Ditch diversion dam. We are also working with two other partners that we consider to be Category A partners, that of the Baca Ditch Company, and the Picketwire Ditch Company, both of which have water delivery authority tied to the Baca-Picketwire diversion dam and headgate. **We have included Letters from all three of these entities in the attachments, confirming that they are partnering with us and agreeing to the submittal and content of this grant application. (See LETTERS OF SUPPORT AND LETTERS OF PARTNERSHIP)**

V. Performance Measures

All applicants are required to provide a brief summary describing the performance measure(s) that will be used to quantify actual benefits upon completion of the project. Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts as well as the overall effectiveness of the project.

The applicant has developed multiple methods (performance measures) to quantify the benefits of our proposed project. The watershed coordinator will work with relevant project partners to conduct pre-project monitoring as well as post-project monitoring, recognizing that program funding cannot be used to measure performance more than 6 months after project construction is complete.

Please see ‘*Evaluation Criterion E.1.5. – Performance Measures*’ section below for a detailed explanation of our proposed performance measures.

VI. Evaluation Criteria

E.1.1 Evaluation Criterion A: Project Benefits (25 Points)

Up to 25 points may be awarded based on the evaluation of the benefits that are expected to result from the proposed project. This criterion evaluates the extent to which the project will benefit ecological values and watershed health that have a nexus to water resources or water resources management. Proposals containing a well-supported description and quantification of project benefits will receive more points under this criterion.

E.1.1.1 Subcriterion A.1: Project Benefits

Explain the extent of project benefits. Only respond to the section(s) of this subcriterion that are relevant to your project.

E.1.1.1.1 General Project Benefits

Address the following questions for all project types as applicable to your project. Proposals containing a well-supported description and quantification of benefits will receive more points.

Explain how the project will benefit ecological values that have a nexus to water resources or water resources management, including benefits to plant and animal species, fish and wildlife habitat, riparian areas, and ecosystems that are supported by rivers, streams, and/or other water sources, or that are directly influenced by water resources management.

The Purgatoire River is a 196-mile-long tributary of the Arkansas River that sustains a robust assemblage of native plains fishes in its lower reaches and important native and sport fishes in the ‘middle’ river beginning below Trinidad Dam. This project addresses the inability of both native and sport fish to move upstream by installing a ‘natural riffle ramp’ fishway onto the existing Baca-Picketwire diversion dam located in the city of Trinidad. This dam has prohibited upstream movement for all life stages of fish for more than 100 years. Through extensive partner collaboration and discussion, a fishway design has been developed that allows all fishes to pass, is acceptable to the local agricultural community, and will allow boaters safer passage over the dam as well.

The project will allow fish access to 3.3 miles of main river, wetlands, 20 miles of Raton Creek and many stream miles within ephemeral drainages including approximately 4 miles of Moore’s Canyon and 9 miles of Colorado Canyon. This project will directly contribute to the sustainability and resiliency of multiple species of that are a priority to local, State and Federal governments and local anglers. These include the flathead chub, (a Colorado species of special concern), central stoneroller, and others. Brown and rainbow trout are the two main sportfish of concern. Many of these populations are in decline. The current inability of fish in the middle Purgatoire to migrate to spawning reaches and areas of thermal refuge during low flow periods is a significant limiting factor for all species.

The project is aligned with habitat goals of the Purgatoire River Watershed Plan as well as non-consumptive habitat goals adopted by the Arkansas Basin Roundtable Basin Implementation Plan. The project also addresses recommendations for improvements provided in the Purgatoire River Assessment Report: Part 1 – River Habitat, Hydrology/Hydraulics, and Fishery Biology Assessment 2019-2020 (Policky, 2021).

Benefits provided by this project are expected to be sustainable far into the future. The existing Baca-Picketwire diversion is a concrete dam that is not passable for fish. The project will not remove the barrier as it is critical irrigation infrastructure but will construct a natural riffle downstream from the diversion with a milder slope to allow fish passage. Fishways of this sort are aesthetically pleasing, natural, and resilient to extreme flows and functional at base flows.

This project seeks to restore fluvial function to the extent possible within the confines of local water use and development. This project will allow fish annual movement to critical spawning, refuge and rearing habitat. Design criteria for the project was informed by guidance from USFWS, CPW, and Colorado State University. Flows in the watershed come from water stored within Trinidad Reservoir. While some view the reservoir as a detraction for downstream aquatic habitats, it also presents an opportunity to improve the current river state by maintaining flow in the river throughout the year to support fish and other riparian life in the arid Southeastern Colorado. This is a tough topic during our extended drought, but we are working closely with project partners to begin to have discussions around opportunities to better manage the quantity and timing of river flows for ecological benefit, as well as for agricultural, municipal, and recreational benefit. There is strong interest from ecologically-oriented water users in the watershed to move these conversations forward around fish and flows in particular – increasing the reliability and timing of water supply for fish and all aquatic life as well as riparian vegetation and other wildlife. We see this fishway as a critical component to ensure the long-term sustainability and resilience of the ecological health of the Purgatoire River and its aquatic life.

The ‘transition zone’ of the eastern slope of Colorado is highly unique in both a regional and national scope. The stark topographic shift from the plains to the foothills of the Rocky Mountains offers similarly abrupt changes in climate, flora and fauna. This phenomenon has yielded a great diversity of species and ecotones in a relatively tiny space. This zone is unique, not only in this diversity, but in its importance for movement of both terrestrial and aquatic species alike. The Purgatoire River is of special note amongst the many transition zone streams of Colorado’s Front Range. It has long been the subject of academic study due its robust native-fish assemblage that has persisted despite a ‘dynamic’ flow regime and heavy agricultural use. The project is important at a watershed level and will contribute to a broader regional effort to promote and restore habitat connectivity in the face of increased human development and habitat fragmentation.

This project leverages significant matching funds towards watershed restoration efforts outlined in the Purgatoire River Watershed Plan and was prioritized through CWCB Stream Management Planning efforts conducted in our watershed.

Under the Great Plains Fish Habitat Partnership, Colorado watersheds were prioritized for restoration based on aquatic species conservation using State Wildlife Action Plans and priority Federal Trust species to determine highest species priorities for 8-digit HUCs across a geographic area. The Purgatoire watershed ranked in the middle quantile and the analysis supports projects like this which incorporate a high diversity of species (both economic and ecological interest) and has local support for conservation at a watershed level.

Will the project *improve watershed health* in a river basin that is adversely impacted by a Reclamation water project?

The project will improve watershed health in the Purgatoire River basin below Trinidad Reservoir, a Reclamation water project that adversely impacts ecological flows in the watershed. The Trinidad Dam project was completed in 1976 and is operated by the US Army Corps of Engineers. Trinidad Lake is considered to be a multi-purpose project for flood control, irrigation and recreation, authorized by the 1958 Flood Control Act. The dam helps protect the City of Trinidad from flood waters and sediment and holds irrigation water for the Purgatoire River Water Conservancy District. The Bureau of Reclamation's involvement in the Project is due to holding the Repayment Contract with the Purgatoire River Water Conservancy District. Flows in the project area originate primarily from Trinidad Reservoir and are now obviously altered from the natural flow regime since the Trinidad Dam was completed. Our project will improve the health of aquatic life in the basin by connecting disparate fish populations upstream and downstream of the Baca Picketwire diversion structure, and connecting fish to more diverse and healthy habitat upstream. Additionally, the project is aligned with habitat goals of the Purgatoire River Watershed Plan to improve watershed health, as well as non-consumptive habitat goals adopted by the Arkansas Basin Roundtable Basin Implementation Plan which address long term watershed health. We are also beginning to have conversations with our project partners and others about the potential in the future to modify the quantity and timing of flows to best advantage fish and other aquatic life, as well as for agricultural, municipal, and recreational benefit. There is strong interest from ecologically-oriented water users in the watershed to move these conversations forward around fish and flows in particular – increasing the reliability and timing of water supply for fish and all aquatic life as well as riparian vegetation and other wildlife. Our fish passage design is being tailored to maximize success and benefit for the current flow conditions, but also allowing flexibility for changing flows in the future.

Is the project for the purpose of meeting *existing environmental mitigation or compliance obligations* under Federal or State law?

No.

If the project will benefit *aquatic or riparian ecosystems* within the watershed (e.g., by reducing flood risk, reducing bank erosion, increasing biodiversity, or preserving native species), explain the extent of those benefits (i.e., magnitude and geographic extent).

Estimate expected project benefits to ecosystems and provide documentation and support for this estimate, including a detailed explanation of how the estimate was determined.

The project will benefit the aquatic biodiversity by providing connectivity between fish populations which are currently physically disconnected for much, if not all of the year by the Baca Picketwire diversion. Geographically, this project will allow downstream fish to access an estimated 3.3 miles of main river, wetlands, 20 miles of Raton Creek and many stream miles within ephemeral drainages, including approximately 4 miles of Moore's Canyon and 9 miles of Colorado Canyon. These estimates were determined by reviewing topographic data and measuring miles of streams currently disconnected from the Purgatoire River downstream of the Baca Picketwire diversion. Increased connectivity will facilitate a more robust gene pool among upstream and downstream populations. These benefits will directly contribute to the improvement and preservation of native fish species populations including native priorities such as the flathead chub (*Platygobio gracilus*, a Colorado species of special concern) and the central stoneroller (*Campostoma anomalum*). This project will also reduce flood risk and bank erosion by 'streamlining' the flow of flood waters down and over the diversion dam. Currently, the significant drop on the Baca-Picketwire diversion dam can act as a 'hang up' spot for large woody debris that moves downstream during flood water flows, resulting in debris pileups and increased erosion. Installation of the fish passage 'ramp' is estimated to help move flood water down and over the dam more efficiently and reduce these woody debris pileups and negative impacts from flood water in the project area.

If the project will benefit specific *species and habitats*, describe the species and/or type of habitat that will benefit and the status of the species or habitat (e.g., native species, game species, federally threatened or endangered, State listed, or designated critical habitat). Describe the extent (i.e., magnitude and geographic extent) to which the project will benefit the species or habitat, including an estimate of expected project benefits and documentation and support for the estimate.

The project will benefit the aquatic ecosystem, primarily fish species, by allowing access to 3.3 miles of main river, wetlands, 20 miles of Raton Creek and many stream miles within ephemeral drainages including approximately 4 miles of Moore's Canyon and 9 miles of Colorado Canyon. The amount of additional habitat connectivity was estimated by reviewing maps and topographic information of drainages between Trinidad Reservoir and the Baca Picketwire diversion. The project will contribute to the sustainability and resiliency of several species of that are a priority to local, State and Federal governments and local anglers. These species include the flathead chub (*Platygobio gracilis*) which is a Colorado species of special concern, the central stoneroller (*Campostoma anomalum*), and others. Brown trout and rainbow trout (*Salmo trutta* and *Oncorhynchus mykiss*, respectively) are the two main sportfish of concern. Many of these populations are in decline. The current inability of fish on the middle Purgatoire to migrate to spawning reaches and areas of thermal refuge during low flow periods is a significant limiting factor for all species.

If the proposed project will benefit *federally listed threatened or endangered species*, address the following:

- **Is the species subject to a recovery plan or conservation plan under the ESA?**
- **What is the relationship of the species to water supply?**
- **What is the extent of the proposed project that would reduce the likelihood of listing or would otherwise improve the status of the species?**
- **Is the species adversely affected by a Reclamation project?**

The project does not benefit any federally listed threatened or endangered species, but it does benefit species that are a priority to State government, including the flathead chub (a Colorado species of special concern) and central stoneroller. All fish species in this section are adversely affected by the Trinidad Reservoir Reclamation project, as management of releases greatly denudes the Purgatoire River throughout much of the year. Providing upstream access by making the Baca Picketwire diversion fish passable will allow the existing population to take advantage of additional habitat during low flow conditions.

Will the project address *drought conditions or drought-related impacts on water supplies, habitat, species, or the ecosystem as a whole*? Is yes, describe past and current drought conditions and impacts and forecasted drought conditions and anticipated impacts. How will this project help build resilience to drought?

This project addresses drought-related impacts by providing our native and sport fishes access upstream above the diversion dam to more diverse aquatic habitat including shadier, cooler stretches of river during summer and deeper pools that are critical for our fishes to have as refugia with lower flows or more infrequent flows during drought. We are currently experiencing a multi-year drought in southeast Colorado, which may very well continue. In terms of current operations of Trinidad Reservoir, drought conditions impact our stream flows through less snow in the winter equaling less run off/inflows into Trinidad Lake, which means less storage for the irrigators, which means lower flows throughout the irrigation season and thus lower flows to sustain fish. Access to deeper pools and shadier habitat are critical at lower flows to sustain our fish populations, both native and sport.

If the project will result in *long-term improvements to water quality (e.g., decrease sediment or nutrient pollution, improve water temperature, or mitigate impacts from floods or drought)*, explain the extent of those benefits (i.e., magnitude and geographic extent). Estimate the expected project benefits to water quality and provide documentation and support for this estimate, including a detailed explanation of how the estimate was determined.

This project will provide long-term improvements through providing upstream connectivity for fish which will allow access to cooler water during periods of low flow. Currently, the water downstream of the Baca Picketwire diversion, particularly during periods of lower flows, has increased temperatures (compared to upstream sections of the river), which can lead to additional stress on fish, impacting their lifecycles. By encouraging fish passage and connectivity to

upstream sections of the river, fish will have access to cooler temperatures year-round. Water temperature could become a limiting factor for these species in the future as climate change continues to occur.

Are there project benefits not addressed in the preceding questions? If so, what are these benefits?

The project provides additional cultural benefit. Bolstered fish populations and restored natural river function resulting in a healthier riparian ecosystem is of major commercial interest to local fishing guides and outfitters. The local angling community has a vested recreational interest in preserving their local river for use by the community today and future generations. The improved diversion structure will offer safer passage to boaters and recreationists and for a broader window of time than the current structure allows. The project area is also an important river education and recreation site for local youth (including many at-risk youth and young adults). Safer access and improved river aesthetics leading to greater community use and engagement offers tangible benefits in the form of jobs and revenue to companies tied directly to the river like the Purgatoire River Run Company and indirectly to the many local downtown businesses in Trinidad. Greater community use and river engagement also offer an array of non-tangible benefits including strengthened local pride, mental health and general well-being.

E.1.1.1.2 Water Conservation and Efficiency Project Benefits – Not Applicable

E.1.1.1.3 Water Management and Infrastructure Improvements Benefits (Category B)

If the proposed project includes a water management or infrastructure improvement project component, address the following question, as applicable to your project, in addition to addressing the general questions above. Proposals containing a well-supported description and quantification of benefits will receive more points.

If the project will make more water available, or make water available at a more advantageous time or location, how much additional water will be made available? Describe the amount of estimated water (in acre-feet per year) expected to be made available directly from the project. Include a specific quantifiable water contribution estimate and describe the support/documentation for this estimate, including a detailed explanation of how the estimate was determined.

An important focus of this project is to develop a final design that makes as much water as possible available for fishes to pass up and over the dam. We are also working with project partners to begin conversations around ecological flows for fish, working with irrigators and the

local municipality to consider opportunities for shifting the timing and quantity of water to benefit our fishes and wildlife, as well as for agricultural, recreational, and municipal benefit.

E.1.1.1.4 Restoration Project Benefits (Category C) – Not Applicable

E.1.1.2 Subcriterion A.2: Multiple Benefits

Explain how and to what extent the project will benefit multiple water uses. Address the following:

If the project will benefit multiple water uses (e.g., benefits to ecological values AND benefits to other water uses, including municipal; agricultural; Tribal; commercial, recreational, subsistence, or Tribal ceremonial fishing; and river-based recreation), explain how and to what extent the project will benefit multiple water uses.

The PWP and a strong collaboration of local and regional partners have developed a well-supported project to install fish passage into the Baca-Picketwire Diversion Dam, an agricultural irrigation structure blocking fish passage upstream on the Purgatoire River for over 100 years. This project will directly benefit native and sport fish species of priority to local, State and Federal governments and anglers; restore aquatic connectivity in a critical stretch of river; and meet multiple goals of diverse water users including agricultural, ecological, municipal, recreational, educational, and economic interests.

For example, the installed ‘natural riffle’ fish passage will also provide boater passage over the dam, and improve river aesthetics and public safety in an area frequently utilized for youth river education/recreation. This work will benefit the local sport fishery and draw more anglers of all ages. Increased community and tourist river utilization in the project area in downtown Trinidad will benefit local businesses in a small rural town working hard to develop a more sustainable economic base (e.g. recreational tourism).

Fish passage will open up 3.3 miles of river main stem and more than 35 miles of upstream ephemeral tributaries containing higher quality riparian forest floodplains, wetlands, and native riverbank vegetation as well as greater in-stream habitat complexity and hydraulic cover. Key native fish to benefit include the flathead chub (a Colorado species of special concern), central stoneroller, longnose dace, fathead minnow, green sunfish, red shiner, and white suckers; key sport fish include brown trout and rainbow trout. This project represents a critical first step towards addressing fish barriers throughout the watershed (3,449 square miles).

If the project will provide multiple restoration benefits (e.g., benefits to ecological values or watershed health; fish and wildlife habitat; protection against invasive species;

enhancement to commercial, recreational, subsistence, or Tribal ceremonial fishing; enhancement of river-based recreation), explain how.

The project will provide multiple restoration benefits, including benefits to ecological values and riparian connectivity; providing all fishes with access to healthier and more diverse fish habitat upstream of the diversion dam; and providing fishes with access to cooler, shadier sections of the river in the heat of the summer above the diversion dam. The fish passage will also directly benefit local efforts spearheaded by the Trout Unlimited Local Chapter – Purgatoire River Anglers to develop and expand a local recreational trout fishery. We have many anglers in our watershed that are excited about the potential to develop a fully sustainable and thriving trout fishery on this section of the Purgatoire River, and providing these trout with access to more diverse habitat and opportunities upstream to survive the heat of the summer as well as the low flows of winter is critical.

Will the project reduce water conflicts within the watershed? If so, explain how.

We are very proud of our many partners and collaborators in that we are working hard to improve communication and collaboration across the board in order to reduce water conflicts and misunderstandings in the watershed. This project is incredibly important in that it represents the agricultural community really going above and beyond to work with recreators, developers, anglers, and the local municipality to be open to the idea of installing fish (and boat) passage into their diversion dam. The agricultural community easily could have said that they were not interested in working together and that would have made things really tough. But the local irrigators were willing to come to the table, and through many discussions and brainstorming, this project and related project components were developed that would be win-win for agricultural, recreation, the local hotel developer, the local municipality, the boaters, the anglers, and the many community members who are from multi-generational families here who remember being told as a little kid that it was ok to dump garbage in the river, and that it wasn't always safe to swim in. This project has incredible potential to help shift that mindset, and for everyone to really see what collaboration can accomplish for the benefit of all. So yes, this project absolutely is helping reduce water conflicts as we speak, and for all of these diverse water users to actually see all of their hard work and give and take bear fruit and actually see this project happen on the ground – it will be incredible in terms of inspiring our partners to work together more.

E.1.2 Evaluation Criterion B: Collaborative Planning (20 Points)

Up to 20 points may be awarded based on the extent to which the proposed project was developed as part of a collaborative process and advances an existing plan or strategy. Priority under this criterion will be given to proposed projects that are supported by a collaboratively developed strategy or plan. Attach a copy of the applicable strategy or plan

as an appendix to your application, or provide a link, and identify the sections relevant to the project within your application narrative.

Strategy or Plan: Is your proposed project supported by a specific strategy or planning document? If so, identify the strategy or planning document by name and address the following questions:

Yes our project is supported by the Purgatoire River Watershed Plan, that was developed through a collaborative watershed effort with USBOR WaterSMART funding. Our project is also supported by the results of the Purgatoire River Assessment Report: Part 1 – River Habitat, Hydrology/Hydraulics, and Fishery Biology Assessment 2019-2020 (Policky, 2021).

When was the plan or strategy prepared and for what purpose?

The plan was prepared in 2021 for the purpose of documenting stakeholder wants and needs on this stretch of the Purgatoire River, then prioritizing those needs and developing high ranking projects with the most benefit for river and watershed health and local water management, while also serving the most diverse amount of water users, and with strong stakeholder support to implement the project.

Interested stakeholders worked together to develop this plan, based heavily on the findings of the Purgatoire River Assessment Report, a multi-component river assessment (2019-2020). Stakeholders determined the management issues of most concern, and collaboratively determined strategies to address these issues. As well, stakeholders prioritized a series of projects to address the most prioritized concerns while also ensuring that each project addressed multiple issues and would provide significant benefit for multiple types of water users (e.g. agricultural, recreational, environmental, municipal) with project implementation.

What types of issues are addressed in the plan? For example, does the plan address water quantity issues, water quality issues, and/or issues related to ecosystem and watershed health or the health of species and habitat within the watershed?

The management issues of concern and determined associated needs include: agricultural infrastructure improvements, measures to protect property and infrastructure against catastrophic flooding, fishery development and aquatic habitat improvement, installation of fish passage, improved water quality (e.g. reduced sediment loads, improved temperature for fish), stabilization of actively eroding banks, woody invasive species removal and riparian forest thinning, removal/mitigation of jetty jacks, improved trails and river access, improvements related to river tubing and boat passage, improved public safety, and improved public amenities and aesthetics for enhanced enjoyment of the river and associated areas.

Is one of the purposes of the strategy or plan to increase the reliability of a water supply for ecological values?

Yes. There is strong interest from ecologically-oriented water users in the watershed to move conversations forward around fish and flows in particular – increasing the reliability and timing of water supply for fish and all aquatic life as well as riparian vegetation and other wildlife.

In 2011, Fin-Up Habitat Consultants completed the report Assessment of Current River Condition & Fisheries Enhancement for the Purgatoire River as it flows from Trinidad Dam to the Highway 350/160 bypass. That assessment recognized the potential to create a seasonal “put and take” fishery within the city limits of Trinidad by creating velocity shelter, in-channel holding cover, and additional useable habitat for stocked trout during the high summer flow season (April through October). Habitat work was also recommended to enhance recreational angling opportunities (access and facilities) and improve bank stability. That report concluded that low winter flows precluded establishment of a year-round, self-sustained fishery. Instream and riparian habitat was subsequently improved in 1.5 miles of river from 2012-2017.

In 2019-2020, a follow up assessment was conducted to take a deeper dive, looking at what was really needed in terms of flows and habitat to support the development of the local trout fishery as well as better support all fishes. This was the Purgatoire River Assessment Report: Part 1 – River Habitat, Hydrology/Hydraulics, and Fishery Biology Assessment 2019-2020. This effort was conducted to determine the effectiveness of those previously conducted habitat improvements and overall current river conditions; determine how best to manage winter flows to create a self-sustained fishery; and conduct a fishery biology assessment.

The findings of that assessment included recommendations for flow targets and next steps. We are all excited to continue to move those conversations forward. It is important to note also that the final design for the fish passage is being thoughtfully developed around how to maximize current conditions when we may have low flows, but also with an eye to the future when we may have healthier ecological flows.

Strategy or Plan Development: Was the strategy or plan developed through a collaborative process?

Yes. It was spearheaded by the Purgatoire Watershed Partnership, a watershed group, as defined in Section 6001(6) of the Cooperative Watershed Management Act. Participating stakeholders represent a diverse and complex mixture of water uses, needs, and priorities; and include farmers and ranchers, small town urban homeowners, environmental and conservation organizations, municipal representatives, property developers and local businesses, natural resource extraction companies, foresters, and a wide variety of recreationists including fisherman, tubers, hikers, and bikers (to name a few).

Describe who was involved in preparing the plan and whether the plan was prepared with input from stakeholders with diverse interests (e.g., water, land, or forest management

interests; and agricultural, municipal, Tribal, environmental, and recreation uses)? Describe the process used for interested stakeholders to provide input during the development of the strategy or plan. For some Tribal strategies or plans, collaboration could include working with entities representing multiple interests within the Tribe (e.g., Tribal water agencies; Tribal fish and wildlife agencies, cities, or towns on Tribal land; Tribal fisheries; Tribal industries; and agriculture).

Yes, as mentioned above, we work with a very diverse group of stakeholders with a wide variety of interests and needs, which makes things interesting! Phone calls, Zoom calls, in person meetings, one-on-one in person conversations, going to community functions and restaurants and just talking with people, attending a variety of diverse and topical community meetings to just get to know people and learn what was important to them and hear what they were thinking.... As the watershed coordinator, it was incredibly helpful to gather input as much one on one as in public meetings. While there are certainly many historic connections to Tribal lands in our watershed, we do not have Tribal reservation land within our local region.

If the strategy or plan was prepared by an entity other than the applicant, explain why it is applicable to the proposed project. Describe whether and how the applicant was involved in the development of the strategy or plan. If the applicant was not involved in the development, explain why.

Not applicable.

For Tribal strategies or plans that were developed collaboratively with multiple Tribal interests, but did not include collaboration with external entities, provide an explanation as to why collaboration with entities external to the Tribe were not involved in the development of the strategy or plan.

Not applicable.

Strategy or Plan Support for Project: Describe how the plan or strategy provides support for your proposed project.

The Purgatoire River Watershed Plan provides support for our proposed project in a variety of ways. The most highly prioritized project in the plan is that of the Baca-Picketwire Diversion Dam Restoration Project, and all of the rich opportunities this project offers to significantly benefit agricultural, municipal, ecological, recreational, and economic development interests of our small rural town that is trying hard to work its way out of a natural resource extraction cycle of boom and bust through developing more opportunities for outdoor recreation and tourism to benefit community members as well as local businesses. The development of this fish and boat passage right in the middle of downtown Trinidad is an incredible opportunity to showcase to the community the power of working together and how it can benefit everyone.

Does the proposed project implement a goal or need identified in the plan?

Yes. The proposed project implements both fish passage and boater passage, both of which ranked out high as important needs in this river section.

Describe how the proposed project is prioritized in the referenced plan or strategy.

The larger Baca-Picketwire Diversion Dam Restoration Project, which includes fish and boat passage as components, was ranked as the #1 proposed project in the plan.

E.1.3 Evaluation Criterion C: Stakeholder Support for Proposed Project (15 Points)

Up to 15 points may be provided based on the level of stakeholder support for the proposed project. Applications that demonstrate support for the project from a diverse array of stakeholders will receive the most points under this criterion.

Describe the level of stakeholder support for the proposed project. Are letters of support from stakeholders provided? Are any stakeholders providing support for the project through cost-share contributions or through other types of contributions to the project?

There is a high level of stakeholder support for the project locally, as well as regionally, and around the state. We have submitted multiple Letters of Support for this project, including from the Purgatoire River Water Conservancy District, Baca Ditch Company, Picketwire Ditch Company, Trout Unlimited Local Chapter – Purgatoire River Anglers, City of Trinidad, Purgatoire River Run Company, Fishers Peak Outfitters, Kip Hampden LLC, The Youth Club of Trinidad, and the US Fish & Wildlife Service. Most of these stakeholders have also included some level of Commitment in their letters as well.

Explain whether the project is supported by a diverse set of stakeholders, as appropriate, given the types of interested stakeholders within the project area and the scale, type, and complexity of the proposed project. For example, is the project supported by entities representing agricultural, municipal, Tribal, environmental, or recreation uses?

Yes. This project is supported by agricultural, ecological, recreational, and municipal interests.

Is the project supported by entities responsible for the management of land, water, fish and wildlife, recreation, or forestry within the project area? Is the project consistent with the policies of those agencies?

Yes we work closely with Colorado Parks & Wildlife, and that was my fault that I did not approach them in time for a Letter of Support but they have been incredibly supportive of this project, as well has the US Fish and Wildlife Service. Both of these agencies have given a lot of their time and commitment to assist in the development of this project. As well, the Purgatoire River Water Conservancy District and local irrigators have spent many many many hours working hard to plan this project and make it the best that it can be.

Is there opposition to the proposed project? If so, describe the opposition and explain how it will be addressed. Opposition will not necessarily result in fewer points.

No.

E.1.4 Evaluation Criterion D: Readiness to Proceed (20 Points)

Up to 20 points may be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement. Applicants that describe a detailed implementation plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates, will receive the most points under this criterion).

Describe the implementation plan for the proposed project. Include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. This may include, but is not limited to, design, environmental and cultural resources compliance, permitting, and construction/installation.

Our timeline of key milestones (including status of relevant permitting and environmental compliance) indicate that the project can realistically proceed to construction and provide fish passage benefits in a timely manner. If awarded funding, our project timeline will depend on (1) when funding is made available, and (2) the agricultural irrigation season, which typically does not allow construction work in the river from Apr 1-Oct 15 (high river flows, cannot compromise irrigator operations).

Project phases:

Phase 1 (Dec 2023-Mar 2024) – Design, permitting, pre-project monitoring

Phase 2 (April 2024-Oct 2024) – Continue Phase 1 efforts during the irrigation season

Phase 3 (Nov 2024-Mar 2025) – Implement Construction if Phase 2 complete

Phase 4 (April 2025-Oct 2025) – Conduct Monitoring and track success of construction during the irrigation season

Phase 5 (Nov 2025-Mar 2026) – Continue any additional construction activities as needed and permitting

Phase 6 (April 2026-Oct 2026) – Conduct Monitoring and continue to track success of construction during irrigation season

Phase 7 (Nov-Dec 2026) – Conduct final closeout of project

Proposals with a budget and budget narrative that provide a reasonable explanation of project costs will be prioritized under this criterion.

See budget and budget narrative included in this document.

Describe any permits and agency approvals that will be required along with the process and timeframe for obtaining such permits or approvals.

Our design consulting team and the watershed coordinator will be working closely with Colorado Parks & Wildlife, USFWS, USACE, USBOR, and the local DWR Water Commissioner and the Purgatoire River Water Conservancy District to ensure that we are securing all permits and agency approvals prior to any work being conducted on the ground.

Identify and describe any engineering or design work performed specifically in support of the proposed project. If additional design is required, describe the planned process and timeline for completing the design. Priority will be given to projects that are further along in the design process and ready for implementation.

We already have a 30% concept design that was developed through extensive collaboration with many partners. With this funding we are applying for herein, we hope to secure funding to finalize our design and go to construction by November 2025. The irrigation season runs April 1 – October 15, so we are unable to do work in the river during that window.

Does the applicant have access to the land or water source where the project is located? Has the applicant obtained any easements that are required for the project? If so, provide documentation. If the applicant does not yet have permission to access the project location, describe the process and timeframe for obtaining such permission.

Yes. We are working closely with the irrigation ditches who own the land and the diversion dam.

Identify whether the applicant has contacted the local Reclamation office to discuss the potential environmental and cultural resource compliance requirements for the project and the associated costs. Has a line item been included in the budget for costs associated with compliance? If a contractor will need to complete some of the compliance activities, separate line items should be included in the budget for Reclamation’s costs and the contractor’s costs.

Yes. We have spoken with our local Reclamation office representative Patrick McCusker. We have included a budget line item for compliance.

Is the project completely or partially located on Federal land or at a Federal facility? If so, explain whether the agency supports the project and has granted access to the Federal land or facility, whether the agency will contribute toward the project, and why the Federal agency is not completing the project. Note: Other sources of Federal funding cannot be included within the scope of the project proposed for Reclamation funding under this NOFO. Other Federal agencies can contribute toward the completion of environmental and cultural resource compliance, provide access to land, and provide project oversight as necessary; however, any costs associated with these activities should not be included within the project budget. Note: Proposed projects must not include activities or costs for the purchase of water or land or to secure a permanent easement. Costs associated with these activities are not eligible project costs and cannot be used to meet the non-Federal cost-share requirement.

No, it is not on Federal land.

E.1.5 Evaluation Criterion E: Performance Measures (5 Points)

Up to 5 points may be awarded based on the extent to which the application describes a plan to monitor the progress and effectiveness of the project once complete.

Note: Program funding may be used to establish a monitoring and data management plan and to install necessary equipment to monitor progress and conservation outcomes. Program funding may not be used to complete long-term (i.e., more than 6 months) monitoring of performance after project construction is complete (these costs are considered normal operation and maintenance costs and are the responsibility of the applicant). See Section C.7 “Eligibility of Monitoring Activities” for additional information.

Describe the performance measures that will be used to quantitatively or qualitatively define actual project benefits upon completion of the project. Include support for why the specific performance measures were chosen.

1) We want to track *at least one* performance quantitative or qualitative measure for each water user group. This includes tracking:

1A) Ecological Performance Measures:

- Quantitative Measure: Track # of tagged fish utilizing the fish passage/found above the dam. This will include installation of necessary fish tracking equipment to monitor progress, and working closely with CPW, USFWS, and Trout Unlimited. This measure was chosen because it is the clearest way to measure fish passage utilization.
- Additional Quantitative/Qualitative Measures: See #3 below – we will be working with project partners to develop a plan to track other ecological measures determined critical.

1B) Recreational Performance Measures

- Quantitative Measure: Track # of boaters who utilize the boater passage each season. We are working with the Purgatoire River Run Company (PRRC), a local boating company, to track these numbers. PRRC will track this number seasonally. This measure was chosen because it is the clearest way to measure boater utilization.
- Qualitative Measure: We will also be working closely with PRRC to capture qualitative input – direct feedback from boaters – on their experience and comments.

1C) Agricultural Performance Measure:

- Qualitative Measure: = We will be working closely with the agricultural irrigators (diversion dam owners) and the Purgatoire River Water Conservancy District to document every issue or concern they have and remedy it immediately, or develop a plan to remedy it if it is a more substantial issue.

1D) Municipal/Economic Development Measure:

- Qualitative Measure: We will be working with the City of Trinidad and local small businesses to track the benefits they see from the implementation of this project (it is expected to draw many people to downtown Trinidad to enjoy the river!)

2) River Flows:

- Quantitative Measure: We will track river flows in the project area. We will be utilizing two river gages (1) USGS 07124410 Purgatoire River Below Trinidad Lake (to track water releases from the dam relevant to our project), and (2) USGS 07124500 Purgatoire River at Trinidad, CO (to track water entering the project area, as it is located within the project area). We will be tracking how these river flows coincide with fish passage and boater usage and quality of usage.

3) Additional Ecological Quantitative/Qualitative Measures:

We will also be working closely with our consultants, CPW, USFWS, and Trout Unlimited to determine additional quantitative and qualitative measures that they deem important for tracking project success and overall ecological benefit, and develop a clear long-term monitoring and data management plan with them to track all measures (including #1 and #2 above). This long-term

monitoring plan will likely overlap with long-term monitoring efforts already in place, being implemented annually/seasonally by CPW. A displacement study using Passive Integrated Transponder (PIT) telemetry has been proposed as part of this effort.

4) Maintenance & Post-Construction Survey

The proposed fishway and associated diversion updates will improve sediment and debris transport but will not eliminate the need for periodic maintenance. Our project includes a plan to provide the needed O&M capacity and costs. The project will require a post construction as-built survey to verify proper construction and permit compliance.

All applicants are required to include information about plans to monitor improved streamflows, aquatic habit, or other expected project benefits. Describe the plan to monitor the benefits over a 5-year period once the project has been completed. Provide details on the steps to be taken to carry out the plan.

As stated above, to ensure that the benefits of the project are monitored successfully over a 5-year period once the project is complete, we will be working closely with our consultants, CPW, USFWS, and Trout Unlimited to develop a clear long-term monitoring and data management plan to track all measures from #1-#3 above. This long-term monitoring plan will likely overlap with long-term monitoring efforts already in place, being implemented annually/seasonally by CPW. We are also developing a Citizen Science monitoring effort as part of this project, and our very enthusiastic Citizen Scientists of all ages, along with committed CPW and USFWS staff, will be working closely with us to ensure that our long-term monitoring efforts are implemented successfully.

E.1.6 Evaluation Criterion F: Presidential and DOI Priorities (15 points)

Up to 15 points may be awarded based on the extent that the project demonstrates support for the Biden-Harris Administration's priorities, including E.O. 14008: Tackling the Climate Crisis at Home and Abroad, E.O. 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, and the President's memorandum, Tribal Consultation and Strengthening Nation-to Nation Relationships. Points will be allocated based on the degree to which the project supports the priorities listed and whether the connection to the priority(ies) is well supported in the application. Without repeating benefits already described in previous criteria, describe, in detail, how the proposed project supports a priority(ies) below.

E.1.6.1 Subcriterion No. E1: Climate Change

Points will be awarded based on the extent the project will reduce climate pollution, increase resilience to the impacts of climate change, protect public health, and conserve our lands, waters, oceans, and biodiversity.

For additional information on the impacts of climate change throughout the Western United States, see

<https://www.usbr.gov/climate/secure/docs/2021secure/2021SECUREREport.pdf>. To describe how the project will address and build resilience to climate change, consider the following:

How will the project build long-term resilience to drought? How many years will the project continue to provide benefits? Estimate the extent to which the project will build resilience to drought and provide support for your estimate.

Our project will make our fish populations healthier and more resilient to climate change through maximizing diverse and healthier habitat that they will now be able to access. Our project will allow fish more diverse access up and downstream, including access to cooler and deeper pools above the diversion dam, which will help sustain our populations when flows are low and warm during drought. Our watershed is currently experiencing a multi-year drought in southeast Colorado, and unfortunately, we know we must plan for more years of the same. We feel strongly that the more diverse habitat (and access to this habitat) we can provide for all of our fishes throughout the year, the more resilient our fish populations will be to drought. Deeper pools provide refugia in drought both during the summer in terms of providing cooler and more water, and during the winter, providing enough water for fish to overwinter when flows are particularly low. This project will build permanent resilience to drought for many years to come. The Purgatoire River Assessment Report: Part 1 – River Habitat, Hydrology/Hydraulics, and Fishery Biology Assessment 2019-2020 (Policky, 2021) addresses multiple opportunities for improving fish population resilience in our river and provides strong support for the long-term benefits of this project.

In addition to drought resiliency measures, does the proposed project include other natural hazard risk reductions for hazards such as wildfires or floods?

Yes. Installation of this fish passage structure will allow for flood waters to move efficiently down and over the current diversion dam and move on downstream. Currently, the diversion dam presents a sudden and significant drop, where during a flood, large woody debris often gets hung up on the dam or surrounding river bank and dropped out at this point, resulting in potential build up of debris to the point of significant damming of the river and flooding of surrounding structures. Installation of this graded/'ramped' fish passage structure will allow for large woody debris (common on our river during flood events) to move easily and quickly down and over the Baca-Picketwire diversion dam (located directly in the middle of downtown Trinidad) and move further downstream where the impact of any debris piling would be significantly less harmful to municipal structures and local businesses.

Will the proposed project establish and use a renewable energy source?

No.

Will the proposed project reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation?

We see potential for this project to reduce greenhouse gas emissions by potentially serving to create more small pockets of wetlands that would sequester carbon. All wetlands are thought to sequester carbon from the atmosphere through plant photosynthesis and by acting as sediment traps for runoff. The carbon is considered to be held in the living vegetation as well as in associated plant litter, peats, organic soils, and sediments that build up over time. Further assessment is needed to determine the extent to which installation of this fish passage may contribute to the creation of additional small pockets of wetlands in the project area.

Does the proposed project include green or sustainable infrastructure to improve community climate resilience, such as reducing the urban heat island effect, lowering building energy demands, or reducing the energy needed to manage water? Does this infrastructure complement other green solutions being implemented throughout the region or watershed?

Yes. This project reduces the amount of human energy and equipment fuel needed to manage water. This project is expected to reduce the amount of operations and management labor needed to maintain the diversion dam on an annual basis as this ‘ramped’ fish passage design is expected to more easily move small and large woody debris (common in our river) past the diversion dam and downstream (out of the downtown area). At present, a significant amount of human labor is expended by irrigators to move and remove woody debris off of the diversion dam structure where it gets stuck. In addition, a significant amount of sediment accumulation above the dam occurs annually as it gets trapped behind the dam because the water slows so significantly behind the dam. With the installation of fish passage, we expect to see water flow to be significantly streamlined and move much more easily over and down the dam, which should significantly reduce the amount of woody debris and sediment that accumulates upstream and on the dam, thus significantly reducing the amount of human labor and equipment fuel needed to maintain the diversion dam structure.

Does the proposed project seek to reduce or mitigate climate pollutions such as air or water pollution?

No.

Does the proposed project have a conservation or management component that will promote healthy lands and soils or serve to protect water supplies and its associated uses?

Yes. As mentioned, we are working closely with a host of land managers (including Colorado Parks and Wildlife, US Fish & Wildlife Service, Trout Unlimited, and others) to ensure that we are promoting healthy lands and soils and protecting our water supplies and its associated uses.

Does the proposed project contribute to climate change resiliency in other ways not described above?

Yes. We feel that an important part of ensuring the climate change resiliency is to continue to work with experts in the field, stay on top of current innovations, and employ adaptive management techniques at each step to ensure maximum project resiliency to changing conditions. We are committed to ongoing collaboration and information sharing with local and regional experts to ensure that our project is designed and implemented to maximize climate change resiliency.

E.1.6.2 Subcriterion No. E2: Disadvantaged or Underserved Communities

Points will be awarded based on the extent to which the project serves economically disadvantaged or underserved communities in rural or urban areas.

Will the proposed project serve or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, or economic growth opportunities.

Describe, in detail, how the community is disadvantaged based on a combination of variables that may include the following:

If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985, which includes populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.

The Purgatoire River was historically treated as a dumping ground for trash and debris, and locals speak of the river being unsafe at times in their childhood. Partners have made great strides in restoration efforts, but this project would be a dramatic jump forward in changing local perspectives by dramatically increasing river aesthetics, perceived and actual public safety, and new opportunities to engage with the river for health and enjoyment.

As well, increased community and tourist river utilization in the project area in downtown Trinidad will benefit local businesses in a small rural town working hard to develop a more sustainable and resilient economy through avenues such as recreational tourism, in a town with a rich history of boom and bust economics often tied to natural resource extraction.

Under the order E.O. 13985, the term “underserved communities” refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, as exemplified by the list in the provided definition of “equity.” The term “equity” means the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.

Our small rural town consists of a population of approximately 50% Latino/Hispanic, and we are working to better serve and engage the high number of at-risk youth and young adults in our community in river ecology, recreational fishing, Citizen Science, and other education and stewardship activities. Ensuring that the river is aesthetically inviting and safe are critical to these efforts. In a county (Las Animas County) ranked within the top 10 worst poverty rates in Colorado (indexmundi.com), the importance of this project to our overall community cannot be understated, as we have many persons in our community affected adversely by persistent poverty and inequality. We are also working hard in our community to raise awareness around the needs of persons with disabilities, and address these needs. Overall, however, we are working closely with our project partners to ensure broad diversity, equity and inclusion of all community members in all of our project efforts, regardless of background, religion, gender identification or partner preference, ethnicity, income level, perceived or actual abilities, or origin (be it rural or urban).

According to screening tools: (1) CEQ Climate and Economic Justice Screening Tool ranks Las Animas County as Disadvantaged, (2) CDC Social Vulnerability Index states Las Animas County’s 2020 National Overall SVI Score = 0.8326, indicating a high level of vulnerability, and (3) EPA EJ Screen ranks Trinidad in the 95 % for Socioeconomic Indicators.

E.1.6.3 Subcriterion No. E.3: Tribal Benefits

Points will be awarded based on the extent to which the project will honor the Federal Government's commitments to Tribal Nations.

Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for an Indian Tribe?

No.

Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?

No.

Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits, such as improved public health and safety, by addressing water quality, new water supplies, or economic growth opportunities?

No.

PROJECT BUDGET

Funding Plan and Letters of Commitment

The non-Federal share of project costs will be obtained through project partners and project funding provided by sources other than the applicant and are supported through Letters of Commitment (combined in some cases with Letters of Support). All Letters of Commitment identify the amount of funding commitment, the date the funds will be available to the applicant, any time constraints on the availability of funds, and any other contingencies associated with the funding commitment. All Letters of Commitment have been combined into the LETTERS OF SUPPORT AND LETTERS OF PARTNERSHIP section, and can be found as an attachment. Our budget proposal does not include any project costs that will be incurred prior to the grant award.

Budget Proposal

Our total project cost is the sum of all allowable items of costs, including all required cost sharing and voluntary committed cost sharing, including third-party in-kind contributions, that are necessary to complete the project. See **Table 1** summarizing all funding sources. In-kind contributions are denoted with an asterisk (*).

Table 1. Summary of Non-Federal and Federal Funding Sources

SOURCE	AMOUNT
Non-Federal Entities	
Applicant/State	\$823,792.60
Agricultural Ditch Companies*	\$7,488
Trout Unlimited Local Chapter - Purgatoire River Anglers*	\$17,970
Purgatoire River Run Company*	\$5,391
15 Additional Key Stakeholders*	\$134,775
Fishers Peak Outfitters*	\$3,594
The Youth Club of Trinidad*	\$7,188
Multiple fish/wildlife organizations (TU, CPW, USFWS)*	\$10,000
Non-Federal Subtotal	\$1,010,198
REQUESTED Reclamation Funding	\$2,403,748

See the Total Project Cost Table (**Table 2**) below. We are not requesting any pre-award costs. All additional details associated with the Budget Proposal can be found in the Budget Narrative.

Table 2. Total Project Cost Table.

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$2,403,748
Costs to be paid by the applicant	\$823,792.60
Value of third-party in-kind contributions	\$186,405.50
TOTAL PROJECT COST	\$3,413,946.10

Our budget proposal includes detailed information on the categories listed below and clearly identifies all items of cost, including those that will be contributed as non-Federal cost share by the applicant (required and voluntary), third-party in-kind contributions, and those that will be covered using the funding requested from Reclamation. See our Detailed Costs (**Table 3**) below.

Table 3. Detailed Project Costs

BUDGET ITEM DESCRIPTION	TOTAL COST
Personnel	
Watershed Coordinator (3-years)	\$51,600.00
Fringe Benefits	
Watershed Coordinator (3-years)	\$18,060.00
Supplies	
Fish Monitoring Supplies (PIT tags, reader, injector)	\$57,740
Construction/Contractual	
Consulting Design Firm	\$128,765
Project Engineer - Implementation & Oversight	\$80,475
Construction Contractor	\$2,805,400
Third Party In-Kind Contributor	
Local Agricultural Irrigators/Ditch Companies – Donating input and oversight on design and construction, including significant time and coordination with project partners.	\$7,488
Trout Unlimited Local Chapter - Purgatoire River Anglers - donating input and oversight on design and construction.	\$17,970
Purgatoire River Run Company - Local boating outfitter providing input on final design, especially boater usage. Assisting with outcomes tracking.	\$5,391
Local Stakeholders involved in final input on project design, and involved in collaborative overall final planning.	\$134,775
Fishers Peak Outfitters - Local outfitters shop donated labor towards input on final project design, providing gear for Citizen Science efforts	\$3,594
The Youth Club of Trinidad - Youth club staff and K-12 youth engaged in Citizen Science monitoring efforts.	\$7,188
Multiple Fish/Wildlife Partners - Donated additional fish monitoring equipment	\$10,000
TOTAL DIRECT COSTS	\$3,328,446
Indirect Costs	
Watershed Administrative Support (3 years) (\$12,000 Reclamation, \$6,000 Applicant)	\$18,000
Organization Insurance (3 years) (\$5,000 Reclamation, \$2,500 Applicant)	\$7,500
TOTAL ESTIMATED PROJECT COSTS	\$3,353,946
Environmental and Regulatory Compliance Costs	
Compliance (\$20,000 Reclamation, \$40,000 Applicant)	\$60,000
TOTAL ESTIMATED PROJECT COSTS + COMPLIANCE	\$3,413,946

Budget Narrative

Personnel

The Project Manager is Dr. Julie Knudson, the Watershed Coordinator for the Purgatoire Watershed Partnership. Project tasks that will be performed include all project management efforts; hiring, oversight, and coordination with contractors; conducting extensive coordination and communication with a large number of partners through each step of the final design and construction; developing systematic and regular opportunities to ensure contractors and key stakeholders are getting regular check ins to ensure everyone is on the same page at each step; conducting all financial tracking, payments, and compliance with reporting requirements including the final project report and evaluation. We certify that the labor rates included in the budget proposal represent the actual expected (with increase) labor rate of the identified personnel and is consistently applied to Federal and non-Federal activities. We expect a high level of effort the first two years, with a reduced level of effort the last year as the project shifts primarily to a monitoring effort. The hourly rate + 5% includes an increase in compensation expected in 2024.

Watershed Coordinator Hourly Rate
\$43.00/hour x 1200 hours = \$51,600
Current Hourly Rate + 5% increase
Estimate 520 hrs Y1, 520 hrs Y2, 160 hrs Y3

Fringe Benefits

The following are the fringe benefits for the Watershed Coordinator, at the rate of 35% or \$15.05 per hour.

Watershed Coordinator Fringe
\$15.05/hr x 1200 hours = \$18,060
35% fringe rate
Estimate 520 hrs Y1, 520 hrs Y2, 160 hrs Y3

Travel

No funding for travel is being requested through this grant.

Equipment

No equipment will be purchased for this project.

Supplies

The following table (**Table 4**) lists all supplies. Our supply purchasing will be focused on fish tagging supplies for monitoring and tracking fish utilization of the fish passage. The basis of the cost is price quote from vendor website.

Table 4. Supplies

Supplies			
Supply Item	Quantity	Unit Cost	Total Cost
Monitoring Supplies for Fish - PIT tag reader	1	\$1,000	\$1,000
Monitoring Supplies for Fish - PIT tag cartridges pre-loaded (10 tags per cartridge * 15 cartridges = 200)	150	\$375	\$56,250
Multi PIT tag injector	1	\$290	\$290
PIT tag injector extra needles	5	\$40	\$200
Total			\$57,740

Contractual

All contractual work is associated with the Construction category below.

Construction

The table below (**Table 5**) provides an overview of Construction Costs.

Table 5. Construction – Contracts & Related Costs Overview

Item	Description of Services	Total Cost
Project Engineer Contract	Project oversight of all construction project components, strong coordination with all project partners.	\$80,475
Consulting Design Firm Contract	Engineering and design, permitting, design monitoring plan, strong coordination with all project partners	\$128,765
Construction Contract	Construction contract to install fish/boat passage, furnish all materials and equipment	\$2,805,400
Compliance Costs	All environmental and cultural compliance.	\$60,000
Total		\$3,074,640

The Project Engineer Contract cost estimate is based on similar costs we have experienced with previous work. The Project Engineer will provide all project oversight of construction project components, and strong coordination with all project partners. The Project Engineer estimate includes labor for the principle engineer (265 hours), a construction engineer (150 hours), mileage, and reimbursables. This component includes the labor necessary to provide construction oversight by the design engineers during the implementation phase. This will allow for the engineers to provide QAQC during construction to ensure successful implementation of design intent and to inform/guide field fit modifications as necessary.

The Compliance Costs were estimated by taking the middle ground in between the range of potential costs stated in the NOFO (*Range = \$30,000 to \$90,000*), as it is difficult to develop an exact estimate at this time.

For the Consulting Design Contract and Construction Contract we have attached estimates (**see attached**) prepared by a design/engineering firm.

A Design Contract will be awarded by PWP for the final design and engineering, preparation of final construction documents, and strong communication and coordination with large number of collaborative partners providing input and oversight on final design efforts. A Construction Contract will be awarded to install the fish/boat passage, and provide all materials and equipment.

The following tables (**Table 6 and Table 7**) provide more detail regarding the Design and Construction Contracts.

Table 6. Design Contract Details

ID	TASK/ITEM DESCRIPTION	Hrs	Principal in Charge	Design Engineer	Asst PM/Senior Biologist	River Technician	Construction Director	EST. COST
			\$205.00	\$185.00	\$145.00	\$110.00	\$120.00	
1	PARTNER COORDINATION	172	36	36	60	40		\$ 27,140
2	FINAL DESIGN AND PERMITTING	308	28	166	61	40	21	\$ 52,215
2.1	HYDRAULIC MODELING	36	2	32	6	4		\$ 7,640
2.2	SEDIMENT TRANSPORT ANALYSIS	12	2	8		2		\$ 2,110
2.3	FDP HYDRAULIC MODELING	42	2	28	6	6		\$ 7,120
2.4	60% DESIGN PLAN SET	36	4	24	4		4	\$ 6,320
2.5	60% PROJECT COST ESTIMATE	16	4	4	2	2	4	\$ 2,550
2.6	60% PROJECT SCHEDULE	8	1	2	4		1	\$ 1,275
2.7	NO-RISE FDP APPLICATION AND COORDINATION	42	1	20	9	12		\$ 6,530
2.8	ENGINEERING COORDINATION	16	4	4	6	2		\$ 2,650
2.9	CONSTRUCTION PLAN SET FOR BID	80	4	40	16	12	8	\$ 12,820
2.10	PROBABLE OPINION OF CONSTRUCTION COSTS	8	2	2	2		2	\$ 1,310
2.11	PROJECT BID SUPPORT	12	2	2	6		2	\$ 1,890
3	MONITORING PROGRAM DEVELOPMENT AND SETUP	336	30	76	100	90	40	\$ 49,410
Total \$								128,765

The Design Contract will include taking our current 30% design through to final design, including construction documents and plan set for bid; a significant amount of partner coordination, permitting and compliance, conducting relevant hydraulic modeling and sediment transport analysis, and working with partners to develop a monitoring program and prepare for monitoring efforts.

Table 7. Construction Contract Details

ID	TASK/ITEM DESCRIPTION	UNIT QTY.	UNIT	UNIT COST	EST. COST
1	DIVERSION DAM MODIFICATIONS & SLUICE GATE	1	LS	\$ 800,000	\$ 800,000
2	ROCK RIFFLE ENGINEERED FILL	1	LS	\$ 840,000	\$ 840,000
2.1	ENGINEERED FILL PURCHASE AND DELIVERY	5750	TN	\$ 120	\$ 690,000
2.2	ENGINEERED FILL PLACEMENT	2500	CY	\$ 60	\$ 150,000
3	CHANNEL & OVERBANK GRADING	1000	CY	\$ 40	\$ 40,000
4	REVEGETATION & RECLAMATION	1	LS	\$ 75,000	\$ 75,000
5	GENERAL CONDITIONS	1	LS	\$ 320,000	\$ 320,000
5.1	PROJECT MANAGEMENT & COORDINATION	1	LS	\$ 15,000	\$ 15,000
5.1	BONDING	1	LS	\$ 60,000	\$ 60,000
5.1	MOBILIZATION	1	LS	\$ 50,000	\$ 50,000
5.1	SWMP PERMITTING AND EROSION CONTROL	1	LS	\$ 20,000	\$ 20,000
5.1	CARE OF WATER	1	LS	\$ 150,000	\$ 150,000
5.1	CONSTRUCTION SURVEYING	1	LS	\$ 15,000	\$ 15,000
5.1	AS-BUILT SURVEY	1	LS	\$ 10,000	\$ 10,000
CONSTRUCTION SUBTOTAL					\$ 2,075,000
CONTINGENCY (20%)					\$ 622,500
GRAND TOTAL					\$ 2,697,500
2024 TOTAL WITH ESCALATION/INFLATION (4%)					\$ 2,805,400

Fish Passage Technical Details and Budget Explanation

Diversions Dam Modifications and Sluice Gate

Fish passage improvements at the Baca-Picketwire Diversions will include some modifications to the existing diversions dam and sluice gate. The diversions crest will be left in place at existing elevation. A small trapezoidal low flow fish passage channel 1-foot deep with a 6-foot bottom width and 1:1 (v:h) side slopes will be cut into the concrete to accommodate a small low-flow fish passage channel. The low flow fish passage channel will be about 98 feet to the right of the existing ditch entrance gate to prevent fish from entering the ditch.

The existing dam has a short, steep sediment sluice adjacent to the ditch entrance. This works with the steep existing diversions structure but will not work with the proposed fish passage riffle. The proposed rock riffle is approximately 195 feet long at approximately 5% grade. To pass sediment around the riffle a new concrete sluice channel approximately 256 feet long at approximately 2.2% grade will be constructed to pass fine sediment and debris away from the ditch intake discharging at the downstream end of the fish passage riffle.

Rock Riffle Engineered Fill

The fish passage improvements at the Baca-Picketwire Diversions dam will consist of a Rock Riffle Ramp Structure built from composite “Engineered Fill” material. The purpose of the engineered fill is to provide bulk to the existing channel and raise the bed (at the downstream face of the existing dam) to design elevations in a manner that mimics the Purgatoire River’s native streambed and associated hyporheic flow. The design gradation of the Engineered Fill will be based on the “Fuller-Thompson” developed by the USFS for mimicking natural streambeds. This process requires importation and mixing of a wide range of material components (Ranging from boulders to dirt/silt) on-site to minimize the interstitial void space between material components immediately upon installation. This mixing process ensures a well graded assortment of component materials and emulates the well sorted characteristics of natural stream bed materials. The estimated construction costs associated with Construction Task 2 includes the

Purchase and Delivery, On-site Mixing and Handling, and Placement of the Engineered Fill specified in the Design.

Channel and Overbank Grading

The costs associated with Construction Task 3 include grading of the channel and overbank upstream, immediately adjacent to, and downstream of the existing diversion dam. This work is based on design decisions to provide boater passage over the dam, meet hydraulic conditions conducive to fish passage of target species, improve in-channel habitat during the wide range of flows typical of the Purgatoire River, and improve riparian/overbank characteristics in support of revegetation efforts. The work accomplished in this task will improve channel dimensions to support more effective sediment transport through the project reach.

Revegetation and Reclamation

Following the completion of the Rock Riffle and Channel/Overbank grading, work associated with Task 4 will involve revegetation with native plants and reclamation of all disturbed areas. As part of the final engineering design process, a revegetation plan will be developed to include list of plant species, determination of type/# of plants, soil augmentation requirements (if necessary), and a planset showing planting zones and approximate locations of specific plants. Planting zones will be designed based on the relative elevation to the channel and will consist of an assortment of plant species intended to mimic un-disturbed vegetation communities.

General Conditions

The General Conditions budget item includes costs associated with management and coordination aspects of the project, along with insurance bonding costs. All costs associated with the mobilization of heavy equipment, personnel, and other construction equipment will fall under general conditions as well. Necessary regulatory components of the project not covered in the design phase, such as local or state construction permits (i.e. stormwater management, dewatering, etc.) and erosion control measures will fall under this budget item, along with care-of-water plans and efforts. Finally, surveying during construction and post-construction (to complete as-built survey) will be covered under the general conditions budget item.

Third-Party In-Kind Contributions

The following third-party in-kind contributions are being provided in support of this project (**Table 8**).

We are incredibly grateful to all of our partners who are committing significant time to this project to ensure that it is done right and to the satisfaction of all. This exciting collaborative project continues to require that all engaged partners put in the time to continue to work together to ensure that everyone's needs are met. Our partner commitments to putting in the time to ensure that this is a successful project are reflected below.

Table 8. Third Party In Kind Contributions

Third Party Contributor	Purpose	Basis of Valuation	Value
Agricultural Ditch Company	Local agricultural irrigators donating input and oversight on design and construction, including significant time and coordination with project partners.	Agricultural Ditch Company Labor (250 hrs x \$29.95/hr [2023 Volunteer Rate])	\$7,488
Trout Unlimited Local Chapter - Purgatoire River Anglers	Local Trout Unlimited Chapter donating input and oversight on design and construction.	Trout Unlimited Local Chapter (2 staff x 300 hours x \$29.95/hr [2023 Volunteer Rate])	\$17,970
Purgatoire River Run Company	Local boating outfitter providing input on final design, especially boater usage. Assisting with outcomes tracking.	Purgatoire River Run Company (180 hours x \$29.95/hr [2023 Volunteer Rate])	\$5,391
15 Additional Key Stakeholders	Stakeholders involved in final input on project design, and involved in collaborative overall final planning.	15 Additional Key Stakeholders x 300 hours planning & oversight x \$29.95/rate (2023 Volunteer Rate)	\$134,775
Fishers Peak Outfitters	Local outfitters shop donated labor towards input on final project design, providing gear for Citizen Science efforts	Fishers Peak Outfitters (120 hrs x \$29.95/hr [2023 Volunteer Rate])	\$3,594
The Youth Club of Trinidad	Youth club staff and K-12 youth engaged in Citizen Science monitoring efforts.	The Youth Club of Trinidad (3 staff x 80 hrs x \$29.95/hr [2023 Volunteer Rate])	\$7,188
Multiple fish/wildlife organizations (TU, CPW, USFWS)	Donated additional fish monitoring equipment	Estimate based on previous years survey gear utilized as volunteer	\$10,000
Total			\$186,406

Indirect Costs

Purgatoire Watershed Partnership has never received a Federal negotiated indirect cost rate. We are asking for the following indirect costs:

Watershed Administrative Support – 80 hours x \$75/hour x 3 years = \$18,000

Organization Insurance - \$2500 per year x 3 years = \$7,500

Total = \$25,500

Federal Funds = \$18,500

Applicant = \$7,000

ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

Purgatoire Watershed Partnership and project partners recognize that all projects being considered for award funding will require compliance with NEPA, and that compliance with all applicable state, Federal and local environmental, cultural, and paleontological resource protection laws and regulations is also required. We recognize that no ground disturbing activities may occur until environmental compliance is complete and a notice to proceed is issued by the awarding Grants Officer.

Environmental and Cultural Resource Considerations

To allow Reclamation to assess the probable environmental and cultural resources impacts and costs associated with each application, Purgatoire Watershed Partnership has provided responses to the following list of questions focusing on the NEPA, NHPA and ESA requirements.

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

Our project will generally only provide benefits - not injury - to the soil, air, water, and animal habitat within the project area. Our project is designed to improve aquatic conditions and connectivity for fish. The installation of the fish passage will include earth moving work in order to install the 'natural riffle' design. This will include the necessity of earth moving equipment to be operating in the project area for a short duration during the construction phase of the project. The access point and path for this equipment, once the project is completed, will be cleaned up and formalized on the way out (as equipment moves out) and then serve as a dual-purpose boater access point and also an irrigator/municipal river maintenance access point. As such, this access path will not be considered a disturbance, rather an asset.

Project partners and other relevant entities will also ensure that no water rights are injured through these project efforts. We will be working closely with Purgatoire River Water Conservancy District on this project who will be ensuring strict adherence to water rights, and as well we will be working with our Colorado Division of Water Resources water commissioner to ensure compliance. To ensure that we are keeping in line with the Arkansas Basin Roundtable wishes, we are including the following language in our grant application as an additional layer to demonstrate that we are considering and ensuring water rights protection through our project.

ARKANSAS BASIN ROUNDTABLE STATEMENT OF PROTECTION OF WATER RIGHTS

Consistent with C.R.S. 37-75-102, et seq. of the "Colorado Water for the 21st Century Act", project proponents who seek support or grants from the Roundtables or the Colorado Water Conservation Board whose project(s) have the potential to change the historic availability of water to decreed water rights by time, amount or location through alterations of the stream flow regime, geomorphology of a natural stream channel,

increasing the surface area of a stream, or the expansion of riparian vegetation will evaluate these impacts by undertaking a water rights impact analysis. Such analysis will be conducted by a qualified registered water resource engineer familiar with the subject water body and drainage basin. This analysis will be conducted prior to implementing any of the tasks identified in the project/grant scope of work. The analysis may be part of the identified project costs. Any mitigation required to prevent negative impacts to water rights may also be included in the project costs.

Our project includes multiple project partners with a mandate and clear interest in ensuring water rights protection, and the only additional action required to ensure protection of water rights will be to ensure project compliance with our Colorado Division of Water Resources water commissioner.

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

We are not 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.

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

We will be working in and directly adjacent to the Purgatoire River. Our project will include installation of a ‘natural riffle’ fish passage structure on the downstream side of the diversion dam. Installation of this structure should not have an impact in the project area outside the structure footprint. We will be working in association with an irrigation structure, so we expect that ag exemptions will apply for some of the project work.

When was the water delivery system constructed?

It is unknown exactly when the original diversion dam was installed, but it is estimated to have occurred in the early 1900’s. However, the more recent irrigation structures are estimated to have been installed approximately 50 years ago.

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

For the diversion dam, recent improvements (diversion dam cap and dam restoration work) were conducted in 2022 and early 2023. The previous modifications are estimated to have been conducted approximately 50 years ago. For the current manual headgate, a new debris bumper and access catwalk was installed in 2023. Other modifications occurred five years ago (e.g. the pouring of a concrete floor for the entrance to the current manual headgate). The installation of the proposed project may include some modification of the current sand gate, but otherwise not change the functionality and efficiency of the irrigation infrastructure.

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

Not that we are aware of.

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

No there are not.

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

No it will not.

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

No it will not.

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

No it will not.

REQUIRED PERMITS OR APPROVALS

Purgatoire Watershed Partnership will adhere to all Federal, state, territorial, tribal, and local laws, regulations, and codes, as applicable, and shall obtain all required approvals and permits. Recipients shall also coordinate and obtain approvals from site owners and operators as needed. See the Design and Permitting section of our Budget Narrative for a description of our expected permitting-related efforts.

OFFICIAL RESOLUTION

The Purgatoire Watershed Partnership Board has included an official resolution adopted by our Board of Directors. We have attached this Official Resolution as an appendix.

LETTERS OF SUPPORT AND LETTERS OF PARTNERSHIP

We have included letters from interested stakeholders supporting the proposed project. Most of these stakeholders are also committing cash match and/or in-kind contributions to this project, and as such we have attached all Letters of Support and Letters of Support/Commitment in one section as an appendix.

CONFLICT OF INTEREST STATEMENT

Purgatoire Watershed Partnership does not have any actual or potential conflict of interest for this project proposal.

UNIFORM AUDIT REPORTING STATEMENT

Purgatoire Watershed Partnership recognizes that any non-profit organization expending \$750,000 U.S. dollars or more in Federal award funds in our organization's fiscal year must submit a Single Audit Report for that year through the Clearinghouse's Internet Data Entry System in accordance with 2 CFR 200 subpart F. Our organization was not required to submit a Single Audit Report for the most recently closed fiscal year.

OVERLAP OR DUPLICATION OF EFFORT STATEMENT

Purgatoire Watershed Partnership is currently working on *complementary* activities to the proposed project (diversion dam restoration work, fish habitat installation, woody invasive species removal), but sees no overlap or duplication of effort. This proposal does not duplicate a proposal submitted for funding consideration to any other potential funding source.

OMB FORM 4040-0019: PROJECT ABSTRACT SUMMARY

The Purgatoire Watershed Partnership Board has submitted an OMB Form 4040-0019: Project Abstract Summary as part of our proposal submittal.

APPENDICES

Purgatoire River Fish Passage

*Project Being Submitted To:
Bureau of Reclamation WaterSMART
Environmental Water Resources Projects for Fiscal Year 2023
Funding Opportunity Announcement No. R23AS00089*

Purgatoire Watershed Partnership

Appendices Contents

The following documents are being uploaded as attachments to the Attachments V1.2 Form

1) Letters of Support and Letters of Partnership (including Letters of Commitment)

- Purgatoire River Water Conservancy District
- Baca Ditch Company
- Picketwire Ditch Company
- Trout Unlimited Local Chapter – Purgatoire River Anglers
- City of Trinidad
- Purgatoire River Run Company
- Fishers Peak Outfitters
- Kip Hampden LLC
- The Youth Club of Trinidad
- Purgatoire Watershed Partnership
- US Fish & Wildlife Service

2) Official Resolution

3) Fish Passage 30% Design Concept

4) Purgatoire River Management Plan Relevant Section

PURGATOIRE RIVER WATER CONSERVANCY DISTRICT

3590 East Main Street, Suite 3
Trinidad, Colorado 81082

(719) 846-7285

March 27, 2023

United States Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber and Mr. Ned Weakland
MS 86-69200
P.O. BOX 25007
Denver, CO 80225

Re: Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River

Dear Ms. Robin Graber and Mr. Ned Weakland,

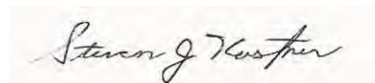
The Purgatoire River Water Conservancy District submits this letter on behalf of the Purgatoire Watershed Partnership's grant application requesting funding for Fish Passage on the Purgatoire River.

The Purgatoire River Water Conservancy District (PRWCD) is a Category A Partner as defined by the Bureau of Reclamation WaterSMART Environmental Water Resources Projects for Fiscal Year 2023 Notice of Funding Opportunity No. R23AS00089, Section C.1.1. The PRWCD is a water conservancy district created pursuant to Colorado statutes. The PRWCD has contract authority and obligations to deliver Trinidad Project waters to the Baca-Picketwire Ditch diversion dam.

The PRWCD is acting in partnership with the Purgatoire Watershed Partnership and other project partners on Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River.

The PRWCD agrees to the submittal and content of this grant application, and will be participating in the project in multiple ways by providing input, oversight, and guidance working closely with project partners.

Sincerely,



General Manager
Purgatoire River Water Conservancy District

March 25, 2023

Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber and Mr. Ned Weakland
MS 86-69200
P.O. BOX 25007
Denver, CO 80225

Re: Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River

Dear Ms. Robin Graber and Mr. Ned Weakland,

The Baca Ditch Company submits this Letter of Support on behalf of Purgatoire Watershed Partnership's (PWP) grant application requesting funding for Fish Passage on the Purgatoire River.

The Baca Ditch Company, as an owner of the Baca-Picketwire Diversion Dam, is considered to be a Category A partner and has water delivery authority for the Baca-Picketwire Ditch. As such, we agree that:

- We are working in partnership with PWP on this project to install fish and boat passage into the Baca-Picketwire Diversion Dam.
- We agree to the submittal and content of this grant application.
- We intend to participate in the project by working closely with PWP and all project partners by providing oversight and input at every step of the project, and approving any project actions prior to implementation.

The Baca Ditch Company commits to working closely with project partners to provide oversight and input, and project approval at each step prior to implementation to ensure the project proceeds in full compliance with ditch company interests and functionality.

Sincerely,



Baca Ditch Company

March 23, 2023

Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber and Mr. Ned Weakland
MS 86-69200
P.O. BOX 25007
Denver, CO 80225

Re: Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River

Dear Ms. Robin Graber and Mr. Ned Weakland,

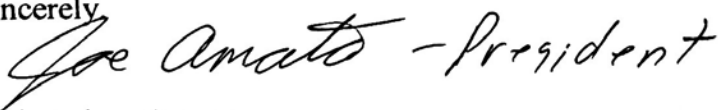
The Picketwire Ditch Company submits this Letter of Support and Commitment on behalf of Purgatoire Watershed Partnership's (PWP) grant application requesting funding for Fish Passage on the Purgatoire River.

The Picketwire Ditch Company, as an owner of the Baca-Picketwire Diversion Dam, is considered to be a Category A partner and has water delivery authority for the Baca-Picketwire Ditch. As such, we agree that:

- We are working in partnership with PWP on this project to install fish and boat passage into the Baca-Picketwire Diversion Dam.
- We agree to the submittal and content of this grant application.
- We intend to participate in the project by working closely with PWP and all project partners by providing oversight and input at every step of the project, and approving project actions prior to implementation.

The Picketwire Ditch Company commits to providing in-kind contributions for this project valued at \$7,487.50 in the form of Picketwire Ditch Company personnel labor working closely with project partners to provide oversight and input, and project approval at each step prior to implementation to ensure the project proceeds in full compliance with ditch company interests and functionality.

Sincerely,

 - President
Picketwire Ditch Company



March 15, 2023

Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber and Mr. Ned Weakland
MS 86-69200
P.O. BOX 25007
Denver, CO 80225

Re: Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River

Dear Ms. Robin Graber and Mr. Ned Weakland,

The Trout Unlimited Local Chapter/Purgatoire River Anglers submits this Letter of Support and Commitment on behalf of Purgatoire Watershed Partnership's (PWP) grant application requesting funding for Fish Passage on the Purgatoire River.

Our Trout Unlimited local chapter is excited to support this project that will install fish passage into the Baca-Picketwire diversion dam. This project will significantly and directly benefit all fishes (native and sport fish) in the Purgatoire River through providing improved aquatic connectivity, and access to healthier and more diverse aquatic habitat upstream of this dam.

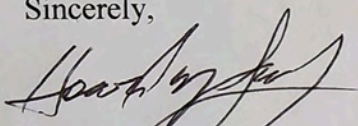
We have worked hard for many years on the Purgatoire River to improve fish habitat above and below the diversion dam, but the healthier river conditions and opportunities for enhancing fish habitat have been predominantly upstream of the dam. As such, much of our fish habitat enhancement work has been conducted above this dam. Installation of fish passage into the dam to provide access upstream for our native and sport fishes to all of this improved habitat has been a long time coming, and we are so excited to see this finally coming to fruition.

We have also been working hard to establish and expand a sustainable trout fishery on the Purgatoire River in this same project area and have been working in conjunction with Colorado Parks & Wildlife towards that goal. Conversations around improved river flows throughout the year to support fish are just getting started, and we are excited about the potential of improved timing and quantity of river flows in the future to benefit overall river health as well as all of our

aquatic organisms. In the meantime, however, we feel that it is critical that all of our fishes have access to the broadest diversity of habitat throughout the year (shady/cooler areas in summer, deeper holes for overwintering) - especially at lower flows in the winter and/or with drought - that exist both above and below the diversion dam.

The Trout Unlimited Local Chapter/Purgatoire River Anglers strongly recommends that this project be funded, and we have many anglers in our community that are incredibly supportive of these efforts as well. We commit \$17,970 of in-kind contributions (2 staff x 300 hours x \$29.95/hr) towards the planning, oversight, and implementation support for this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Howard Lackey", written over a horizontal line.

Howard Lackey
President

Trout Unlimited Local Chapter/Purgatoire River Anglers

135 N. Animas Street
P O Box 880
Trinidad, CO 81082



(719) 846-9843
fax (719) 846-4140
www.trinidad.co.gov

March 24, 2023

Ms. Julie Knudson
Executive Director
Purgatoire Watershed Partnership
3590 East Main Street
Trinidad, CO 81082

Re: Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River

Dear Ms. Knudson,

I understand that the Purgatoire Watershed Partnership has been working with the Baca Ditch Company, Picketwire Ditch Company, Purgatoire River Water Conservancy District, Trout Unlimited, United States Fish & Wildlife Service and Colorado Parks & Wildlife to finalize a conceptual design for a fish and boater passage in the Purgatoire River. The design consists of the installation of a 'natural riffle' structure on the downstream side of the Baca-Picketwire Diversion Dam.

I write in support of your grant application to help fund the fish and boater passage project. The city recognizes your efforts to date and views this project as a significant improvement to boat and fish passage in the Purgatoire River adding to the quality of life for city residents and visitors.

Please feel free to reach out should you have any questions or need additional information. The city looks forward to partnering with you on this project.

Sincerely,


Phil Rico
Mayor

March 21, 2023

Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber and Mr. Ned Weakland
MS 86-69200
P.O. BOX 25007
Denver, CO 80225

Re: Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River

Dear Ms. Robin Graber and Mr. Ned Weakland,

The Purgatoire River Run Company, based in Trinidad, Colorado, submits this Letter of Support and Commitment on behalf of Purgatoire Watershed Partnership's (PWP) grant application requesting funding for Fish Passage on the Purgatoire River.

This effort to install fish passage - and the associated boater passage as part of the 'natural riffle' design - into the Baca-Picketwire Diversion Dam is an important and well-supported effort that will significantly benefit both ecological and recreational priorities on the river, as well as our community as a whole.

We - the Purgatoire River Run Company - are an outdoor water recreation company based in Trinidad, Colorado and specialize in professional and self-guided inner tube trips down the Purgatoire River through downtown Trinidad. We have been in business for four years and serve a wide variety of clients ranging from longtime locals to their family and friends to an increasing number of recreation tourists who are beginning to discover the wonders and opportunities of the Trinidad area and our watershed.

We are incredibly excited to see fish and boater passage installed into this diversion dam that for many years has presented a significant obstacle to both fish and boating on the Purgatoire River. We strongly recommend that this project be funded, and commit \$5,391 of in-kind contributions towards this project in donated labor for project planning and oversight.

Sincerely,



Brad Kirby
Business Owner
Purgatoire River Run Company



March 23, 2023

Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber and Mr. Ned Weakland
MS 86-69200
P.O. BOX 25007
Denver, CO 80225

Re: Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River

Dear Ms. Robin Graber and Mr. Ned Weakland,

Fishers Peak Outfitters submits this Letter of Support and Commitment on behalf of Purgatoire Watershed Partnership's (PWP) grant application requesting funding for Fish Passage on the Purgatoire River.

We are an outdoor retail store based here in Trinidad, Colorado and are passionate about enhancing and restoring our river and natural resources in the region for the ecological benefit as well as for the benefit of our community and all visitors who travel our way. We provide guided fly-fishing outings and clinics as well as a variety of other outdoor recreation guided activities and events along the Purgatoire River and throughout the watershed.

We are excited and supportive of installation of fish passage into the Baca-Picketwire diversion dam for the many benefits that it will provide to help grow and sustain our local native and sport fish populations. We work closely with the Trout Unlimited Local Chapter – Purgatoire River Anglers in particular in supporting all efforts to increase the sustainability of our local fishery, as that also benefits our local guiding service and our many customers excited to fish the Purgatoire River. We also strongly support that this fish passage design – that of a 'natural riffle' – will additionally provide boater passage down over the diversion dam, improving boater safety and recreational boating opportunities on the river.

Fishers Peak Outfitters highly recommends the funding of this project, and commits \$3,594 of in-kind contributions (120 hrs x \$29.95/hr Volunteer Rate) as donated labor towards this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Leigh Cooper". The signature is written in a cursive, flowing style.

Fishers Peak Outfitters

March 20, 2023

Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber and Mr. Ned Weakland
MS 86-69200
P.O. BOX 25007
Denver, CO 80225

Re: Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River

Dear Ms. Robin Graber and Mr. Ned Weakland,

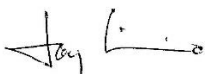
Kip Hampden, LLLP submits this letter in full support of Purgatoire Watershed Partnership's (PWP) grant application requesting funding for Fish Passage on the Purgatoire River.

We are excited about this project that will provide important fish passage to all fishes (native and sport) up and over the Baca-Picketwire Diversion Dam on the Purgatoire River in downtown Trinidad. We are also excited that the fish passage design, that of a 'natural riffle,' will improve boater safety in the river by providing recreational boater passage down over the diversion dam.

Our new hotel complex is directly adjacent to the project area and we see the installation of fish passage into the existing diversion dam as an important opportunity to benefit our fish populations as well as to increase the overall ecological connectivity and integrity of our Purgatoire River corridor. The project area has also historically been an important river education and river play site for youth and families, and we are fully supportive of the significant improvements for ecological learning, safety, and recreation that this project will bring.

We fully support this collaborative multi-user project and are excited to work closely with project partners on this important work that will strongly benefit our local fishes and our community.

Sincerely,



Jay Cimino



March 23, 2023

Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber and Mr. Ned Weakland
MS 86-69200
P.O. BOX 25007
Denver, CO 80225

Re: Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River

Dear Ms. Robin Graber and Mr. Ned Weakland,

The Youth Club of Trinidad submits this Letter of Support and Commitment on behalf of Purgatoire Watershed Partnership's (PWP) grant application requesting funding for Fish Passage on the Purgatoire River.

The Youth Club of Trinidad has worked closely and collaboratively with the Purgatoire Watershed Partnership on many rewarding youth outdoor education projects and events tied to the river and the ecological health of our watershed.

Installation of fish passage into the Baca-Picketwire diversion dam will not only increase the health and sustainability of our local fish populations, but also expand engagement and educational opportunities on the river for our local youth including learning more about fish ecology and habitat restoration, as well as participating in angling activities.

Our community contains a large number of at-risk youth and we have seen first-hand the benefits of engaging our kids in activities tied to education, engagement with, and recreation on our local river. We are excited that boater passage will be installed as part of fish passage, as that will also provide new opportunities for our kids to safely engage with and recreate on the river.

The Youth Club of Trinidad strongly supports the funding of this project, and commits \$7,188 of in-kind contributions (3 staff x 80 hrs x \$29.95/hr) of staff hours tied to assisting with final project planning and engaging in fish-related activities (e.g. fish tagging, monitoring) with our youth on this project.

Sincerely,

Pat Walsh
Director
Youth Club of Trinidad



Purgatoire Watershed Partnership • 3590 East Main Street, Trinidad, CO 81082 • 970-420-1915

March 21, 2023

Bureau of Reclamation
Water Resources and Planning Office
Attn: Ms. Robin Graber and Mr. Ned Weakland
MS 86-69200
P.O. BOX 25007
Denver, CO 80225

Re: Purgatoire Watershed Partnership's FY 2023 WaterSMART Environmental Water Resources Grant Application for Fish Passage on the Purgatoire River

Dear Ms. Robin Graber and Mr. Ned Weakland,

The Purgatoire Watershed Partnership provides this Letter of Commitment on behalf of our grant application requesting funding for Fish Passage on the Purgatoire River.

The Purgatoire Watershed Partnership commits to providing cash match of \$823,792 through other grant funding. If the project is funded, the cash match would be available as of December 31, 2023.

Sincerely,

A handwritten signature in black ink, appearing to read "Julie Knudson", written over a light blue rectangular background.

Julie Knudson
Executive Director/Watershed Coordinator
Purgatoire Watershed Partnership



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240



March 28, 2023

To: Purgatoire Watershed Partnership

This letter is an acknowledgement of our involvement and support in the effort of the Purgatoire Watershed Partnerships to restore aquatic connectivity to the Purgatoire River through the town of Trinidad, CO. The Purgatoire Watershed Partnership is interested in removing a severe barrier that limits upstream movement by aquatic organisms, including native and sport fish species. The successful removal of this barrier will provide both upstream and downstream connectivity where currently it has been severely limited.

The Purgatoire River is home to a diverse range of native fish species that reside in both the perennial reaches of the river and the intermittent tributaries. These species are well adapted to the dynamic hydrograph of the Purgatoire River and have developed generalist behavior to survive the harsh and fluctuating conditions of this river. Instream barriers fragment the longitudinal connectivity of this river that is vital for these species survival in these harsh conditions. Fragmentation limits species presence, distribution, and immediate access to habitat necessary to fulfill life history traits ultimately impacting their ability to persist within available habitat.

The Baca-Picketwire Diversion Dam is a sever barrier limiting upstream access of native and sport fish and the U.S. Fish & Wildlife Service has determined that the removal of this barrier would help increase the persistence of native fish within the Purgatoire River. The diversion also entrains both native and sport fish as they attempt to navigate the structure resulting in mortality. A well-designed diversion incorporating a fish passage structure would be an ideal solution to the current barrier providing the community with access to water and ensuring the passage of aquatic organisms. The Fish & Wildlife Service has been actively involved in design review for the Baca-Picketwire Diversion Dam and we appreciate the Purgatoire Watershed Partnerships plans to include all interested stake holders to limit the fragmentation currently caused by this diversion dam.

Cole Brittain

Fisheries Biologist, COFWCO

U.S. Fish & Wildlife Service