

WaterSMART Environmental Water Resources Grants Program
Fiscal Year 2022 Projects
Notice of Funding Opportunity No. R22AS00026
Grant Proposal



Pagosa Gateway Project
A Community Project to Preserve Aquatic Habitat and in the Face of
Drought and Climate Change
Colorado



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Technical Proposal and Evaluation Criteria

1. Executive Summary

Date: 9 December 2021

Applicant Name: Trout Unlimited

City, County, and State: Pagosa Springs, Archuleta County, Colorado

Category of Applicant: Category B (Trout Unlimited is acting in partnership with the Town of Pagosa Springs; a Town Resolution is included in the Attachments)



Project Summary:

Trout Unlimited, in partnership with the Town of Pagosa Springs and the Upper San Juan Watershed Enhancement Partnership (WEP) -an unincorporated, community-based watershed group- will improve approximately 2.5 miles of the San Juan River to preserve aquatic habitat in the face of declining flows and warming temperatures. The San Juan River is home to native and recreational fisheries. River recreation, including sport fishing, is a significant economic driver in this small, disadvantaged rural community. A recent environmental and recreational water supply needs assessment commissioned by WEP identifies alarming changes in stream hydrology driven by prolonged drought. (Lotic 2021). For example, year-over-year reductions in summertime stream flow volumes within the project area are decreasing at an average rate of 700 acre-feet per year. The study concludes that late summer and fall flows may be restricting the availability and quality of aquatic habitat for fish and other aquatic species. Conditions are expected to get significantly worse, based on state scenario planning models which indicate significant reduction in magnitude and frequency of peak flows, further reductions in late summer and fall flows, and increase in stream temperature in the area. (Lotic 2021). The Pagosa Gateway Project (a.k.a. the Pagosa Gateway Project) will implement a series of measures, including creation of low flow channels, riffle and pool habitat, bank stabilization and

revegetation, fish passage, and similar measures to increase the resiliency of the San Juan River and its fisheries in the face of a very dry and hot future.

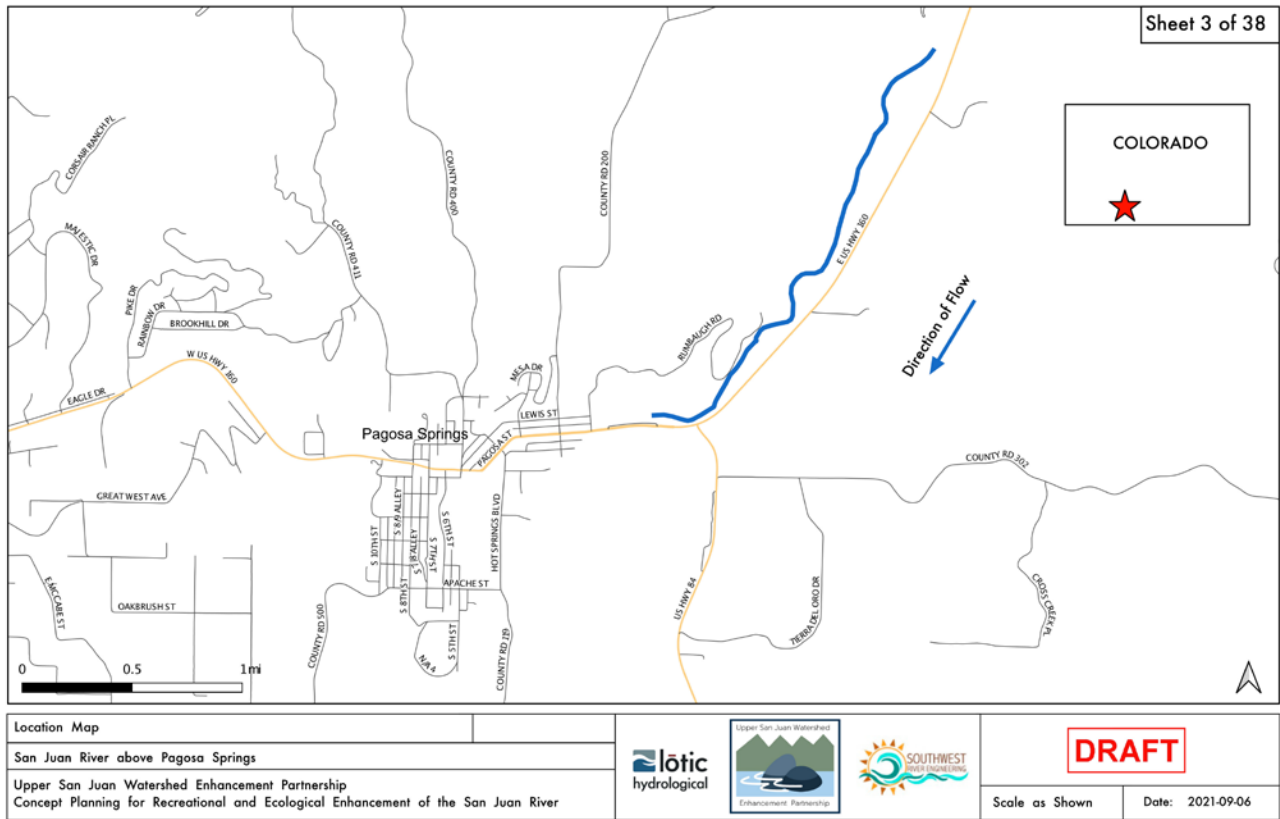
Length of Time and Estimated Completion Date:

Trout Unlimited anticipates the Project will be completed within 26 months after receipt of confirmation of funding from Reclamation and the Colorado Water Conservation Board (expected by no later than September 2022). Assuming a six-month period to obtain NEPA and NHPA approvals, construction will begin in June 2023 (runoff conditions allowing) and be completed by no later than November 2024.

Federal Facility: The project is not located in a Federal Facility but the San Juan River is impacted by upstream BOR’s San Juan-Chama transmountain diversion project.

2. Project Location

The Pagosa Gateway Project is located in Archuleta County, Colorado. The upper terminus of the Project is 2.5 miles upstream of the Town of Pagosa Springs and the lower terminus ends at the entrance to Town. The project area latitude is 37.28240218493351 and its longitude -106.98262837331916.



3. Technical Project Description

The project consists of the construction of a series of measures or “interventions” designed to address the negative impacts of decreasing stream flows on aquatic habitat and to improve the river’s resilience in the face of climate change. The types of interventions proposed include:

Low Flow Channel Shaping

Two types of low flow channel intervention are envisioned.

- High-priority low-flow channel shaping is indicated in areas where the current structure of the stream bed does not include any area of consolidated flow during low flow periods. The focus in these areas will be on structural modification of the stream bed to provide a lower elevation surface across some portion of the cross-sectional profile. High priority low-flow channel shaping is also called out in areas where the existing low-flow channel appears to provide critical habitat. The focus in these areas is on protecting existing channel forms and behavior.
- Opportunistic low-flow channel shaping is indicated in all areas that are not high-priority areas. In these sections of river channel, efforts will focus on moving material (possibly single boulders or small clusters of cobble) in a manner that promotes consolidation of flow in the existing channel thalweg during late summer and fall periods. This work will be performed where and when it is convenient and not at the expense of other aspects of the full effort.

Grade Control Structures

Placement of a channel spanning structure across the riverbed is proposed at several locations. The main goal of these structures is the promotion and maintenance of low flow channels at certain positions in the channel bed. In other locations, partially buried rock ribs extending outward from the inside of the river bend intend to hold grade on existing alluvial surfaces and drive consolidation of late-summer and fall low flows into a narrower section of the channel bed. These structures often alternate with flow deflectors positioned on the opposite stream bank. These deflectors are intended to prevent organization of water velocity fields during periods of high and moderate flow and protect infrastructure or streambanks subjected to debris removal.

Riparian Plantings

Several areas along the river corridor are proposed for riparian revegetation. The extent of some of these areas suggests that an extensive planting plan and, perhaps, multi-season irrigation of the area, is required to maximize benefits of the intervention. At this time, the extent of riparian revegetation efforts is expected to be limited to the near stream area. Planting plans for these areas are expected to rely heavily on willow cuttings from on-site and from nearby stream reaches.

Placement of Habitat Structures

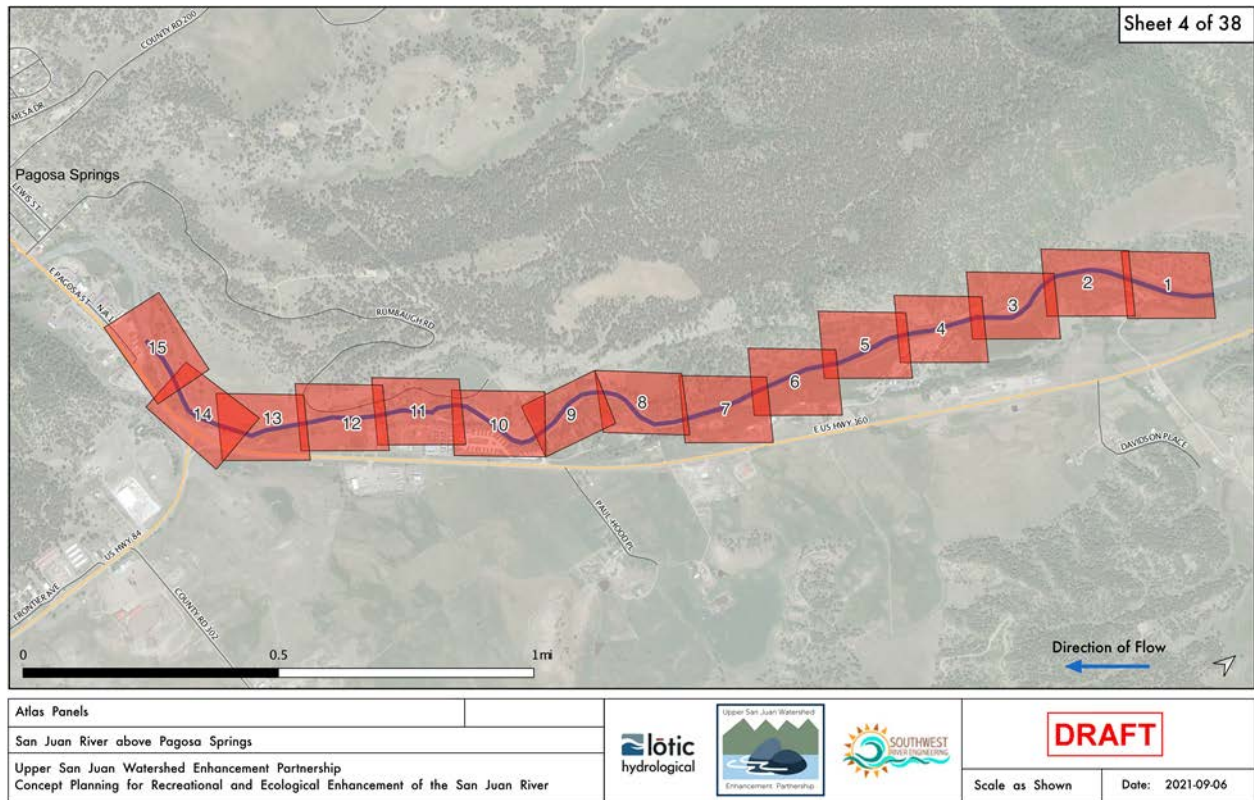
Low baseflow conditions result in shallow water depths and reduction in habitat quality for aquatic species in many locations. Synergistic effects between flow alteration and near-complete removal of streamside vegetation in several locations and the presence of relatively uniform bedrock bed surfaces in others further constrains habitat quality and results in reductions in stream network connectivity during some portion of the year. Placement of habitat structures in the stream channel and along the streambanks intends to increase bed complexity, encourage the

formation of small scour pools, and provide an opportunity for aquatic organisms to transit through a reach by “hop-scotching” between preferred habitats. The habitat structures envisioned by this project area constructed from large rock and/or toe wood.

Streambank Work

Cars were historically buried in levee features and along the outside bend of some streambanks to stabilize the bank. Recent channel changes have led to the exposure of these cars and other materials. Removal of these materials is primarily intended to reduce risks to recreational river users. However, removal of exposed cars will be followed by regrading, revegetation, and strategic placement of flow deflectors, rip-rap revetments and/or buried revetments to protect stream-side infrastructure. This work is expected to also benefit water quality and aquatic habitat.

A conceptual level design for the project has been completed and is included in the Attachments. The conceptual design divides the 2.5 miles of the river into panels and a description of the specific work to be done in each panel is provided.



Some of the work described involves stream bank stabilization work consisting of removal of old cars, long ago used to shore up the bank and recently exposed by channel changes, an old pipeline and other debris. This work will reduce recreation hazards, a secondary benefit of the project, but will also help stabilize the banks, improve water quality by reducing fine sediments, introduce organic matter to the stream, remove a source of potentially toxic fluids, and provide an opportunity for revegetation to provide shading that helps reduce stream temperature. Should

a determination be made that this portion of the project is outside the scope of the grant, no funds from this grant will be used for that portion of the project.

4. Performance Measures

The applicant will work with Colorado Parks and Wildlife aquatic biologists to develop a multi-year monitoring plan that will assess the impact of the project on fish communities. Specifically, total fish biomass and species counts will be performed at two locations within the project reach in the year prior to project implementation and in the five years following project completion. Total biomass of native and sport fish will be used as a performance measure, along with the total number of native fish species present. Riparian condition will be monitored for a minimum of 5 years using photo points and green line surveys in areas where planting and other restoration techniques are applied. Riparian vigor and evidence of recruitment on scoured surfaces will be used as performance measures.

5. Evaluation Criteria

Evaluation Criterion A—Project Benefits (35 points)

Up to 35 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 that have a nexus to water resources or water resources management. Other benefits will also be considered for projects that have multiple benefits.

Sub-Criterion A.1—Benefits to Ecological Values

Please provide a general description of how your project will benefit ecological values by responding to the bullets listed below. Note: More detailed information and support for specific project benefits, and the extent (quantification) of those benefits, by project type are addressed under subcriterion A.2. Your responses to A.1. should include brief narrative responses; calculations of specific project benefits should be included in your responses to A.2.

- *Please 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 other water sources, or that are directly influenced by water resources management.*
 - *In your response, please identify the specific ecological values benefitted and how those ecological values depend on, or are influenced by, water resources or water resources management.*
 - *Please also explain whether the project will increase water supply reliability for ecological values by improving the timing or quantity of water available; improving water quality and temperature; or improving stream or riparian conditions for the benefit of plant and animal species, fish and wildlife habitat, riparian areas, and ecosystems, or through similar approaches.*

This project intends to increase water supply reliability for ecosystems along the San Juan River above Pagosa Springs. This increase in reliability will not be achieved by altering management of water but, rather, by modifying the channel to be more resilient in the face of historical flow alterations and expected future changes to low-flow conditions. Applicant partner WEP recently finished a comprehensive assessment of ecological conditions in the project area. That assessment explored the potential for continued trends in historical hydrology and/or future impacts associated with climate change to produce increasingly limiting hydraulic habitat conditions for native and sport fish in this section of river. This proposal responds to the assessment findings. Structural interventions aimed at encouraging the development and persistence of low-flow channels within the existing stream bed are intended to increase the availability of late summer habitat for aquatic organisms and reduce the potential for increasing water temperatures in a warming future. Maintaining cool water temperature regimes in the river is critical to the viability and quality of the sport fishery above and through the Town of Pagosa Springs. Maximizing the extent and quality of riparian communities along the stream bank should provide similar benefits to aquatic organisms like fish. Shading from large woody vegetation provides another control on water temperatures. Organic matter supplied to the water column from riparian forests is an important food source for aquatic insects. Contributions of woody debris add habitat and structural complexity to the stream bed. Riparian forests are also biologically diverse and provide high-quality habitat to terrestrial and avian animals. Riparian re-vegetation efforts will increase the total acreage of active riparian forests throughout the project area. Removal of buried cars, sections of abandoned steel pipeline, and concrete debris from the stream banks will enhance habitat quality and remove a potential source of toxic fluids and materials from the river corridor. These removal activities will result in a reduction in the linear feet of stream bank where riparian community condition and habitat quality are ranked as extremely poor.

- *If the project will benefit multiple water uses (i.e., benefits to ecological values AND benefits to other water uses, e.g., municipal, agricultural, or tribal water uses), please explain how the project benefits other water uses.*

The project will not only provide significant ecological benefits; it will also benefit recreation. The described shifts in hydrology are having and will continue to have a significant impact on recreational use of the river--an important economic driver for the local community. Some float-fishing and whitewater boating activities in this section of the San Juan River are already limited by low flow conditions. Scenario modeling that characterizes the impacts of climate change indicates the potential for a significant decrease in the number of days suitable for whitewater boating activities. A decline in aquatic habitat and fisheries impacts fishing. Modifications to the stream channel aimed at improving aquatic habitat will also make the channel more passable by watercraft during low flow conditions and can extend the period of time when recreational users in rafts, kayaks, and dories can utilize the river. Streambank stabilization work to remove old cars and debris and replace it with rock, woody materials and vegetation will provide ecologic benefits and it will also improve safety.

Sub-Criterion A.2—Quantification of Specific Project Benefits by Project Type

Explain the extent of project benefits. Please respond to the following questions for each project type included in your application (i.e., please only respond to the section(s) of this sub-criterion that are relevant to your project).

Project Benefits for Drought Resiliency Projects Related to Fish and Wildlife

- *What are the types and quantities of environmental benefits provided, such as the types of species and their numbers benefited; acreage of habitat improved, restored, or protected; or the amount of flow provided? How was this estimate calculated?*

The quantification of environmental benefits conferred by the project will depend on the final engineering design and the extent to which design elements alter low-flow channel hydrology along the project reach. However, 2-dimensional hydraulic habitat modeling suggests that an increase in water depth during the late summer will produce beneficial improvements in habitat quality for native and sport fish alike. Native fish like Flannelmouth sucker and Bluehead sucker seem particularly well-poised to benefit from increased low-flow channel depths. Improvements in habitat conditions for these two species is notable given their special status as “species of concern” among state and federal fisheries management agencies. This project has the potential to beneficially impact low-flow habitat conditions along 2.5 miles of the San Juan River.

- *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. Please 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.*

N/A

- *How is the species or habitat impacted by drought?*

Streamflow on the San Juan River above Pagosa Springs are altered by several surface water diversions. The combined effect of these diversions is to reduce late summer streamflows by approximately 50%. Drought conditions are expected to lead to further reductions in flows on this section of river. The Colorado Water Conservation Board holds a 50 cfs minimum instream flow (ISF) water right on this section of the San Juan for the purpose of aquatic life protection. A detailed water use modeling effort conducted for the project area indicates that a warming climate will deplete late season flows to the point where only half of the days in August and September in ‘typical’ year types will see enough flow to satisfy the ISF water right. Simulated conditions for drought years are considerably worse. For example, 2-dimensional aquatic habitat modeling conducted on the San Juan River near Fourmile Creek indicates that median August minimum flows are expected to decrease by 63% when shifting from historical conditions to a ‘hot-and-dry’ climate future. This change in flows corresponds to a greater than 25% decrease in habitat suitability for adult brown trout and a greater than 35% decrease in habitat suitability for adult rainbow trout. The expectation among fisheries managers is that extension of the periods of time where hydraulic habitat conditions are sub-optimal will have deleterious effects on the presence of both native and sport fish.

- *If the proposed project will benefit federally listed threatened or endangered species please consider the following elements:*
 - o *Is the species subject to a recovery plan or conservation plan under the ESA?*
 - o *What is the relationship of the species to water supply?*
 - o *What is the extent of the proposed project that would reduce the likelihood of listing, or would otherwise improve the status of the species?*
 - o *Is the species adversely affected by a Reclamation project?*

This project is expected to benefit Bluehead suckers and Flannelmouth suckers, two ‘species of concern’ in the Colorado River basin. These species were historically impacted by a variety of resource use/management activities including Reclamation’s large reservoirs on the mainstem Colorado River and smaller projects in tributary systems like the San Juan Chama Project. Anecdotal evidence collected from local residents suggests that the San Juan – Chama diversions structures on the Rio Blanco and Navajo River prevent significant numbers of Bluehead suckers from moving upstream in the early spring. These long-ranging species require highly connected stream networks to locate and use optimal habitat for various life stages and behaviors. Dams and large water diversions fragment networks and are, undoubtedly, a factor in the regional decline of these species. This project will provide a local benefit to network connectivity and habitat quality for Bluehead suckers and Flannelmouth suckers. The scale of this project cannot counteract the detrimental impacts of Reclamation’s projects in the Colorado River basin but it may help reduce the likelihood of a future listing of one or both species.

Project Benefits for Watershed Management Projects

- *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) please explain the extent of those benefits (i.e., magnitude and geographic extent). Please estimate 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 result in the reshaping of the low-flow channel across the majority of the 12,000-foot long project reach. These reshaping activities are expected to consolidate low-flows into a narrower channel footprint, effectively reducing thermal gains to the stream as it traverses the reach. The quantification of the buffering against stream temperature increases produced by these activities will depend on the final engineering design and is, therefore, not available currently.

- *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), please explain the extent of those benefits (i.e., magnitude and geographic extent). Please estimate expected project benefits to ecosystems and provide documentation and support for this estimate, including a detailed explanation of how the estimate was determined.*

This project will result in a minimum of 1,295 linear feet of woody riparian plantings. These plantings are expected to improve or protect water quality by limiting bank erosion. As these plantings become well-established and begin to row, they will provide some degree of shade to the streambed. Streambed shading is an important control on summertime water temperatures.

The exact extent and magnitude of these beneficial impacts are difficult to discern prior to development of a complete engineering design.

- *If the project will benefit specific species and habitats, please 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). Please 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.*

Published Habitat Suitability Indices that indicate relative habitat quality along gradients of velocity, depth, etc. are available for many fish species. As a matter of practice, habitat suitability is regularly modeled as a bivariate response to water velocity and depth—characteristics that are easily measured and modeled and tend to capture meso-scale variability in channel unit types (e.g., pools, riffles, glides, etc.). Pools typically have lower velocities and higher depths while riffles have higher velocities and lower depths. The exact extent and magnitude of these beneficial impacts are difficult to discern prior to development of a complete engineering design. Bluehead Suckers, as well as Speckled Dace and Rainbow Trout are resident riffle obligates. Other resident native and sportfish species utilize other habitats in the river. Pools provide holding habitat and feeding areas for a variety of fishes. They may also act as refuges for many fish species in high and low flow periods due to lower velocities and deeper waters. Pools and their transitions between habitats provide cobbled substrate for spawning by multiple fish species. Riffles provide some spawning habitat as well and are important for macroinvertebrate production. Riffles and runs can also provide cover for fish from predators that reside both within and outside of the river.

Habitat modeling results indicate that habitat quality for native species generally increases with flows. At both San Juan River sites, habitat conditions were found to be more suitable for warm-water fish than cold-water fish at flows above 200 cfs. Relative comparisons of habitat quality curves between the species at each site indicate habitat conditions potentially more favorable to Bluehead suckers than Flannelmouth suckers as flows increase beyond 300 cfs. Habitat quality curves for the non-native sport species indicate conditions may be more favorable to brown trout than rainbow trout at all flows. Both cold-water species seem less sensitive to changes in flow than the warm-water species.

Project benefits for multi-benefits projects: If applicable, please describe the extent to which the project will benefit multiple water uses. Please do not repeat information included in your prior responses.

- *Please describe the extent to which the project will benefit agricultural, municipal, tribal, or recreation uses? Please explain how your estimate of benefits to multiple uses was calculated and provide support for your response.*

Manipulation of the low flow channel structure on the reach of the San Juan River above Pagosa Springs is expected to lengthen the summer period when conditions are suitable for recreational

uses of the channel like rafting, kayaking, and tubing. Surveys of local river users indicate minimum navigable flows on this section of river for rafts (400 cfs), kayaks (200 cfs), and SUPs (250 cfs). Typical daily average streamflows on this reach during July and August are ~300 and ~160 cfs, respectively. Daily average streamflows during dry years are lower: ~175 cfs in July and ~105 cfs in August. As a result, no recreational floating use is possible on this section of river in August in typical years and for the months of July and August in drought years. Channel shaping meant to consolidate flows during the low-flow season is expected to improve navigability through this reach at flows between 100-250 cfs. The expected outcome is increased opportunity for recreational use ranging from 30-60 days, depending on the year type.

• *Will the project reduce water conflicts within the watershed?*

Yes. By improving recreation opportunities, the project will reduce conflicts that arise due to limited recreation space and days.

Evaluation Criterion B—Collaborative Project Planning (25 points)

Up to 25 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. Reclamation will use the following criteria to prioritize applications based on the extent to which the specific project proposed in your application was developed collaboratively. Please 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. These pages will not be included in the total page count for the application.

- *Was the proposed project described in your application developed as part of a collaborative process by:*
 - o *A watershed group, as defined in section 6001 of the Cooperative Watershed Management Act; or*
 - o *A water user and one or more stakeholders with diverse interests (i.e., stakeholders representing different water use sectors such as agriculture, municipal, tribal, recreational, or environmental)?*

Yes. The proposed Pagosa Gateway Project was proposed by the Upper San Juan Watershed Enhancement Partnership (WEP), a stakeholder group formed for the purpose of (1) assessing environmental and recreational water supply needs and agricultural irrigation infrastructural needs within the San Juan River basin, from the headwaters to immediately below the Town of Pagosa Springs; (2) identify projects or processes to address identifies gaps; and (3) engage the community to understand community water priorities, monitor assessment results, and help identify projects and processes to meet multiple water supply needs.

WEP operates through a Steering Committee that includes broad representation of water uses. Members include:

Town of Pagosa Springs
San Juan Water Conservancy District

Pagosa Area Water and Sanitation District
Banded Peak Ranch
Park Ditch Representative (currently vacant)
Natural Resources Conservation Service (advisory)
Colorado State University Archuleta County Extension
Pagosa Outside
Colorado Division of Water Resources (advisory)
Colorado Parks and Wildlife (advisory)
U.S. Forest Service (advisory)
The Nature Conservancy
Trout Unlimited
San Juan Conservation District
Mountain Studies Institute (partner/coordinator)

• *Describe the strategy or plan that supports your proposed project.*

The Pagosa Gateway Project is supported by WEP's Non-Consumptive Use Assessment (Lotic 2021), prepared as part of WEP's Upper San Juan Integrated Water Management Plan (IWMP). The IWMP will incorporate community input, key findings from the Assessment, and a list of projects and actions that, if implemented, could address the water related issues identified in the Assessment. While the IWMP has not been finalized, the Pagosa Gateway Project has arisen as a high priority project for both WEP and the community and is ready to proceed.

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

The Non-Consumptive Use Assessment was completed in June 2021 and a companion Agricultural Irrigation Infrastructure Needs Assessment was completed in April 2021. As previously discussed, the IWMP is being finalized. The IWMP was originally proposed as a Stream Management Plan, aimed at developing needed information about environmental and recreational water supply needs, identify gaps, and list projects and actions designed to address those gaps. Input from agriculture representatives in the WEP steering community expanded the scope of the plan to include an investigation of agricultural irrigation infrastructure needs and a list of projects designed to meet those needs.

The IWMP is part of a much larger water planning effort in the State of Colorado. The Colorado Water Plan, finalized in 2015 and currently being updated, identified lack of information regarding environmental and recreational water supply needs as a key issue and made significant resources available to address the short-coming. The Southwest Basin Roundtable, the entity implementing the Water Plan at the regional level, determined that the best approach to developing this information in the large Southwest region, is to rely on basin-specific stakeholder groups to both develop the information and propose cooperative measures to address identified needs. WEP was created for such purpose and the IWMP and assessments fulfill the Southwest Basin Roundtable's need.

As WEP reaches the end of the IWMP process, the Steering Committee has expressed a desire to continue to function as a watershed group, for the purpose of implementing projects identified in

the IWMP, as well as other projects that meet the needs identified in the Non-Consumptive Needs and Agricultural Irrigation Infrastructure Needs assessments.

- *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 health or the health of species and habitat within the watershed?*
 - *Is one of the purposes of the strategy or plan to increase the reliability of water supply for ecological values?*
 - *Does the project address an adaptation strategy specifically identified in a completed WaterSMART Basin Study or Water Management Options Pilot (e.g., a strategy to mitigate the impacts of water shortages resulting from climate change, drought, increased demands, or other causes).*

As discussed above, the plan addresses needs identified in the Non-Consumptive Use Assessment and the Agricultural Irrigation Infrastructure Needs Assessment. Water quantity, water quality, and issues related to ecosystem health within the study area are addressed. Increasing the reliability of water supply for ecological values is within the scope of the plan. The Pagosa Gateway Project will increase the reliability of environmental and recreational flows in 3 miles of the San Juan River by adjusting the stream channel to an altered hydrology brought about by drought and climate change. Future projects may seek to improve flows through agricultural or municipal efficiency projects, water leases, or other voluntary, cooperative means.

A WaterSMART basin study has not been completed for this area, but the Pagosa Gateway Project addresses an adaptation strategy identified in an equivalent study: the Non-Consumptive Use Assessment (Lotic 2021).

- *Was your strategy or plan developed collaboratively?*
 - *Who was involved in preparing the plan? Was the plan prepared with input from stakeholders with diverse interests (e.g., water, land, or forest management interests; and agricultural, municipal, tribal, environmental, recreation uses)? What was the process used for interested stakeholders to provide input during the planning process?*

Yes, the IWSP is being developed by the WEP, which Steering Committee includes broad representation from local government, state and federal government, agriculture, municipal, recreation and governmental. WEP hosted public meetings before, during and after the development of the Assessments to shape the studies, understand community priorities, and seek input outcomes. WEP then conducted surveys and has held a public meeting to seek input on potential projects and actions to meet the needs identified in the Assessments.

- *If the plan was prepared by an entity other than the applicant, explain why it is applicable.*

The plan is being developed by WEP. This grant application is being filed by Trout Unlimited in partnership with the Town and Pagosa Springs and WEP. WEP is contemplating incorporating as a non-profit and obtaining an IRS 501(c)(3) designation to operate as its own entity. However, due to grant application deadlines, the Town and Trout Unlimited have agreed to apply for grants and be their fiscal agent on behalf of the group: Trout Unlimited is applying for this grant and the Town will be applying for a Colorado Water Conservation Board grant.

- *Describe how the plan or strategy provides support for your proposed project.*
 - o *Does the proposed project implement a goal or need identified in the plan?*
 - o *Describe how the proposed project is prioritized in the referenced plan or strategy.*

Yes, the Pagosa Gateway Project implements needs identified in the Non-Consumptive Needs Assessment. WEP has determined that, given the importance of a healthy San Juan River to the economy and well-being of the local community, the Pagosa Gateway Project is a high priority project. The finding will be included in the IWMP. The finding is also consistent with input received from the community.

Evaluation Criterion C—Stakeholder Support (15 points)

Up to 15 points may be provided based on the level of stakeholder support for the proposed project and the extent to which the project will complement, and not duplicate, other ongoing efforts. Applications which demonstrate support for the project from a diverse array of stakeholders, and which will complement other ongoing activities, will receive the most points under this criterion.

- *Please 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?*

The Pagosa Gateway Project enjoys broad support. Letters of support, including a letter from WEP representing a broad scope of stakeholders, and other partners, are included in the Attachments. The Town of Pagosa Springs is a Category A partner in the Project and has approved both cash and in-kind support. The Town will also be seeking significant additional funding from the Colorado Water Conservation Board for the project. WEP is also working to secure cash support from the following entities in 2021: San Juan Water Conservancy District, The Nature Conservancy, Friends of the San Juan, and Weminuche Audubon, Archuleta County, Pagosa Tourism Board, and the Southwest Water Conservation District. Mountain Studies Institute and Trout Unlimited are committing significant in-kind contributions.

- *Please explain whether the project is supported by a diverse set of stakeholders (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?*

The Pagosa Gateway Project is being proposed by WEP, composed of a broad range of water stakeholders. See discussion above.

- *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?*

The Pagosa Gateway Project is being proposed by WEP, which steering committee includes representatives of the U.S. Forest Service, Colorado Parks and Wildlife, NRCS and the San Juan Conservation District, as well the area’s main water supplier (PAWSD). These representatives have been involved in project discussions and have expressed (unofficial) support for the project.

- *Will the proposed project complement other ongoing water management activities by state, Federal, or local government entities, non-profits, or individual landowners within the project area? Please describe other relevant efforts, including who is undertaking these efforts and whether they support the proposed project. Explain how the proposed project will avoid duplication or complication of other ongoing efforts.*

The Pagosa Gateway Project complements similar work being conducted downstream of Pagosa Springs – a project known as “Recreational and Ecological Enhancement of the San Juan River - Yamaguchi South.” This project is also proposed by WEP and will be implemented under the Town’s oversight. In conjunction with previous channel improvement work in the San Juan River through Town, these projects will improve the resiliency of several miles of the San Juan River in the face of prolonged drought and climate change. Trout Unlimited is not aware of any proposed project that duplicates or conflicts with the proposed Pagosa Gateway Project.

- *Is the project completely or partially located on Federal land or at a Federal facility? If so, explain whether the agency supports the project, whether the agency will contribute toward the project, and why the Federal agency is not completing the project.*

The project is not located on federal lands or federal facilities.

- *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.*

There is no known opposition to the project.

Evaluation Criterion D—Readiness to Proceed (10 Points)

*Up to **10 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, and a detailed budget) will receive the most points under this criterion.*

- *Describe the implementation plan for the proposed project. Please 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.*

The following schedule assumes that a grant contract between Reclamation and Trout Unlimited will be entered into by September 2022. This is the same timeframe when all other non-federal funding will be secured (see Funding Plan in Section 6, below).

Pagosa Gateway Project Implementation Plan			
	Start Date	End Date	Comments
Design & Engineering	Sept. 2022	March 2023	
Permitting	Dec. 2022	March 2023	Assumes USACE nationwide and CX
Construction	May 2023	Nov. 2024	Allows for 2 const. seasons

• The project budget outlining costs for specific tasks should identify costs associated with the tasks in your project schedule, and all contractor costs should be broken out to identify the specific tasks included in those costs.

Costs for specific tasks are identified in the Budget section of this application.

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

NEPA, ESA, and NHPA review by Reclamation will be needed, as well as a CWA 404 permit issued by the U.S. Army Corps of Engineers (USACE). The project should fit within a USACE Nationwide stream restoration CWA 404 permit. Given the nature of the work, it is applicants' hope that the project will also qualify for a Categorical Exemption under NEPA.

• Identify and describe any engineering or design work performed specifically in support of the proposed project, or that will be performed as part of the project. Priority will be given to projects that are further along in the design process and ready for implementation.

A Conceptual Design for the Pagosa Gateway Project has been prepared and is included in the Attachments. The Conceptual Design identifies the work to be completed in each section of the 2.5 miles of the San Juan River within the project area.

• 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, please provide documentation. If the applicant does not yet have permission to access the project location, please describe the process and timeframe for obtaining such permission.

Access to the sections of the San Juan River to conduct project work will be through private property. Partner WEP has approached all but two of the property owners involved and has received positive responses. WEP is in the process of locating the remaining two owners. Access agreements will be obtained from all affected property owners.

• 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. Describe any new policies or administrative actions required to implement the project.

Applicant has not yet contacted the local Reclamation office but will do so expeditiously. A request will be made that Reclamation conduct the needed NEPA, ESA and NHPA review for the Project.

Evaluation Criterion E—Performance Measures (5 points)

Up to 5 points may be provided 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 or to install necessary equipment to monitor progress. However, program funding may not be used to measure performance once the project is completed (these costs are considered normal operation and maintenance costs and are the responsibility of the applicant).

• Please 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.

The following performance measures will be used to quantitatively and/or qualitatively assess impacts associated with the project:

- **Riparian photo points and greenline surveys:** Riparian condition will be monitored for a minimum of 5 years using fixed photo points and greenline surveys in areas where planting and other restoration techniques are applied. Photo points will be used to qualitatively assess the impacts of the project on riparian forest condition. Greenline community composition by species (%) and evidence of woody species recruitment on scoured surfaces will be used as quantitative performance measures.
- **Fish biomass and species/life stage counts:** The applicant will work with Colorado Parks and Wildlife aquatic biologists to develop a multi-year monitoring plan that will assess the impact of the project on fish communities. Specifically, total fish biomass and species counts will be performed at two locations within the project reach in the year prior to project implementation and in the five years following project completion. Total biomass of native and sport fish will be used as a performance measure, along with the total number of native fish species present. Comparison of monitoring results prior to project implementation and in the years following project completion will provide a means for quantifying the beneficial impact of the project on aquatic life.
- **Recreational user surveys:** A single survey of private and commercial recreational users will be conducted five years after project implementation. This survey will assess whether or not

the project changed user-perceptions of the flow-mediated navigability of the project reach. Differences between minimum navigability thresholds collected during this survey and a similar survey conducted in 2021 will provide a basis for quantitative exploration of the impact of the project on recreational use opportunities.

- *All applicants are required to include information about plans to monitor improved streamflows, aquatic habitat, or other expected project benefits. Please describe the plan to monitor the benefits over a five-year period once the project has been completed. Provide detail on the steps to be taken to carry out the plan.*

A formal monitoring plan will be created in the year of project implementation. A contractor will be engaged in the development of the plan. This plan will articulate all data collection schedules and necessary coordination with partnering organization and agencies and/or private landowners. The plan will also clarify all data collection, management, and analysis methods to be used in the evaluation of the performance measures detailed above. Approval of the plan will be sought by all WEP partners prior to carrying out any data collection activities. Members of the WEP will coordinate all activities described by the plan over the five-year period following project implementation. Specifically, WEP will coordinate with CPW aquatic biologists to collect fisheries data on the project reach. A contractor will likely be hired to carry out all other data collection and analysis activities. However, where and when the necessary capacity and expertise exists among select WEP partners, data collection and analysis activities may be carried out by these partners.

Evaluation Criterion F—Presidential and Department of the Interior Priorities (10 points)

Up to 10 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 and E.O. 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government. Consideration under this criterion is also given for Tribal benefits.

*Please address only those priorities that are applicable to your project. It is not necessary to address priorities that are not applicable to your project. A project will not necessarily receive more points simply because multiple priorities are addressed. Points will be allocated based on the degree to which the project supports one or more of 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.***

1. **Climate Change:** *E.O. 14008 emphasizes the need to prioritize and take robust actions to reduce climate pollution; increase resilience to the impacts of climate change; protect public health; and conserve our lands, waters, oceans, and biodiversity.*

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

The purpose of the project IS to make the San Juan River and its aquatic habitat more resilient to drought and climate change. See description above. With proper maintenance, we expect these benefits to persist in perpetuity.

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

No.

- *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?*

Riparian restoration will result in a modest improvement in carbon sequestration in soils and vegetation.

- *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?*

No.

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

The project is expected to result in narrower and deeper low-flow river channels. This change in morphology is intended as a mitigation measure for the warming effect of a changing climate on water temperatures through the project reach. Maintenance of cooler late-season water temperatures will benefit the aquatic species adapted to the project reach, adding some measure of resiliency to a system that may otherwise change significantly in response to a warmer future.

- *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?*

Removal of old vehicles and pipelines from the streambank and revegetating some riparian areas that were historically impacted should have the net effect of reducing sediment inputs to the water column. This small but positive impact to water quality is expected to benefit downstream recreational and municipal water users in Pagosa Springs. Riparian restoration should also result in localized improvements to soil health.

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

Given Archuleta County/Pagosa Springs' reliance on river-based recreation, the Pagosa Gateway Project will contribute to the community's economic resilience in the face of climate change.

2. *Disadvantaged or Underserved Communities: E.O. 14008 and E.O. 13985 affirm the advancement of environmental justice and equity for all through the development and funding of programs to invest in disadvantaged or underserved communities.*

• *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 through water quality improvements, new water supplies, or economic growth opportunities.*

With an annual median household income (AMI) that is almost 30% lower than the statewide AMI (2019 census), Archuleta County is a disadvantaged community within the meaning of Section 6001(2) of the Cooperative Watershed Management Act. Outdoor recreation is a mainstay of the community. According to the Region 9 Economic Snapshot-2020 Update, tourism is one of the top employment industries in Archuleta County and largely based on the area's spectacular natural resources. The Upper San Juan River forms the "foundational infrastructure" for local recreational and economic interests. Riverine based tourism activities (boating, fishing, trails, bird watching, etc.) are some of the most utilized of those interests. Drought and climate change threaten the San Juan River's recreational opportunities on which the local economy so heavily relies. The Pagosa Gateway Project will assist in the preservation of this valuable community asset.

• *If the proposed project is providing benefits to a disadvantaged community, provide sufficient information to demonstrate that the community meets the applicable state criteria or meets the definition in Section 1015 of the Cooperative Watershed Act, (i.e., defined as a community with an annual median household income that is less than 100 percent of the statewide annual median household income for the state).*

A summary of the official 2019 U.S. Census data for Archuleta County can be accessed at <https://www.census.gov/quickfacts/fact/table/archuletacountycolorado,CO,US/INC110219>.

Accordingly, the Median Household Income for Archuleta County is \$52,221, compared to Colorado's Median Household Income of \$72,331 and the U.S. Median Household Income of \$62,843. Archuleta County is a disadvantaged community within the meaning of Section 1015 of the Cooperative Watershed Act.

6. Project Budget

Funding Plans and Letters of Commitment

The Pagosa Gateway Project will be funded through a mix of state and federal grants, as well as local contributions.

The largest grant sought is from the Colorado Water Conservation Board (CWCB). The CWCB is the entity charged with developing, updating and implementing the Colorado Water Plan. WEP is a watershed group created to further the Colorado Water Plan’s goals and strategies at the local level and the Pagosa Gateway Project implements the specific strategies identified in the San Juan Basin Implementation Plan, the regional arm of the Colorado Water Plan. Like other state entities, the CWCB has received a large influx of grant money from federal and state stimulus packages for on-the-ground projects. These funds must be committed by no later than May 2023. Given the Pagosa Gateway Project’s role within the CWCB water planning effort, its importance to support the economy of a disadvantaged community, and the project’s state of readiness, funding from the CWCB is highly likely. However, CWCB grant applications are not due until July 1, 2022 (with a decision by September 2022). The CWCB grants require a 25% match. This federal grant application is intended to provide a large percentage of the required match. Reclamation’s award of this grant would provide seed money that will further strengthen our ability to obtain CWCB funds.

The following summarizes planned cash and in-kind contributions for the Project:

NON-FEDERAL FUNDING SOURCES	AMOUNT	STATUS
Cash Contributions		
Colorado Water Conservation Board	\$1,532,096	Application due July 1, 2022
Town of Pagosa Springs	\$ 54,000	Committed
Pagosa Tourism Board	\$ 25,699	Will request in April 2022
Archuleta County	\$ 30,000	Will request on January 2022
San Juan Water Conservancy District	\$ 2,500	Committed
Southwestern Water Conservation District	\$ 17,000	Application due December 13,
Friends of the Upper San Juan	\$ 750	Committed
Weminuche Audubon	\$ 750	Requested
The Nature Conservancy	\$ 4,000	Requested
Trout Unlimited	\$ 1,000	Committed
Total Nonfederal Cash Contributions	\$1,667,795	
In-Kind Contributions		
Trout Unlimited, the Town and partners expect to contribute significant staff and volunteer time to the Project. The partners have opted to not quantify or claim these resources for purposes of this grant.		
TOTAL NON-FEDERAL CONTRIBUTIONS	\$1,667,795	

Budget Proposal

Table 1 - Total Project Cost

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$ 375,000
Value of third-party contributions	\$ 1,667,795
TOTAL PROJECT COST	\$ 2,042,795

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

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
Colorado Water Conservation Board	\$1,532,096
Town of Pagosa Springs	\$ 54,000
Tourism Board	\$ 25,699
Archuleta County	\$ 30,000
San Juan Water Conservancy District	\$ 2,500
Southwestern Water Conservancy District	\$ 17,000
Friends of the Upper San Juan	\$ 750
Weminuche Audubon	\$ 750
The Nature Conservancy	\$ 4,000
Trout Unlimited	\$ 1,000
Non-Federal Subtotal	\$1,667,795
REQUESTED RECLAMATION FUNDING	\$ 375,000

Table 3. Budget Proposal

A more itemized cost estimate is included in the Attachments.

Budget Item Description	\$/Unit	Quantity	Unit	Total Cost
Salaries and Wages				
No salaries or wages requested				\$ 0
Fringe Benefits				
No salaries or wages requested				\$ 0
Travel				

No travel expenses requested				\$ 0
Equipment				
No equipment purchases claimed				\$ 0
Supplies and Materials				
Large Rocks (4-5 ft)	\$200	2136		\$ 427,200
Large Root Wad	\$200	31		\$ 6,200
Willow Transplants	\$80			\$ 103,600
Design, Engineering and Permitting				
Design and Engineering				\$ 85,000
Permitting/wetlands delineation				\$ 75,000
Construction				
Channel spanning rock grade control structures				\$ 168,000
Non-spanning rock structures				\$ 102,000
Bank stabilization rock structures				\$ 141,000
Channel habitat clusters				\$ 27,000
Trash removal/disposal from bank				\$ 80,000
Channel Shaping				\$ 135,000
Transplant willows				\$ 103,600
Seed and mulch all disturbed soil areas with				\$ 34,125
Project mobilization and demobilization				\$ 20,000
Construction management				\$ 60,000
Contingency		20%	Percentage	\$ 313,545
Environmental and Regulatory Compliance				
NEPA, NHPA, ESA				\$ 30,000
Other				
Technical Project Oversight (on behalf of partners)				\$ 60,000
Monitoring				\$ 20,000
Total Direct Costs				\$1,991,270
Indirect Costs				
NICRA (Negotiated) of \$375,000		13.74%	Percentage	\$ 51,525
Total Estimated Project Costs				\$2,042,795
Total Non-Federal Share				\$1,667,795
Total Estimated Project Costs – Reclamation EWRP				\$ 375,000

Budget Narrative

Salaries and Wages

Applicants are not requesting funds for salary and wages.

Fringe Benefits

Applicants are not requesting funds for fringe benefits.

Travel

Applicants are not requesting funds for traveling.

Equipment

Use of construction equipment will be arranged by contractor as part of the construction contract. No separate equipment purchases are being claimed.

Supplies and Materials

Supplies and materials will be provided by contractor as part of the construction contract. Materials needed for the project include large rocks, root wads, and willow transplants. The total cost of materials is estimated at \$537,000 for the entire 2.5 miles of project. Materials costs for specific sections of the river are provided in the attached *Concept Plan Cost Estimate for Upper San Juan River (Southwest River Engineering 9/21, Revised by Lotic 12/21)*.

Design, Engineering and Permitting

Applicant and partners will retain a consultant to prepare design and engineering for the project and to obtain needed permits. A competitive bid process will be used to select the consultant. The cost of design and engineering for all the treatments to be constructed over the 2.5 miles of the project is estimated at \$80,000. The cost of permitting, including wetlands delineation, is estimated at \$75,000.

Construction

Applicant and partners will select a contractor to construct the project via a competitive bid process. Estimated construction costs for the entire 2.5-mile project reach are itemized in Table 3, above, and further itemized per project section in the attached *Concept Plan Cost Estimate for Upper San Juan River (Southwest River Engineering 9/21, Revised by Lotic 12/21)*.

Given that cost estimates are based on a conceptual design and that construction will not begin until March 2023, a 20% contingency was applied to the design, engineering, permitting and construction cost estimates for the project.

Environmental and Regulatory Compliance

Applicant has not been able to connect with the local Bureau of Reclamation office to discuss potential environmental and regulatory compliance costs. A \$30,000 item has been added to the budget as a place holder. In addition, the budget includes \$75,000 for permitting and wetlands delineation.

Other Costs

Given the complexity of the project, Applicant and partners intend to retain a Technical Project Manager who will oversee engineering and construction of the project. This approach is anticipated to be more cost efficient than Applicant's hiring an employee for that purpose. The TPM will be selected through a competitive bidding process. \$60,000 has been allocated in the budget for this purpose, based on a projected 3-year design, engineering, permitting and construction process.

Monitoring

A \$20,000 budget was allocated for monitoring the project for 5-years. A small portion of this budget item may be used to establish the monitoring program and any equipment needed before or while the project is being built. No Reclamation funds will be used to conduct monitoring over the proposed 5-year period. Funding from non-federal sources will be used for that purpose.

Indirect Costs

Trout Unlimited will seek reimbursement of its indirect costs using the negotiated NICRA rate of 13.74%. A copy of the NICRA between the U.S. Department of the Interior and Trout Unlimited is attached to this application.

7. Environmental and Cultural Resources Compliance

To allow Reclamation to assess the probable environmental and cultural resources impacts and costs associated with each application, all applicants must respond to the following list of questions focusing on NEPA, ESA, and NHPA requirements. Please answer the following questions to the best of your knowledge. If any question is not applicable to the project, please explain why. The application should include the answers to:

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

Some disturbance of streambanks and the streambed will occur as a result of this project. The most extensive disturbances will occur in locations where old vehicles and pipelines need to be removed from the streambank. These areas do not represent high-quality habitat currently and the impacts of earth moving are not expected to impact air quality or terrestrial animal habitat. Some localized, short-lived sediment inputs are inevitable. Direct impact to aquatic habitats will also occur when excavating equipment is placed on the streambed. Potential impacts on aquatic life will be minimized by coordinating closely with Colorado Parks and Wildlife aquatic biologists. Careful scheduling and sequencing of any/all activities that might impact the quality of aquatic habitat will help ensure that those impacts do not occur during critical times of year (e.g. spawning).

- *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?*

Applicant is not aware of any listed or proposed species or special habitat delineations for those species in the project reach.

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

No impacts are expected to intact wetlands. This project will result in targeted restoration of riparian vegetation along the project reach in areas where historical or contemporary land uses resulted in removal or loss of riparian forests. It is expected that the proposed work will qualify for a CWA 404 nationwide permit.

- *When was the water delivery system constructed?*

Not applicable. Water constructed water delivery systems are not part of the project.

- *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.*

This project is not expected to impact any irrigation system features.

- *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.*

This project is not expected to impact any irrigation system features.

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

No.

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

No.

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

No.

8. Required Permits and Approvals

Applicants anticipate needing a CWA Section 404 Nationwide permit from the USACE. Approval letters from landowners needed for access and bank stabilization will be obtained before construction begins. NEPA, NHPA and ESA authorizations will be required.

9. Letters of Support

Letters of support are included in the Attachments.

10. Official Resolution

The Town of Pagosa Springs' Resolution supporting this grant application and committing to act as Category A partner for the project is included in the Attachments.

ATTACHMENTS

Town of Pagosa Springs Resolution
Pagosa Gateway Project Conceptual Plans
Letters of Support
Concept Plan Cost Estimate
Trout Unlimited Board Resolution

TOWN OF PAGOSA SPRINGS, COLORADO

RESOLUTION NO. 2021-25

A RESOLUTION SUPPORTING A GRANT APPLICATION TO THE BUREAU OF RECLAMATION FOR RECREATIONAL AND ECOLOGICAL ENHANCEMENTS OF THE SAN JUAN RIVER

WHEREAS, the Town of Pagosa Springs ("Town") is a home rule municipality duly organized and existing under Article XX of the Colorado Constitution and the Pagosa Springs Home Rule Charter of 2003, as amended; and

WHEREAS, the Town Council of Pagosa Springs supports Trout Unlimited applying for a Bureau of Reclamation grant, on behalf of the Upper San Juan Watershed Enhancement Partnership and the Pagosa Springs community, for Recreational and Ecological Enhancements of the San Juan River above Pagosa Springs, in an amount of \$350,000; and

WHEREAS, the Town participates on the San Juan River Watershed Enhancement Partnership steering committee who have completed an assessment of the river corridor and as a result has identified river recreational and ecological improvements that will enhance the health of the San Juan River; and

WHEREAS, the Town has approved Resolution 2021-24, supporting the grant application submittal to the Colorado Water Conservation Board in July 2022 for funding of Recreational and Ecological Enhancements of the San Juan River above Pagosa Springs; and

WHEREAS, the Town's 2018 Comprehensive Plan recognizes "*Access to the San Juan River is important for recreation, economic development and community culture. As the natural environment is critical to the tourism industry, its protection is necessary. Balancing access with preservation of the natural system will assure the environment remains healthy and vibrant*".

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PAGOSA SPRINGS, COLORADO as follows:


1. The Town Council of the Town of Pagosa Springs supports Trout Unlimited to submit a grant application to the Bureau of Reclamation for a WaterSmart Environmental Water Resources project grant application in the amount of \$350,000.
2. If the grant is awarded, the Town Council supports the Town of Pagosa Springs serving as the Category A partner and will: Act in partnership with the Trout Unlimited for the grant application and project completion; Agree to the submittal and content of the grant application; and Will participate in the project by providing input, feedback, project oversight and other support for the project as needed.
3. The Town Council of the Town of Pagosa Springs authorizes the expenditure of matching funds in the amount of \$54,000 in 2022, subject to annual appropriations, towards the Colorado Water Conservation Board grant to achieve the completion of the proposed Recreational and Ecological Enhancements of the San Juan River above Pagosa Springs.
4. This resolution to be in full force and effect from and after its passage and approval.

5. Severability. If any part, section, subsection, sentence, clause or phrase of this Resolution is for any reason held to be invalid, such invalidity shall not affect the validity of the remaining provisions.
6. Effective Date. This Resolution shall take effect and be enforced immediately upon its approval by the Council.

ADOPTED this 07th day of December, 2021.


TOWN OF PAGOSA SPRINGS, COLORADO

By



Don Volger, Mayor

Attest:



April Hessman, Town Clerk



Concept Plan Cost Estimate for Upper San Juan River
Prepared by Southwest River Engineering 9/21, Revised by Lotic 12/21

Panels 2-15

11000

Preliminary Cost Estimate		COST (\$)
Preliminary Cost Estimate	Materials	Materials
	Large Rocks 4-5 ft	\$427,200
	Large root wad	\$6,200
	Willow Transplants (gather on site)	\$103,600
	Materials subtotal	\$537,000.00
	Construction	
	Build channel spanning rock grade control structure (60 rocks each)	\$168,000
	Build non spanning rock structure (30 Rocks Each)	\$102,000
	Build bank stablization rock structure (15 Rocks Each avg)	\$141,000
	Build in channel habitat clusters (4 rocks each)	\$27,000
	Trash Removal/disposal from bank	\$80,000
	Channel Shaping	\$135,000
	Transplant Willows	\$103,600
	Seed & mulch all disturbed soil areas with native grass seed mix	\$34,125
	Project mobilization/demobilization	\$20,000
Construction subtotal	\$810,725.00	
Project Subtotal	\$1,347,725.00	
	Permitting/wetlands delineation	\$75,000.00
	Construction Management (12wk)	\$60,000.00
	Final Design Plans/ Bid Process	\$85,000.00
	Contingency(20%)	\$313,545.00
	Total	\$1,881,270.00

\$142.52

\$171.02



Trout Unlimited, Inc. Board of Trustees Resolution
Authorizing Application to Bureau of Reclamation Notice of Funding Opportunity
No. R22AS00026, Environmental Water Resources Projects for FY2022:

"Pagosa Gateway Project"

Whereas: Trout Unlimited, Inc. ("Trout Unlimited") has prepared an application for funding to implement stream improvement projects to address flow reduction and warming caused on Colorado's San Juan River by drought and to preserve aquatic habitat in the face of expected worsening conditions due to climate change;

The Board of Trustees of Trout Unlimited, upon motion made, seconded, and duly carried, it is hereby **RESOLVED** that:

1. Trout Unlimited is authorized to submit an application to the Bureau of Reclamation for grant assistance for the above-titled project.
2. Trout Unlimited has prepared and reviewed the application, and Chris Wood, President and Chief Executive Officer of Trout Unlimited, or his designee, is authorized to sign the application and enter into a funding agreement, if awarded.
3. Any grant assistance received under this application will be used for costs associated with implementation of the above-titled project. Trout Unlimited is authorized to commit to the provision of in-kind contributions and other resources identified in the funding application, and will work with Reclamation to timely meet all deadlines associated with an award of funding.
4. Trout Unlimited acknowledges that if the Bureau of Reclamation approves grant assistance for the project, the Bureau of Reclamation will pay Trout Unlimited only on a reimbursement basis. Trout Unlimited understands reimbursement basis means that Trout Unlimited will only request payment from the Bureau of Reclamation after Trout Unlimited incurs eligible and allowable costs and pays them.

Trout Unlimited
Board of Trustees

Attested by: Patricia I. Sturgeon

Position: secretary

Date: 12/8/21