

Modernization of the Maybell Irrigation District's Diversion from the Yampa River in Colorado

Proposal submitted under Bureau of Reclamation Funding Opportunity No. R22AS00026: WaterSMART Environmental Water Resources Projects for Fiscal Year 2022

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(Category B applicant)
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In partnership with: Maybell Irrigation
District (Category A entity)

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1 Technical Proposal and Evaluation Criteria

1.1 Executive summary

- **Date:** December 6, 2021
- **Applicant name:** The Nature Conservancy – Colorado
- **Applicant Location (City, County, State):**
 - Category B applicant (The Nature Conservancy) – Boulder; Boulder County, Colorado
 - Category A partner (Maybell Irrigation District) – Maybell; Moffat County, Colorado
- **Applicant Type:** Category B applicant working with Category A partner

The Nature Conservancy is applying as a nonprofit Category B applicant working in partnership and with the agreement of the Maybell Irrigation District, one of the largest water management entities for over two hundred miles on the lower Yampa River in Colorado. The Nature Conservancy and Maybell Irrigation District are currently collaborating on the design and engineering of this project, with all work being completed in coordination with Maybell Irrigation District as owner of the diversion and headgate structure in need of modernization. The partnership letter is included in Appendix A to this proposal.

- **One-paragraph Project Summary:**

The Nature Conservancy and the Maybell Irrigation District will improve and modernize the Maybell diversion on the Yampa River, located approximately 40 miles west of Craig, CO. The proposed project will reconstruct the instream diversion to allow for safe passage of fish and paddlers at a location that currently impedes fish movement and poses a boating hazard. The project also will enable irrigators to access and control irrigation water without the need for annual construction of a gravel push-up dam to direct water into the Maybell Ditch headgates. Engineering, design, and permitting for the project are already underway. The project is located in designated critical habitat for three endangered fish (Bonytail, Colorado pikeminnow, and Razorback sucker) and one threatened fish (Humpback chub). The project is intended to improve habitat and fish passage for these species. In addition to The Nature Conservancy serving as the project manager for the effort, key project partners include the Maybell Irrigation District, the Upper Colorado River Endangered Fish Recovery Program, the Yampa-White-Green Basin Roundtable, and the local non-profit organization, Friends of the Yampa. The project is supported by planning documents that include the Yampa-White-Green Basin Implementation Plan, the Upper Colorado River Endangered Fish

Recovery Program’s 2021 Recovery Implementation Program Recovery Action Plan, and the Yampa River Basin’s Integrated Water Management Plan’s Diversion Infrastructure Assessment.

- ***Project schedule***

The construction period for the project is estimated to be 4 months, with the project slated to begin construction by September 15, 2022. The estimated completion date is mid-December 2022. If there are delays in any environmental or compliance approvals, then part of the construction may extend to 2023.

- ***Federal facility status***

The project is located on Federal land managed by the U.S. Bureau of Land Management (BLM) but is not a federal facility. The Maybell Irrigation District holds a Right-of-Way in perpetuity for the diversion, which was constructed on public land before the enactment of the Federal Lands Protection and Management Act of 1976.

1.2 Project location

Provide specific information on the proposed project location or project area, including a map showing the geographic location.

The project “Modernization of the Maybell Irrigation District’s Diversion from the Yampa River in Colorado” is located on the Yampa River in Moffat County, CO, approximately 40 miles west of the town of Craig, CO. The project latitude is 40.47319 and longitude is -107.99206. See Figure 1 for a map of the project site.

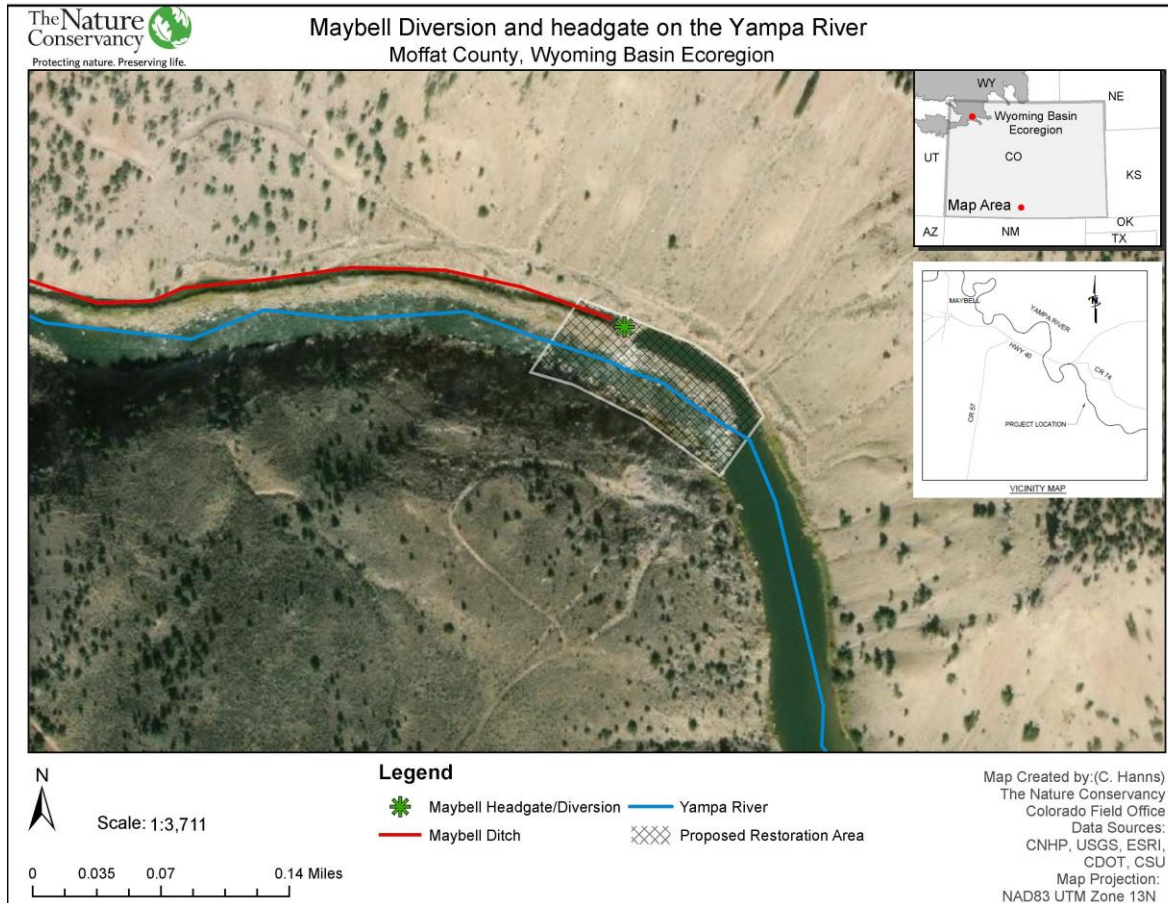


Figure 1. Project Location on the Yampa River.

1.3 Technical project description

Provide a more comprehensive description of the technical aspects of your project, including the work to be accomplished and the approach to complete the work. This description should provide detailed information about the project including materials and equipment and the work to be conducted to complete the project.

This project focuses on in-channel work to improve fish movement through the project reach, benefit instream habitat, and enable safe boat passage. The project will also allow irrigators to reliably divert irrigation water without the need for annual construction of gravel push-up dams which disrupt aquatic habitat and are costly to build and maintain.

This project is a phase of a larger modernization and efficiency effort on the Maybell Ditch which has included past work to install and operate wastegates, employ check dams, and line a portion of the ditch with a geomembrane liner (funded by a previous

Bureau of Reclamation WaterSMART grant). The larger effort also includes a planned modernization of headgates and other ditch intake infrastructure with an integrated supervisory control and data acquisition (SCADA) system to better control the rate and timing of water diversion. Because the project is located in a remote location with difficult access, the overall effort requires significant improvements for access and constructability, including road improvements and development of staging areas for construction. Separate funding is being sought for these separate components of the project – the costs and benefits of these are not described in this proposal.

1.3.1 In-channel work

The existing Maybell diversion structure consists of a 425' long weir that extends 350 feet upstream from the Maybell ditch headgate before curving south to tie into the south bank of the Yampa. The weir crest is composed of a loose collection of boulders and large cobble. Immediately below the weir crest is a scattering of large boulders, several of which are over 10-feet in diameter. Fish passage is possible through the project reach, but some species and life stages are likely blocked at lower flow rates by the initial drop over the weir crest, which is almost 3 feet at low flows around 550 cfs (Figure 2). The configuration and size of these boulders also makes boat navigation through the diversion difficult and hazardous at low flows.



Figure 2. Existing conditions at low water (553 cfs) show the diversion of water into the Maybell Ditch to the right and the steep drop-off toward the main channel of the Yampa to the left. (Photo: J-U-B Engineers)

The proposed in-channel improvements are designed to better distribute the water surface elevation change to improve fish passage and reduce the boating hazard

through the diversion, while maintaining similar headgate water surfaces as existing conditions at equivalent flow rates. These improvements will consist of a series of boulder grade control structures. The design goal is to maintain at least 6-inches of water depth for at least some portion of each grade control for as low a flow as possible. The 30% design process included two different alternatives to illustrate the type of instream work that can meet project goals (Figure 3). Specific design elements, including the number of structures, are continuing to be refined through the final engineering and design process to meet design criteria, which will include a further refinement of critical flow rates for evaluating fish passage. An optional fishway may be included to facilitate fish passage during low flow periods. Imported material will be required for construction of the in-river infrastructure because the quantity of rock needed is beyond what can be obtained on site. The project intends to use locally quarried, high-quality limestone.

The proposed in-channel improvement work will also need to provide a reliable water source for irrigators. The existing diversion crest is fairly porous and allows water to flow through versus over the diversion crest. As a result, during low flow periods like summer 2021, the diversion's ability to capture river flow is decreased and irrigators have constructed a large push-up dam to divert water into the Maybell ditch. To meet irrigation needs reliably without the need for a push-up dam, the project proposes to use grout to fill void spaces between boulders for the upstream boulder grade control feature. The upstream structure is the only feature that controls water flowing into the Maybell Ditch. The grouted boulder section would extend several feet below the river level. The grouted section would not include the top 6 inches of the boulders, to limit its visibility and provide spaces for bottom swimming fish species to pass through the structure.

Because the Yampa River has unpredictable spring flows and a harsh winter climate – combined with the need for irrigators to obtain water through the irrigation season – the most cost-effective time for construction will be the fall of 2022. Irrigators have indicated that they would be willing to shutdown irrigation deliveries in September to accommodate construction.

The in-river work necessary for this project includes care and diversion of the Yampa River and placing imported rock and fill material according to the design plans and specifications. The proposed construction schedule would begin in-river work in September. The “care of water” plan would dictate how and water would be bypassed

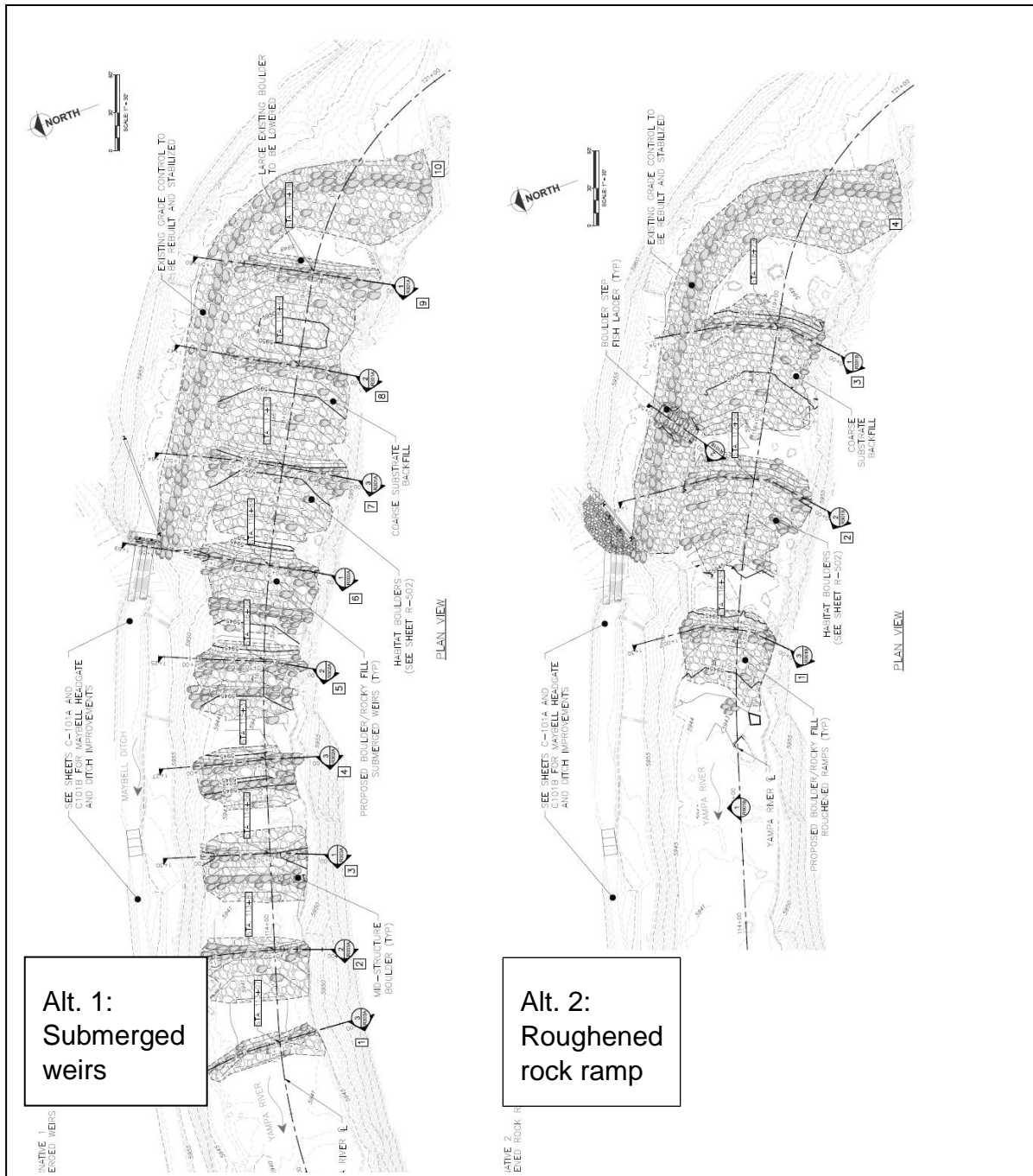


Figure 3. Plan-view comparison of Alternative 1 (submerged weirs) and Alternative 2 (roughened rock ramp) from 30% design for in-stream improvements to the Maybell diversion. (Source: J-U-B).

through or around the existing infrastructure to enable irrigation deliveries at least through mid-September. The contractor will “dry down” the center of the main channel to allow for installation of the in-river structures, which will include some areas of grouted boulder to prevent water infiltration. One to two weeks of curing time will be required for any areas with grout. Approximately 6 – 9 weeks of instream work are slated for construction.

Site restoration will proceed in the spring, including planting of willows to improve riparian habitat conditions where current habitat is degraded or may be impacted by construction.

1.4 Performance measures

All applicants are required to provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project. Please describe the performance measures for your project within the evaluation criteria section of your application.

The project will include short-term and long-term performance measures for assessing and quantifying project benefits. Short-term performance measures include using a construction monitor to ensure that the project has been constructed according to project specifications. Long-term performance measures include evaluations of fish and boat passage through the diversion. These performance measures are discussed more fully in Section 1.5.5.

1.5 Evaluation criteria

The Maybell project meets all of the evaluation criteria set forth by the Bureau of Reclamation. The following sections address each of the evaluation criteria in order.

1.5.1 Evaluation Criterion A – Project Benefits (35 points)

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.

As discussed below, the Maybell project will provide ecological benefits, including benefits to four endangered or threatened fish species, while also providing benefits for multiple water uses, including irrigators and recreational users. Promoting the recovery of endangered fish is a priority conservation target in the reach of the Yampa downstream of the Maybell diversion. The Maybell Irrigation District’s historic depletions are covered under the 2005 Final Programmatic Biological Opinion (Yampa PBO) on

the Management Plan for Endangered Fishes in the Yampa River Basin (U.S. Fish and Wildlife Service, 2005). By modernizing Maybell’s diversion, the project provides an enduring outcome for improving fish passage in the Yampa and providing endangered fish with the ability to access habitat upstream and downstream of the project area more easily.

1.5.1.1 Sub-Criterion A.1 – Benefits to Ecological Values

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.***

The Maybell diversion modernization project will benefit four endangered or threatened fish species and other aquatic and riparian species in the Yampa. The Maybell reach of the river (from the point of diversion to the end of the ditch where water returns to the Yampa) is home to three endangered fish species [Bonytail (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), and the Razorback sucker (*Xyrauchen texanus*)] and one threatened species [Humpback chub (*Gila cypha*)], whose movement is often constrained by low flows in the channel and channel obstructions, especially during irrigation season (April – October). These fish are an important part of Colorado’s heritage and water history. The Colorado pikeminnow, for example, is a large fish (commonly 2 – 3’ in length) thought to have evolved more than three million years ago. The pikeminnow is adapted to warm rivers and requires uninterrupted passage and a hydrologic cycle characterized by large spring peaks of snowmelt runoff and lower, relatively stable base flows.

- ***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 will improve water supply reliability and riparian ecological habitat conditions for the four endangered or threatened fish species that are the focus of the Upper Colorado River Endangered Fish Recovery Program (“Recovery Program”). Currently, fish passage is compromised through the large boulders that were placed in the river before 1900 to direct water to the diversion; fish passage also is compromised when the irrigators build large gravel push-up dams in the river to direct water to the

Maybell diversion. In addition, low flows are a known stressor for these fish. Under low flow conditions, movement of the endangered fish is hindered in the lower Yampa River and the fish are often confined to small pools of deeper water where they are vulnerable to predation by nonnative fish. Releases of water from the Elkhead Reservoir Fish Pool help to mitigate these risks. Through enabling improved fish passage at the Maybell Diversion, this project can assist in reducing the predation risks that occur during low-flow conditions in the Maybell reach of the Yampa, providing long-term benefits for the four endangered or threatened fish and other species that are stressed by low flows and an inability to move freely through the reach. Yampa flows and movement of sediment also benefit habitat for endangered fish in the Green River downstream of the Yampa confluence, a primary concern in the Upper Colorado River watershed. This project will help maintain the movement of water and sediment in the river.

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.

In addition to providing benefits to ecological values, this project also benefits multiple water uses, including agricultural and recreational. By improving the diversion structure, irrigators will no longer undertake the costly annual construction of a push-up dam. The project will reduce potential shortages for those who have been unable to access their decreed water rights as well as preserve the current irrigated acres along the Maybell Ditch. The project will also improve passage and safety for recreational boaters at the diversion site, allowing multiple-day float trips to proceed through this reach down to Dinosaur National Monument. For recreational users, the Maybell reach is noted as one of the most hazardous places for paddling due to landslides, large boulders that block the river, and gravel push-up dams that hinder fish and boat passage. During certain flow conditions, boaters need to portage around the Maybell diversion due to the drop in flow velocities and exposed rock in the channel. These boaters inadvertently increase erosion and damage riparian vegetation on the riverbanks as well as facing hazards themselves. This project will allow for safe passage of boaters during flow conditions when recreational use of the Yampa is high, improving safety for recreational boaters at the diversion site and preserving the quality of riparian habitat.

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

Project Benefits for Watershed Management Projects

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.

As described above, this project will benefit three federally endangered and one federally threatened species that are managed through the Recovery Program. The Humpback chub was recently reclassified from endangered to threatened on October 15, 2021. Other native fish, including flannelmouth sucker, bluehead sucker, and roundtail chub, will also benefit from this project.

As stated in the Recovery Program's 2021 Recovery Implementation Program Recovery Action Plan (RIPRAP), "the overall goal for recovery of the four endangered fishes is to achieve naturally self-sustaining populations and to protect the habitat on which those populations depend." This project is located in the 80-km designated critical habitat reach for the four fishes on the lower Yampa. The RIPRAP "identifies the actions that are necessary to recover the endangered fishes, including schedules and budgets for implementing those actions." Key recovery elements include (but are not limited to): 1) identify and protect instream flows, 2) restore and protect habitat, and 3) reduce negative impact of nonnative fishes and sportfish management activities (Upper Colorado River Endangered Fish Recovery Program, 2021a).

Under the "restore and protect habitat" element, the 2021 RIPRAP highlights this project (as part of the larger modernization and efficiency effort at the Maybell Ditch), noting:

In partnership with the Maybell Irrigation District, The Nature Conservancy is working to rehabilitate the diversion and modernize the headgate, ensuring that the diversion provides water to the users who need it. At the same time, TNC is coordinating with the recreation community to ensure safe passage of watercraft through the new diversion. The three parts of the project – lining the ditch, replacing the headgate, and rehabilitating the diversion – will improve efficiency, water flow and habitat for native fish. (Upper Colorado River Endangered Fish Recovery Program, 2021a, pp. 12 – 13)

As noted previously, the ditch lining has been completed and separate funding is being pursued for the headgate replacement - the project that is the subject of this proposal is the diversion rehabilitation.

Furthermore, the RIPRAP notes that:

The Recovery Program has been evaluating agricultural diversion structures in the Yampa River and has discovered that although not all of these structures impeded Colorado pikeminnow passage, annual bulldozing in critical habitat in the river required to maintain many of these structures may destroy or adversely modify fish habitat. Upgrading these structures so that they are more secure would eliminate the need for annual bulldozing and consequent adverse

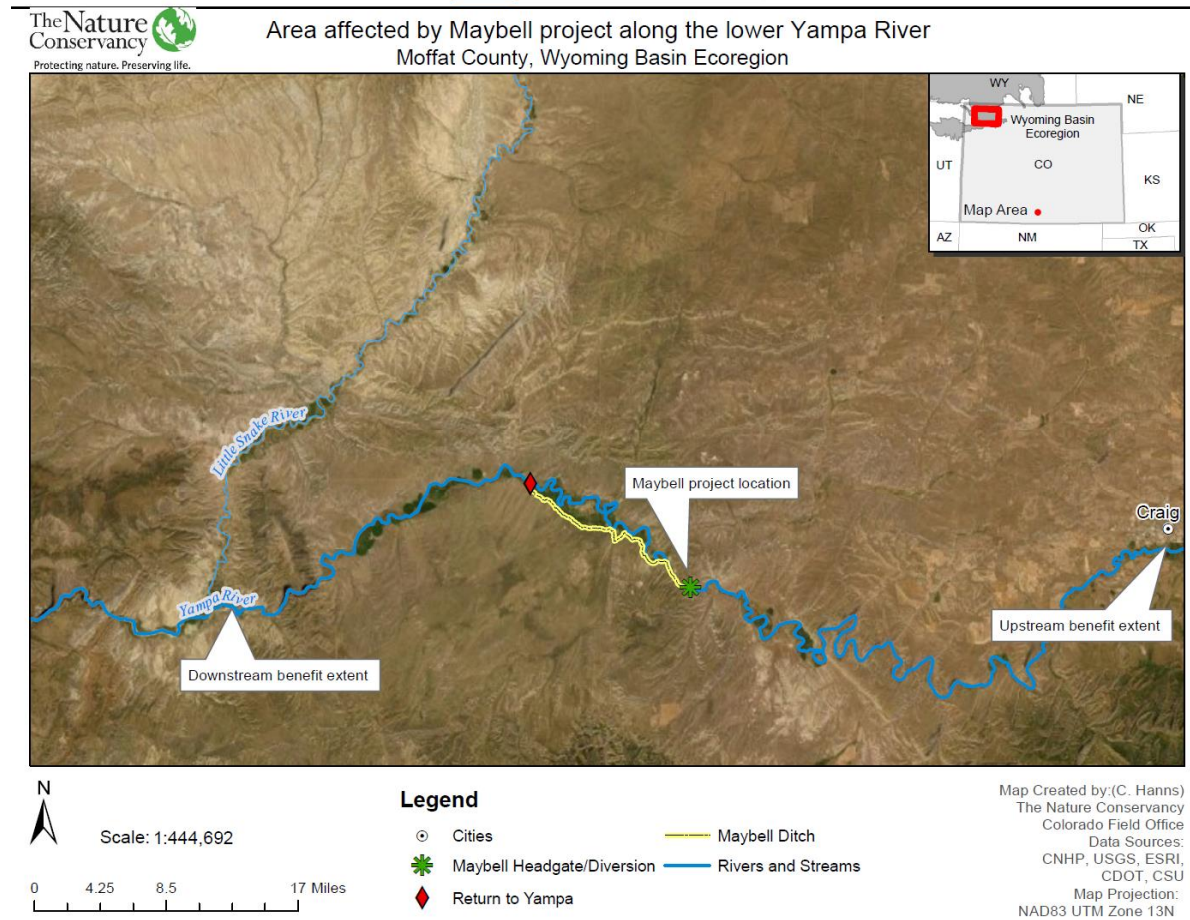
modifications of critical habitat. (Upper Colorado River Endangered Fish Recovery Program, 2021a, Appendix-2)

This project is intended to prevent the annual bulldozing of a gravel pushup dam at the Maybell Diversion.

Geographically, the project's focus is restoring and protecting habitat at the site of the largest water diversion within the 80-km designated critical habitat reach. A study of pikeminnow movement in the Yampa documented how pikeminnow traverse the Maybell diversion as part of their pre-spawning and post-spawning migration and noted the influence of minimum flows on that passage (Modde et al., 1999). Modde et al. (1999) also documented the use of deeper pool habitat near Maybell. This project is being designed to meet scientifically based habitat recommendations for fish movement and pool depth, to optimize fish habitat through the diversion.

The project is expected to improve fish access to habitat from downstream of Craig, CO to near the confluence of the Yampa and the Little Snake River – a distance of over 55 miles (Figure 4).

Figure 4. Area affected by Maybell diversion modernization project.



This project is part of the portfolio of activities that are needed for successful achievement of Recovery Program goals. Because this project is embedded within a large number of recovery actions that all combine to help achieve the Recovery Program goals, it is not possible to separately quantify the benefits of this project on the four endangered or threatened fishes.

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.

The proposed project is a multi-benefit project for agricultural and recreation uses, in addition to the environmental benefits. The irrigators who rely on the Maybell Diversion will benefit from an improved diversion structure that can provide more efficient conveyance and improve control of water to the ditch, enabling the irrigators to access water without the need for annual construction of a gravel push-up dam to direct water to the headgates. The current agricultural infrastructure of the Maybell Diversion dates back to 1896 and can no longer be operated in a reliable and efficient manner. Modernizing the agricultural water infrastructure will increase the reliability and efficiency of water diverted to the Maybell Ditch and decrease annual operational costs, providing more resilience to the Maybell Irrigation District as they confront a future of increasing temperatures and decreased water supplies (Lukas and Payton, 2020), and highly volatile livestock markets (Herrold, 2021).

The project is also being designed to improve the safety of recreational boaters. Colorado Parks and Wildlife notes the Maybell diversion as a diversion hazard between the Juniper Canyon and Maybell Bridge access points (see: <https://cpw.state.co.us/placestogo/parks/YampaRiver/Pages/Boating.aspx>). The non-profit Friends of the Yampa notes that boaters must scout the diversion to avoid being pulled into the head gate and suggests that canoes and other small open boats that don't want to run the diversion can portage at this spot (<https://friendsoftheyampa.com/wp-content/uploads/2018/06/Floating-the-Yampa-River-Steamboat-Springs-to-Cross-Mtn.pdf>). Because of steep banks in this location, portage increases streambank erosion and can impact riparian vegetation. American Whitewater and Colorado Parks and Wildlife estimate an average of 200 people per year float the Yampa River through Juniper Canyon, near the Maybell Diversion. This project will contribute to safer passage for these recreational activities in the Yampa.

1.5.2 Evaluation Criterion B – Collaborative Project Planning (25 points)

Was the proposed project described in your application developed as part of a collaborative process by:

- ***A watershed group, as defined in section 6001 of the Cooperative Watershed Management Act? Or***
- ***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)?***

The proposed project emerged from a collaborative process between the Maybell Irrigation District (a water user) and multiple stakeholders with diverse interests in a healthy Yampa River. In 2015, collaborative discussions began between representatives of Maybell Irrigation District, Colorado River Water Conservation District, the Recovery Program, Yampa Division Engineer, and Upper Basin Water Users. These discussions emerged from the need to augment summer low flows in the lower Yampa River between Elkhead Creek and the Green River to benefit the three endangered and one threatened fish species described in Section 1.5.1. Through these discussions, the parties identified additional structural improvements to the Maybell canal that would help meet Recovery Program goals for the endangered fish. The Maybell Irrigation District and The Nature Conservancy began collaborating in 2017 on these additional structural improvements to the Maybell canal (also referred to as the Maybell Ditch) and headgate to improve the efficiency of the ditch, reduce excess diversions, reduce tail water returns, and result in additional water in the river. These improvements were completed between 2018 and 2020 and included:

- Installation of three check structures (overshot gates) in the canal.
- Rebuilding and lining 1300 feet of the canal.

Canal lining was funded by a previous Bureau of Reclamation WaterSMART grant.

The proposed project is a phase of a larger modernization and efficiency effort at the Maybell Ditch which includes the past work described above and a planned modernization of headgates and other ditch intake infrastructure with an integrated supervisory control and data acquisition (SCADA) system to allow for better control of the rate and timing of water diversion. The specific proposed project for this grant is a collaboration between the Maybell Irrigation District (the water user), The Nature Conservancy (an environmental nonprofit), and Friends of the Yampa (a non-profit focused on river recreation). These stakeholders have come together to pursue this project to modernize the Maybell diversion because it can provide diverse benefits including:

- increasing the ease and efficiency of irrigation along the historic Maybell Ditch (a benefit to the water user)
- improving fish passage at the site for the four endangered or threatened fish species (an environmental benefit of interest to The Nature Conservancy)
- providing safe recreation (a benefit of interest to Friends of the Yampa and other recreational stakeholders).

The proposed project is supported by a multi-state, regional plan (the Upper Colorado River Endangered Fish Recovery Program) and by a river basin plan in Colorado (the Yampa-White-Green Basin Roundtable Basin Implementation Plan). These two planning efforts are described below in Sections 1.5.2.1 and 1.5.2.2.

1.5.2.1 Upper Colorado River Endangered Fish Recovery Program

Describe the strategy or plan that supports your proposed project.

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

As noted in Section 1.5.1.2 of this proposal, this project furthers the goals of the existing Upper Colorado River Endangered Fish Recovery Program which was established in 1988:

to help bring four species of endangered fish back from the brink of extinction: the humpback chub, bonytail, Colorado pikeminnow, and razorback sucker. The Recovery Program is a unique partnership of local, state, and federal agencies, water and power interests, and environmental groups working to recover endangered fish in the Upper Colorado River Basin while water development proceeds in accordance with federal and state laws and interstate compacts (Upper Colorado River Endangered Fish Recovery Program, 2021b).

Management actions are detailed in the Recovery Goals documents developed for each of the four species. Annually, the Recovery Program prepares a Recovery Implementation Program Recovery Action Plan (RIPRAP), for the following purpose:

The Recovery Implementation Program Recovery Action Plan (RIPRAP) . . . identifies specific actions and time frames currently believed to be required to recover the endangered fishes in the most expeditious manner in the Upper Basin. The RIPRAP is the Recovery Program's long-range plan. It contains dates for accomplishing specific actions over the next 5 years and beyond (Upper Colorado River Endangered Fish Recovery Program, 2021a).

- ***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?***

The RIPRAP focuses on issues related to the health of the four endangered or threatened species, with major elements in the Plan that include:

- Identify and protect instream flows
- Restore and protect habitat
- Reduce negative impacts of nonnative fishes and sportfish management activities.

Because of the importance of protecting instream flows for the benefit of the endangered fish, a major purpose of the Plan is 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)?***

A WaterSMART Basin Study was completed for the Colorado River Basin in 2012 (Bureau of Reclamation, 2012). The Study raises concerns regarding the reliability of the Colorado River system to meet future Basin resource needs, including water needs for endangered species. The Study focused on resolving supply and demand imbalances. The proposed project is focused on instream habitat improvement and improved fish passage and thus it does not specifically address an adaptation strategy from the Study that is associated with water supply and demand. However, other phases of the Maybell improvement effort do address water supply and demand through improved and automated control of the irrigation system.

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

The Upper Colorado River Endangered Fish Recovery Program is a collaborative effort among the following program partners:

- State of Colorado

- State of Utah
- State of Wyoming
- Bureau of Reclamation
- Colorado River Energy Distributors Association
- Colorado Water Congress
- National Park Service
- The Nature Conservancy
- U.S. Fish and Wildlife Service
- Utah Water Users Association
- Western Area Power Administration
- Western Resource Advocates
- Wyoming Water Association

The Upper Colorado River Endangered Fish Recovery Program received the Department of Interior's Cooperative Conservation Award in 2008 that “recognizes groups and individuals who achieve excellence in conservation through collaboration and partnerships.” The program partners listed above represent diverse interests including water users, energy distributors, federal and state entities, and environmental organizations.

The Nature Conservancy (the applicant for this project) is one of the partners for the Recovery Program. The Recovery Program strategy and specific planning efforts are applicable to this project because the Recovery Program motivated the initial collaboration between the Maybell Irrigation District and The Nature Conservancy. The Nature Conservancy is committed to this project because of its importance for benefiting endangered fish.

Describe how the plan or strategy provides support for your proposed project.

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

The 2021 Recovery Implementation Program Recovery Action Plan (RIPRAP) for the Recovery Program “identifies the actions that are necessary to recover the endangered fishes, including schedules and budgets for implementing those actions.” The proposed project helps implement the goal in the plan of “restore and protect habitat.”

Furthermore, under the “restore and protect habitat” element, the 2021 RIPRAP highlights the proposed project (as part of the larger modernization and efficiency effort at the Maybell Ditch), noting:

In partnership with the Maybell Irrigation District, The Nature Conservancy is working to rehabilitate the diversion and modernize the headgate, ensuring that the diversion provides water to the users who need it. At the

same time, TNC is coordinating with the recreation community to ensure safe passage of watercraft through the new diversion. The three parts of the project – lining the ditch, replacing the headgate and rehabilitating the diversion – will improve efficiency, water flow and habitat for native fish (Upper Colorado River Endangered Fish Recovery Program, 2021a, pp. 12 – 13).

The relevant sections from this plan are included in Appendix B to this proposal.

1.5.2.2 Yampa-White-Green Basin Implementation Plan

Describe the strategy or plan that supports your proposed project.

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

The proposed project aligns with the Colorado Water Plan, and with the goals of the local Yampa-White-Green Basin Roundtable which is one of the nine grassroots water policy roundtables established in Colorado to develop locally driven, collaborative solutions to water supply challenges.

The Colorado Water Plan “is the state’s framework for solutions to its water challenges. It guides future decision-making to address water challenges with a collaborative, balanced, and solutions-oriented approach” (Colorado Water Conservation Board, 2021). The first plan was released in 2015; Colorado is now working on an update to the plan for 2022.

The Basin Roundtables play an important role in the framework of the Colorado Water Plan. In 2015, each roundtable developed its own Basin Implementation Plan that “framed regional values and offered strategies for how each basin's future water needs will be addressed at the local level.” The 2015 Basin Implementation Plans are also going through an update process, with draft revised plans slated for completion in early 2022. The Basin Implementation Plan relevant to this project is the Yampa-White-Green Plan (Yampa/White/Green Basin Roundtable, 2022).

- **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?**

The Yampa-White-Green Basin Implementation Plan identifies eight primary basin goals. Bold highlighting is added below to identify the primary basin goal in alignment with the proposed project.

Protect the YWG Basin from compact curtailment of existing decreed water uses and some increment of future uses.

Restore, maintain, and modernize water storage and distribution infrastructure.

Protect and encourage agricultural uses of water in the YWG Basin within the context of private property rights.

Improve agricultural water supplies to increase irrigated land and reduce shortages.

Identify and address Municipal and Industrial (M&I) water shortages

Quantify and protect environmental and recreational water uses.

Maintain and consider the existing natural range of water quality that is necessary for current and anticipated water uses.

Develop an integrated system of water use, storage, administration and delivery to reduce water shortages and meet environmental and recreational needs (Yampa/White/Green Basin Roundtable, 2022).

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

As noted above, one of the eight goals of the plan is to quantify and protect environmental and recreational water uses. The plan notes that “[e]nvironmental and recreational water uses are critical to the economy and way of life in the YWG Basin. The YWG BRT recognizes the economic value of the relatively natural flow regimes of the Yampa and White river systems. This goal addresses how to protect these values” (Yampa/White/Green Basin Roundtable, 2022).

- ***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 noted above, this project does not specifically address an adaptation strategy from the 2012 WaterSMART Basin Study for the Colorado River Basin (Bureau of Reclamation, 2012). This project is focused on instream habitat improvement and improved fish passage and not targeted to address water supply and demand.

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?***

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

The Yampa-White-Green Basin roundtable is designed as a grassroots process to give local communities a strong voice in water management. The members of the roundtable include county commissioners; municipal representatives; representatives of local water conservancy districts; representatives for environmental, recreational, agricultural, municipal, and industrial interests; and at-large representatives for the basin. In addition to the formal members, any interested citizen or organization is afforded the opportunity to attend roundtable meetings and submit comments on draft documents.

The plan is applicable to this project because it is the overarching plan for the Yampa-White-Green basin identifying the common goals across diverse stakeholders.

Describe how the plan or strategy provides support for your proposed project.

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

The Yampa-White-Green Basin roundtable has been strongly supportive of the proposed project and the larger effort to which this project contributes. The Basin roundtable approved funding for other project phases and wholeheartedly endorsed the project. The project addresses multiple goals of the 2015 Yampa-White-Green Basin Implementation Plan and the draft revised Basin Implementation Plan for 2022, including helping to protect environmental and recreational water uses by benefiting fish and recreational passage at the project site and by helping to modernize water distribution infrastructure.

Documentation of the priority status of this project is in the Final 2021 Draft of the Yampa-White-Green Basin's "Intended Project and Process" list. The Maybell Diversion Restoration and Headgate Modernization project is categorized as a Tier 1 project overall (which is the highest priority tier), with a Tier 1 score for "Strongly aligns with Basin Implementation Plan" and a Tier 1 score for "Extensive local planning, organizational support and water rights support the project" (see Appendix B for excerpt).

The relevant sections from the draft revised Basin Implementation Plan for 2022 are included in Appendix B to this proposal.

1.5.3 Evaluation Criterion C – Stakeholder Support (15 points)

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?

All of the phases of the Maybell Diversion improvement project have received high levels of stakeholder support, including the proposed project. The letters of support from the Maybell Irrigation District, Friends of the Yampa (a non-profit with a recreational focus), and the Upper Colorado River Endangered Fish Recovery Program are all included in Appendix A. Maybell Irrigation District provides significant logistical and technical support for the project including coordinating access to the site for contractors, engaging with the engineering contractor in stakeholder meetings, and commenting on engineering designs and plans. Friends of the Yampa and American Whitewater also contribute significant time to engaging with the engineering design process and commenting on engineering plans from the viewpoint of recreational access.

The larger Maybell Diversion improvement project has received support from the Yampa-White-Green Basin Roundtable (see Section 1.5.2) and the Moffat County Board of County Commissioners, who have both provided letters of support for previous grant applications (see Appendix A).

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?

As noted above, the project is supported by entities representing agricultural uses (Maybell Irrigation District and the Yampa-White-Green Basin Roundtable), environmental uses (The Nature Conservancy), and recreational uses (Friends of the Yampa).

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 proposed project is supported by entities responsible for natural resource management within the project area and is consistent with the policies of those agencies. As noted in Section 1.5.2.1, the Upper Colorado Endangered Fish Recovery Program supports the project and has included the project within their annual recovery action plan document (Upper Colorado River Endangered Fish Recovery Program, 2021a). The project is also supported by the Colorado Water Conservation Board (CWCB), which is the state agency that has the mission to “conserve, develop, protect and manage Colorado’s water for present and future generations.” CWCB has provided the grant funding for the current engineering and design phase of the project.

The project design team is working closely with the Bureau of Land Management, who owns and manages the land where the diversion structure is located (see Appendix B for letter).

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 proposed project complements the ongoing water management activities of the Yampa River Basin Integrated Water Management Plan (IWMP). The Yampa-White-Green Basin Roundtable is leading the development of the IWMP to “combine community input with science and engineering assessments to identify actions to protect existing and future water uses and support healthy river ecosystems in the face of growing populations, changing land uses, and climate uncertainty.” The IWMP is coordinated by “a committee of volunteers selected by and reporting to the YWG BRT . . . Committee members have experience in water management, agriculture, fisheries and recreation.” (see <https://sites.google.com/view/ywgroundtable/yampa-iwmp-home-page?authuser=0>).

The IWMP developed an assessment of diversion infrastructure on the Yampa with the following goals:

1. Gain an understanding of infrastructure used for diversions and the range of working conditions currently experienced across the four segments.
2. Identify locations where infrastructure improvements could provide multiple benefits to the Yampa River and water users. Specifically, the Diversion Infrastructure Assessment evaluated opportunities that could benefit the structure owner(s), fish passage, recreational boating, and river health (Wilson Water Group and JUB Engineers, 2020).

In the diversion infrastructure assessment, the Maybell Canal received the highest total score in the entire Yampa Basin, where a high score indicates a greater opportunity for a multi-benefit improvement project at the diversion structure. The report notes:

The diversion point is inside the canyon, which makes access, maintenance, and remote operation a challenge. The in-river diversion infrastructure could be a barrier to fish, depending on the flow conditions, and is difficult for boats to navigate. The headgates and other ditch infrastructure are aging. Recently, the ditch company has implemented and continues to work on improvements, such as lining the canal, automating the waste gate, replacing the flume over the river, and

installing check structures on laterals. The ditch company has received grant funding from the BRT in support of their modernization efforts. The Maybell Canal presents the opportunity to replace the diversion infrastructure with permanent rock weirs and cross vanes designed to meet the needs of irrigation, fish passage and boat passage. The headgates and headwall could be replaced as part of the modernization effort. Bank stabilization upstream of the diversion may also be necessary to protect the structure. This would be a large undertaking, but would greatly benefit the agriculture water users, recreation enthusiasts, and the river health (Wilson Water Group and JUB Engineers, 2020).

Thus, the IWMP process has identified improvements at the Maybell Canal as a high priority in the entire Yampa Basin, complementing the other activities of the IWMP. The proposed project does not duplicate or complicate other efforts but instead can serve as a model for how to design, fund, and implement a complex multi-benefit project in the Basin.

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 site is located on Federal land managed by the Bureau of Land Management (BLM). The BLM has been supportive of the project and is working with the engineering and design team on required permitting and environmental compliance under the National Environmental Policy Act (NEPA). An Environmental Assessment is being prepared, following direction of BLM staff. The BLM is contributing staff time for NEPA coordination and review. The BLM is not completing the project because they do not own or manage the diversion structure. The Maybell Irrigation District holds a perpetual Right-of-Way for the diversion facility itself, which was constructed on public land before the enactment of the Federal Lands Protection and Management Act of 1976 (see Appendix B for letter from the BLM).

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 formal or organized opposition to the proposed project. Stakeholders have expressed different opinions about details of the proposed design during stakeholder meetings. Depending on the design that is ultimately selected for the project, it is possible that some stakeholders will have preferences for a different design and may be disappointed with the selected design. This opposition will be addressed through transparent communication around the design criteria and other constraints (such as

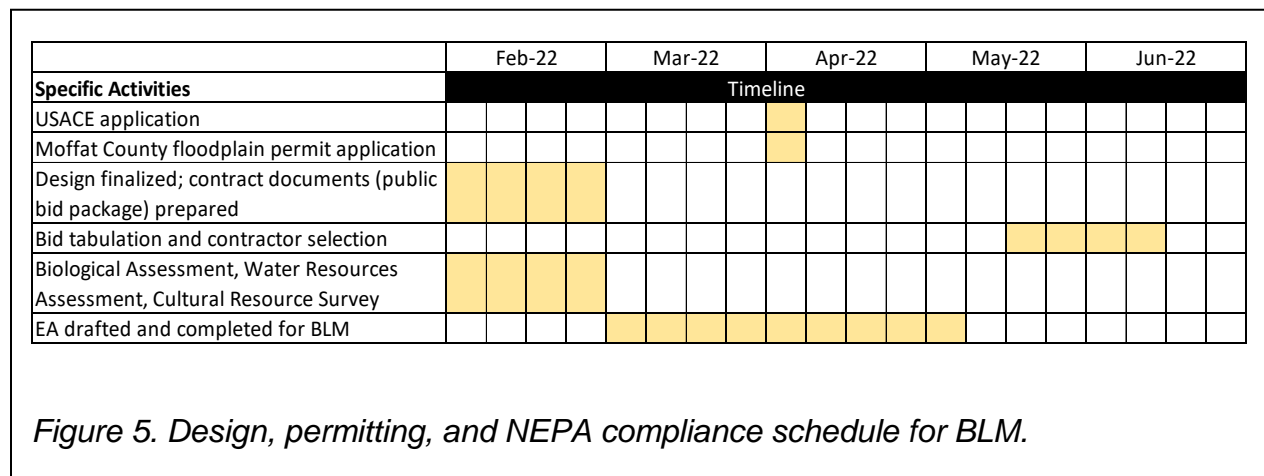
budgetary constraints) that led to the selection of the final design. Opposing or differing perspectives have numerous chances to be heard during the public outreach and stakeholder meetings that have been a part of the design process and through the formal public comment period that will occur for the Environmental Assessment.

1.5.4 Evaluation Criterion D – Readiness to Proceed (10 points)

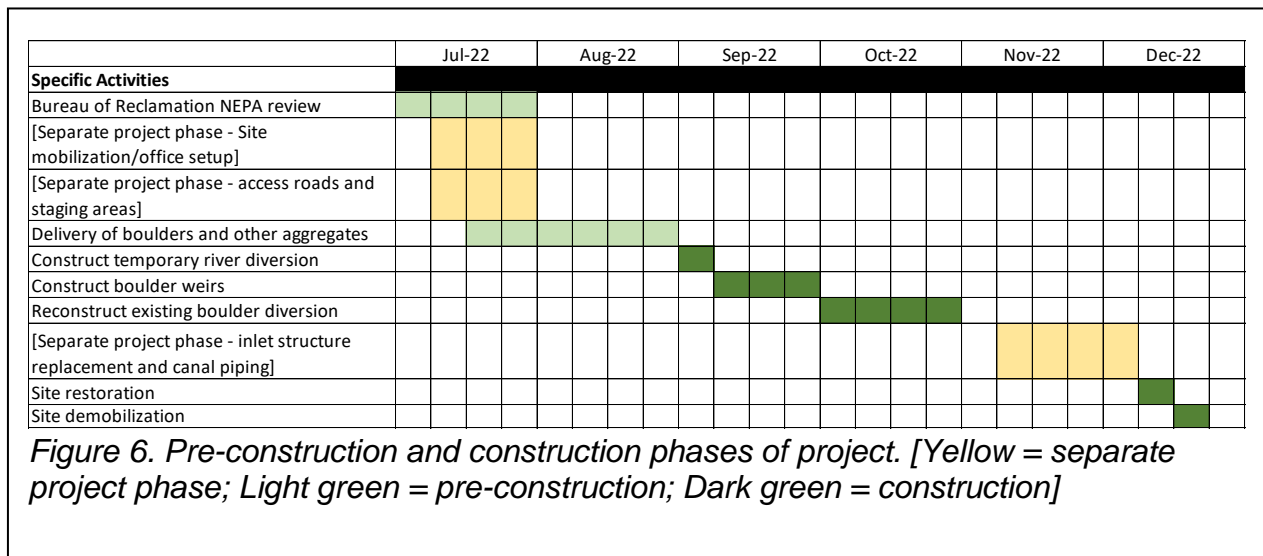
Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. This may include, but is not limited to, design, environmental, and cultural resources compliance,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

This project is planned to be ready for construction by September 1, 2022 with a start date for in-water work of September 15, 2022. The project is currently undergoing engineering and design, under a contract funded by the Colorado Water Conservation Board. The design engineer for the project (J-U-B Engineers) developed an implementation plan for the project which includes completing the engineering, design, and permitting phase; selecting a contractor through a competitive bid process; and proceeding with construction at the end of the irrigation season in 2022, assuming permission from Bureau of Reclamation is in place. As noted previously, the specific project for this grant is part of a larger, multi-phase effort that also includes work to modernize the headgates and operation of the ditch. The construction mobilization effort for the headgate modernization phase of the project will be leveraged for this project, to increase efficiency and avoid the costs of mobilizing twice for work in the same remote area. The scope of work specific to the construction of this project will be wholly separate from the other phases which are being pursued with other funding sources. *The schedule for completing design and permitting is shown in*

Figure 5. The timeline for incorporating Bureau of Reclamation compliance review would occur in July 2022, as part of pre-construction activities.



The schedule for pre-construction and construction work is shown in Figure 6, with pre-construction work scheduled for July and August 2022, including Reclamation’s NEPA review and delivery of materials to the site. In-water construction work for this project would begin in September 2022, after irrigation through the ditch is turned off. The in-water work is expected to be completed in approximately two months, before the onset of winter.



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

The design engineer is also leading the development of environmental permitting and compliance documents. Required permits include Clean Water Act permitting through the U.S. Army Corps of Engineers (USACE) and floodplain permitting through Moffat County. These permit applications will be submitted in early April 2022 after the design is finalized. Because access to the project will take place on land managed by the Bureau of Land Management (BLM), an Environmental Assessment is being prepared with the BLM as lead agency.

The Environmental Assessment (scheduled for completion in May 2022) will incorporate a Biological Assessment, Water Resources Assessment, and Cultural Resources Assessment. Surveys for threatened and endangered species have already taken place. The Bureau of Reclamation’s local field office in Grand Junction, CO has indicated that this work for BLM will facilitate obtaining the environmental and cultural resource compliance required for the project by the Bureau of Reclamation.

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.

The project already has a completed 30% design and the 60% design phase is scheduled to be completed in February 2022. A final design will be selected following the 60% design review and then the design contractor will prepare a public bid package with the intention of the project being put out to bid in March 2022. A contractor will be selected through a competitive, sealed bid process. An initial pre-bid meeting has already been held in the field so potential contractors could see the remote site and ask questions. At this meeting, multiple contractors indicated interest in bidding on the project.

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.

Maybell Irrigation District holds a Right-of-Way in perpetuity for the diversion facility itself, which was constructed on public land before the enactment of the Federal Lands Protection and Management Act of 1976. See Appendix B for documentation of this right-of-way from the BLM. Thus, no additional permission is needed for construction work at the project diversion location, but BLM will need to provide permission for the site access that crosses BLM land. The project management team has already been coordinating closely with BLM on the NEPA process required to enable site access and protect the lands and waters in the project area.

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.

The project budget includes \$5,300 to cover the costs of Reclamation's review of the environmental and cultural compliance documents and any supplemental investigations that Reclamation could require. The Nature Conservancy has communicated with the local Reclamation office in Grand Junction, CO for previous phases of work at Maybell and will continue to coordinate with them on environmental and cultural resource compliance requirements that Reclamation has for this project.

1.5.5 Evaluation Criterion E – Performance Measures (5 points)

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.

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.

Monitoring will ensure outcomes are maintained and will allow collaboration between agricultural users, regulatory agencies, and recreational boaters – telling the story of how the project has benefited multiple users. In addition, if monitoring efforts suggest that expected benefits have not been achieved, the existing relationships and communication protocols allow for the possibility for adaptive management of the diversion to improve outcomes.

More specifically, The Nature Conservancy is committed to a five-year monitoring and adaptive management plan for this significant project, working collaboratively with Maybell Irrigation District and other key stakeholders. The adaptive management cycle for this project will be embedded within an adaptive management process for the larger Maybell Diversion improvement effort, which also includes installation of automated headgates. The process will emphasize “learning while doing” – in line with the Department of Interior’s Technical guide on Adaptive Management (Williams et al. 2009).

To successfully engage in an adaptive management process, the Nature Conservancy will work with other project stakeholders to establish project objectives and metrics, as well as to go through the iterative process of monitoring, assessment, and decision-making. The goals of this specific project are:

- Improve upstream and downstream fish passage through the project reach
- Improve downstream boat passage through the project reach.

These goals need to be accomplished while also enabling the diversion of the full water right of 129 cfs through the headgate and measurement device and completion of the separate phase of work that involves allowing the irrigators to better manage diversions and decrease return flows back to the river at the end of the canal or at other bypass locations.

Together with the guidance and expertise of the engineering contractor team, The Nature Conservancy and Maybell Irrigation District will work to develop specific project

objectives and metrics for the fish passage and boat passage goals of the project. We expect to include physical, hydraulic, and species passage criteria and will request review and input on these criteria from state and federal agency staff. Data collection needs to be efficient and targeted, given the remote location and difficult access to the site. Physical and hydraulic criteria may include minimum water depths, velocities, and grade-control heights. Fish passage monitoring may require novel techniques suitable to a remote location, such as tracking the presence of environmental DNA (eDNA) (e.g., Duda et al., 2021). Friends of the Yampa would assist with outreach to the boating community to develop qualitative metrics of improved boat passage. The Nature Conservancy will also take advantage of any data collection efforts being undertaken by other entities such as the USFWS or Colorado Parks and Wildlife, to utilize that information within the adaptive management process.

Data collected around physical and hydraulic criteria, fish passage, and/or boat passage would be evaluated and compared to the established criteria for this project, and also considered in the context of publicly available irrigation diversion records and stream flow measurements. Possible adaptive management measures in response to various data findings could include additional data collection to better understand findings and, if necessary, modifications to the channel work, if the diversion is not performing as designed.

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

This project addresses two Presidential Priorities as discussed below.

1.5.6.1 Tackling the Climate Crisis at Home and Abroad

This project demonstrates support for Biden-Harris E.O.14008: Tackling the Climate Crisis at Home and Abroad by increasing resilience of important irrigation infrastructure to climate change. The Colorado River Basin is a hotspot for climate change. The Bureau of Reclamation's recent State of the Science report for the Colorado River Basin notes that the basin has seen a substantial warming trend over the past 40 years, with the period since 2000 about 2 deg. F warmer than the 20th-century average temperature (Lukas and Payton, 2020). The report also notes that runoff and water supply in the basin are expected to decline over the next several decades due to warming alone, even if precipitation averages remain constant.

The project builds long-term resilience to these increasing drought conditions by improving a diversion structure that was constructed more than 100 years ago under different hydrological conditions. The improved diversion structure will provide more efficient conveyance of water to the ditch, enabling irrigators to access water without the

need for gravel push-up dams that damage in-stream habitat. The project has an engineered design-life of 50 years – it is intended to be a permanent fixture in the river. As part of a larger multi-benefit resiliency effort for the Maybell Ditch that includes headgate replacement and modernization, the project also contributes to climate change resiliency by demonstrating and improving collaboration and communication among water users. A future of limited water supply along the Yampa and in the Colorado River Basin under climate change will require increased communication and collaboration among water users to reach mutually beneficial outcomes.

1.5.6.2 Disadvantaged or Underserved Communities

The proposed project benefits Maybell, CO by improving and modernizing critical irrigation infrastructure, which is needed for agricultural production. Maybell is a disadvantaged community, as defined by Section 1015 of the Cooperative Watershed Act. The annual median household income in Maybell, CO is \$21,429, which is only 28% of the Colorado median household income of \$72,331. Median income in Moffat County is \$57,229, which is only 79% of Colorado median household income. The irrigators who operate the Maybell Irrigation District require grant funding and outside assistance to be able to implement this modernization project, as a multi-million-dollar project is not within their financial reach to carry out independently.

1.6 References

- Bureau of Reclamation. 2012. Colorado River Basin: Water Supply and Demand Study. Available: [StatusReport_06-02-11_FF_TechCons \(usbr.gov\)](#). (Accessed November 26, 2021).
- Colorado Water Conservation Board. 2021. About the Water Plan (website). <https://cwcb.colorado.gov/colorado-water-plan/about-the-water-plan> (Accessed November 28, 2021).
- Duda, J. J., Hoy, M. S., Chase, D. M., Pess, G. R., Brenkman, S. J., McHenry, M. M., & Ostberg, C. O. 2021. Environmental DNA is an effective tool to track recolonizing migratory fish following large-scale dam removal. *Environmental DNA*, 3(1), 121-141.
- Herrold, B. 2021. Cattle prices remain volatile, with some opportunities. Missouri Farmer Today. October 19 (updated October 21). Available: https://www.agupdate.com/missourifarmertoday/markets/cattle-prices-remain-volatile-with-some-opportunities/article_1717616e-3110-11ec-8311-b3ba724bcbb0.html (Accessed November 28, 2021).

Lukas, J., and E. Payton, eds. 2020. Colorado River Basin Climate and Hydrology: State of the Science. Western Water Assessment, University of Colorado Boulder. DOI: <https://doi.org/10.25810/3hcv-w477>.

Modde, T., W. J. Miller, and R. Anderson. 1999. Determination of habitat availability, habitat use, and flow needs of endangered fishes in the Yampa River between August and October. Final Report to Upper Colorado River Endangered Fish Recovery Program. Denver. Available: <https://coloradoriverrecovery.org/documents-publications/technical-reports/isf/ModdeMillerAnderson1999.pdf> (Accessed November 28, 2021).

Upper Colorado River Endangered Fish Recovery Program. 2021a. Recovery Implementation Program Section 7 Consultation, Sufficient Progress, and Historic Projects Agreement AND Recovery Implementation Program Recovery Action Plan (RIPRAP). July 29. Available: https://coloradoriverrecovery.org/documents-publications/foundational-documents/RIPRAP/2021_final_RIPRAP_508.pdf (accessed November 26, 2021).

Upper Colorado River Endangered Fish Recovery Program. 2021b. Upper Colorado River Endangered Fish Recovery Program Website. <https://coloradoriverrecovery.org/index.html> (accessed November 26, 2021).

U.S. Fish and Wildlife Service. 2005. Final Programmatic Biological Opinion on the Management Plan for Endangered Fishes in the Yampa River Basin. Available: <https://coloradoriverrecovery.org/documents-publications/section-7-consultation/yampaPBO/FinalYPBO.pdf> (accessed November 28, 2021).

Williams, B. K., R. C. Szaro, and C. D. Shapiro. 2009. Adaptive Management: The U.S. Department of the Interior Technical Guide. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC.

Wilson Water Group and JUB Engineers. 2020. Diversion Infrastructure Assessment Final Report for the Yampa River Basin Integrated Water Management Plan. Available: https://drive.google.com/file/d/10yfHaorc0dvxxsHvBw8Wz1XVw8LY_Kxa/view (Accessed November 28, 2021).

Yampa/White/Green Basin Roundtable. 2022. Yampa-White-Green Basin Implementation Plan. January. Draft. Available: <https://drive.google.com/file/d/1sDhKMBqjxzlmfjBuvDptdprcbfNolwaq/view> (Accessed November 26, 2021).

2 Project Budget

The total estimated budget for this phase of the project is \$2,627,575; as the applicant, The Nature Conservancy proposes to contribute 27% of this cost as cash match. As detailed in Section 2.3, 96% of the budget is for construction costs, with the remainder needed for staff time and travel to the site, construction oversight, environmental review costs from the Bureau of Reclamation, and community outreach.

2.1 Funding Plan

The non-federal share of costs for this project phase is \$706,675. The Nature Conservancy as the applicant has already received this amount of funding in private philanthropic donations that can be used for this project; The Nature Conservancy commits to make this funding available to this project.

The budget application assumes that all project costs will be incurred after award.

2.2 Budget Proposal

The total project is \$2,627,575, with \$706,675 to be paid by The Nature Conservancy as the applicant (Table 1).

Table 1. Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$ 1,920,900
Costs to be paid by the applicant	\$ 706,675
Value of third-party contributions	\$ -
TOTAL PROJECT COST	\$ 2,627,575

The Non-Federal funding source for this project is private philanthropic funds raised by The Nature Conservancy in support of water projects in Colorado (Table 2).

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

FUNDING SOURCES	AMOUNT
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Non-Federal Entities	
1. Private donations to The Nature Conservancy (secured)	\$ 706,675
Non-Federal Subtotal	\$ 706,675
REQUESTED RECLAMATION FUNDING	\$ 1,920,900

A detailed breakdown of budget items, following Reclamation’s suggested template is found in Table 3.

Table 3. Budget Proposal for Proposed Project

Budget Item Description	Compu- tation	Quantity	Quantity type	TOTAL COST
	\$/unit			
Salaries and Wages				
Project Manager (Jennifer Wellman, Freshwater Project Director)	\$ 52.47	120	hrs	\$ 6,296
Project Director (Diana Lane, Director of Sustainable Food and Water Program)	\$ 63.02	50	hrs	\$ 3,151
Fringe Benefits				
Full-Time Employees (41.1% of salary)	\$ 22.84	170	hrs	\$ 3,883
Travel				
Round-Trip by car: Yampa, CO to Maybell, CO (mileage) (each trip = 170 miles * 5 trips)	\$ 0.56	850	miles	\$ 476
Yampa, CO to Maybell, CO - per diem (5 full-day trips)	\$ 55	5	days	\$ 275
Round-Trip by car: Boulder, CO to Maybell, CO (mileage) (each trip = 470 miles * 2 trips)	\$ 0.56	940	miles	\$ 526
Yampa, CO to Maybell, CO - per diem (2 1.5-day trips with overnight)	\$ 179	3	days	\$ 536
Equipment				
None - included in Contractor budget				
Supplies and Materials				

Budget Item Description	Compu- tation	Quantity	Quantity type	TOTAL COST
	\$/unit			
None - included in Contractor budget				
Contractual/Construction				
Construction contractor	\$ 2,052,909	1	LS	\$ 2,052,909
Construction oversight contractor	\$ 61,587	1	LS	\$ 61,587
Community outreach consultant	\$ 75	80	hrs	\$ 6,000
Other				
Bureau of Reclamation costs for compliance	\$ 5,300	1	LS	\$ 5,300
TOTAL DIRECT COSTS				\$ 2,140,939
Indirect Costs				
Type of Rate	Percentage	\$base		
Federal NICRA	22.73%	\$ 2,140,939		\$ 486,636
TOTAL ESTIMATED PROJECT COSTS				\$ 2,627,575

2.3 Budget Narrative

The specific items described below are required to complete the proposed project.

2.3.1 Salaries and Wages

Two key personnel are identified for this project:

- The project manager for the work is Ms. Jennifer Wellman, Freshwater Project Director for Northwest Colorado for The Nature Conservancy's Colorado Field Office. Ms. Wellman is responsible for managing all contracts, overseeing

community engagement, and ensuring the project is completed on time and on budget.

- The project director for the work is Dr. Diana Lane, Sustainable Food and Water Program Director for The Nature Conservancy's Colorado Field Office. Dr. Lane is responsible for overall oversight of the project and its outcomes, as well as overseeing fundraising for the project.

The key personnel for the project are supported by administrative personnel, including financial and contracts specialists, whose time are included within the estimated indirect costs.

As indicated in Table 3, we anticipate the project manager spending approximately 20 hours per week on the project during the four months of construction, plus 20 hours during pre-construction activities and 20 hours for compliance with reporting requirements, including the final evaluation. The project director would spend approximately 5 hours per week on the project during the four months of construction, plus 10 hours during pre-construction activities and 20 hours for compliance with reporting requirements, including the final evaluation.

The hourly salary rate for each position is indicated in Table 3.

2.3.2 Fringe Benefits

Fringe benefits for U.S. based employees of The Nature Conservancy are calculated at 41.1% of salary. Fringe benefits include all costs related to health/dental insurance, life insurance, travel and accident insurance, savings and retirement plans, wage continuation plans, workers' compensation, social security tax, vacation, holiday, and sick time.

The fringe benefit rate of 41.1% for full-time staff was negotiated by the U.S. Department of the Interior, Interior Business Center, and The Nature Conservancy for Fiscal Year 2022, in accordance with the authority contained in applicable regulations. These indirect cost rates are for use on grants, contracts, and other agreements with the Federal Government to which Public Law 93-638 and/or 2 CFR Part 200 apply subject to the limitations contained in Section II.A. of the agreement.

2.3.3 Travel

The project manager anticipates making 5 full-day trips from their field office location (Yampa, CO) to the project site (Maybell, CO). The roundtrip is 170 miles, for a total of 850 miles, which would be compensated at the IRS calculated business mileage rate for 2022 of \$0.56 per mile. Because each trip is expected to last 10 – 12 hours (covering all meals), per diem of \$55 per trip is calculated to cover breakfast, lunch, and dinner. No

overnight lodging is anticipated. The purpose of these trips is to coordinate with the community at local project meetings and to participate in construction oversight discussions as the project proceeds.

The project director anticipates making 2 full-day trips from their office location (Boulder, CO) to the project site (Maybell, CO). The roundtrip is 470 miles, for a total of 940 miles, which would be compensated at the IRS calculated business mileage rate for 2022 of \$0.56 per mile. Because each trip is expected to last 1.5 days, per diem of \$179 per trip is calculated to cover meals and lodging. The purpose of these trips is to provide oversight and support for the project manager and to assist with community outreach.

Travel costs are summarized in Table 3.

2.3.4 Equipment

No equipment purchases or rentals (outside of the construction contract) are anticipated.

2.3.5 Materials and Supplies

No materials or supplies (outside of the construction contract) are anticipated.

2.3.6 Contractual

The construction contractor will be responsible for completing the in-water construction that is the core element of this proposed project. The project is currently in 30% Design and The Nature Conservancy received an Opinion of Probable Construction Cost for in-water work (Table 4). These cost estimates will be refined during the Final Engineering and Design phase and then put out for a competitive procurement using a sealed bid process to identify the most qualified bidder.

Table 4. In-water construction cost estimate from J-U-B Engineers for 30% Design.

Item	Description	Unit	Est. Quantity	Unit Price	Amount
1	Care of Water and Erosion Control	LS	1	\$ 230,000	\$ 230,000

Item	Description	Unit	Est. Quantity	Unit Price	Amount
2	Channel Excavation, Stockpile Onsite	CY	1215	\$ 23	\$ 27,945
3	Furnish, Deliver, and Place Boulder Grade Control	TON	741	\$ 184	\$ 136,344
4	Furnish, Deliver, and Place Coarse Substrate Backfill (18-inch D50)	TON	3429	\$ 150	\$ 512,636
5	Place Existing Substrate Stockpiled Onsite	CY	972	\$ 92	\$ 89,424
6	Haul-off and dispose of excavated material	CY	243	\$ 35	\$ 8,384
7	Furnish, Deliver, and Place Flow Diversity Boulders	TON	97	\$ 184	\$ 17,848
8	Re-configure Existing Diversion Structure Using In-Situ Material	CY	4020	\$ 175	\$ 702,617
9	Grout Existing Diversion Structure	CY	4020	\$ 17	\$ 69,345
10	Install Boulder Fish Ladder	LS	1	\$ 34,500	\$ 34,500
11	Bonding (2%)				\$ 31,981
12	Profit and Overhead (12%)				\$ 191,886
	Total				\$ 2,052,909

The proposed project would also include two additional contracts, as specified in Table 3. A construction oversight contractor is an independent, third-party contractor who provides on-site review during construction to ensure that construction proceeds as planned and documents any decisions made in the field. This contract is estimated as a lump-sum of 3% of the construction cost (\$61,587). The oversight contractor would be hired through a competitive process to identify the best value bidder, considering qualifications and cost

A third contractor is a community outreach consultant, responsible for engaging the public, communicating the progress of the project, and relaying any concerns to the project team. Outreach and communication are critical parts of project success. This contractor is estimated to cost \$75 an hour for 80 hours of work, for a total of \$6000. This contractor would be engaged through a competitive RFP process to identify best value, including experience and qualifications.

2.3.7 Third-Party In-Kind Contributions

No third-party in-kind contributions are anticipated.

2.3.8 Environmental and Regulatory Compliance Costs

The NEPA work for this phase of the project is being prepared under a separate contract with BLM as the lead agency. Because this work is already in preparation, the local Bureau of Reclamation field office in Grand Junction estimated BOR compliance costs as \$5300 to cover staff time to review the prepared documents.

2.3.9 Other Expenses

No other expenses are anticipated.

2.3.10 Indirect Costs

Indirect costs of 22.73% were negotiated by the U.S. Department of the Interior, Interior Business Center, and The Nature Conservancy for Fiscal Year 2022, in accordance with the authority contained in applicable regulations. These indirect cost rates are for use on grants, contracts, and other agreements with the Federal Government to which Public Law 93-638 and/or 2 CFR Part 200 apply subject to the limitations contained in Section II.A. of the agreement.

3 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.***

The proposed project is expected to have some level of adverse impact on the surrounding environment during the construction phase of the project. This may include earth-disturbing work for access to the site and developing staging areas, in-channel work to direct water away from the construction site, and disturbance to the stream channel bed where new rock structures are put into place. In addition to the footprint for soil and streambed disturbance, these activities are expected to create minor, temporary impacts to water quality and animal habitat during construction. All of these impacts are being documented through an Environmental Assessment document that is in preparation, with BLM as the lead agency. The engineering design and construction plan for the project will detail steps to be taken to minimize these impacts, including best management practices to prevent spills of fuels or hazardous chemicals and a prevention and restoration plan to avoid introducing invasive species. Based on preliminary conversations with BLM staff, we expect that they will issue a Finding of No Significant Impact.

If the proposed project receives Reclamation funding, our team will work with Reclamation to conduct any additional reviews necessary for Reclamation to approve and/or adopt the NEPA work. The Nature Conservancy maintains excellent working relationships with the local Reclamation office.

- ***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?***

As discussed previously in this proposal, there are three Federally-listed endangered and one threatened fish species in the upper Colorado River Basin. According to the previous EA document “there is critical habitat for the Colorado pikeminnow adjacent to and upstream of the project area. . . and downstream of the project area there is critical habitat for all four fish species” (Roehm 2004 as cited in Bureau of Reclamation, 2019). The proposed project is included in the Upper Colorado River Endangered Fish Recovery Program and is expected to have beneficial effects to the Colorado River’s endangered fish habitat. No changes to depletions are expected to occur as a result of this project.

In addition to the fish species, other potential federally-listed threatened or endangered species include Ute-ladies’ tresses (*Spiranthes diluvialis*), Bessey’s locoweed (*Oxytropis besseyi* var. *obnapiformis*), Mexican spotted owl (*Strix occidentalis lucida*), and Yellow-billed cuckoo (*Coccyzus americanus*). A plant survey conducted in July 2021 for the proposed project did not find any evidence of Ute-ladies’ tresses or Bessey’s locoweed at the site. An Environmental Assessment prepared by Reclamation for a previous phase of the project determined that the Mexican spotted owl and Yellow-billed cuckoo lacked suitable habitat in the project area (Bureau of Reclamation, 2019).

See: Bureau of Reclamation. 2019. Final Environmental Assessment and Finding of No Significant Impact. Maybell Canal Water Conservation Project. Western Colorado Area Office Upper Colorado Region. Available: <https://www.usbr.gov/uc/envdocs/ea/20191100-MaybellCanalWaterConservationProject-FinalEAandFONSI-508-WCAO.pdf> (Accessed November 28, 2021).

- ***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.***

The project boundaries include wetlands along the Yampa River that are presumed to fall under CWA jurisdiction as Waters of the United States. The project is not expected to have any major or long-term impacts on wetlands. Any disturbance to riparian wetland habitat during construction that requires mitigation will be mitigated with onsite riparian revegetation. An aquatic resource delineation/field study has occurred for the site in accordance with USACE requirements.

- ***When was the water delivery system constructed?***

Construction of the Maybell water delivery system dates back to 1896.

- ***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.***

The proposed project will result in modification of the in-stream diversion weir that directs water to the Maybell headgates and canal. The existing in-stream diversion was built prior to 1900 and has not undergone extensive, permanent improvements since then. The proposed project will improve fish and recreational boat passage at the diversion and improve the reliability of water delivery. Annual construction of gravel push-up dams currently occurs in the area; this proposed project will alleviate this ecologically disruptive practice.

- ***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.***

An expert archaeology team surveyed cultural resources at the site and is in the process of completing their report, with anticipated completion by the end of 2021. For the broader project at the Maybell Ditch (including phases beyond this proposal), the team expects that there may be a finding of an adverse effect to the historic rock work proposed at and just beyond the headgates. Proposed mitigation would likely include either a context report or a GIS story map completed to the standards of the State Historic Preservation Office. This adverse effect and proposed mitigation would not apply to this proposal's project phase that is focused on the instream diversion and not the historic canal.

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

We are not yet aware of archaeological sites in the proposed project area. The forthcoming report from the archaeologist contractor will detail the presence of any known archaeological sites.

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

The project is not expected to have a disproportionately high or adverse effect on low income or minority populations. Although the Maybell community is classified as low income, the project will have a beneficial economic effect on the community.

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

The proposed project will not limit access to and ceremonial use of Indian sacred sites or result in other impacts on Tribal lands. The project is not changing existing access in the area (for either public or private land) and is not located on any currently held Tribal lands.

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

The project is not expected to contribute to the introduction of, continued existence, or spread of noxious weeds or non-native invasive species in the area. All construction vehicles will follow best practices for decontamination to avoid spread of weed seeds. Any mulch or other vegetative material required for site restoration will be certified as weed-free.

4 Required Permits or Approvals

Applicants must state in the proposal whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.

This project will require permits and approvals from county, state, and federal agencies. The status and proposed timing for these permitting and approval processes are explained below:

- **U.S. Army Corps of Engineers Clean Water Act Section 404 Permit.** The team has held a pre-consultation meeting to discuss permitting and the anticipated agricultural exemption for the project. Permit submission is scheduled to occur by April 7, 2022.
- **Colorado Department of Public Health and Environment Clean Water Act Section 401 Water Quality Permit.** The team has gathered the required pre-permitting information for the National Pollutant Discharge Elimination System (NPDES) permit. The permit will be requested when the final engineering plans are ready, which is scheduled to occur by Feb. 28, 2022.
- **U.S. Bureau of Land Management (BLM) National Historic Preservation Act Section 106 Compliance** – A cultural survey has been completed and the BLM is reviewing survey results. The project is in the pre-consultation phase and will move into consultation when the report is complete and the engineering plans are ready at the end of February 2022.
- **U.S. Fish and Wildlife Service (USFWS) Endangered Species Act, Section 7 consultation** - Pre-coordination meetings with the USFWS have been completed. The project team is in the process of developing the Biological Assessment for the project. When the Biological Assessment is finalized, it will be reviewed by BLM as the lead agency before they send to USFWS for review and consultation, if informal or formal consultation is needed. The Biological Assessment is scheduled to be completed by Feb. 28, 2022.
- **Moffat County Floodplain Certification** – Preparation for Moffat County Floodplain certification has occurred. Engineers for the project expect to receive a “no rise certification” that the project will not create any increase to the Base Flood Elevations in the County. Submission to Moffat County is scheduled to occur by April 7, 2022.

5 Letters of Support and Letters of Partnership

We are providing the following letters of support and letters of partnership in Appendix A for this proposed project:

- Letter of Partnership from Maybell Irrigation District as the Category A partner
- Letter of support from the Non-Profit Friends of the Yampa
- Letter of support from the Upper Colorado River Endangered Fish Recovery Program.

We also are providing letters of support developed for previous grant applications for the larger Maybell Diversion improvement project effort:

- Previous letter of support from the Moffat County Board of County Commissioners.
- Previous letter of support from the Yampa-White-Green Basin Roundtable.

6 Official Resolution

The appropriate official from the Nature Conservancy has reviewed and supports the application submitted. The Nature Conservancy requires additional time to complete the internal verification and authorization steps to adopt the official resolution required in this application. The official resolution will be submitted within 30 days of the application deadline.

Appendix A

- Letter 1. Letter of Partnership from Maybell Irrigation District as the Category A partner
- Letter 2. Letter of Support from the Non-Profit Friends of the Yampa
- Letter 3. Letter of Support from the Upper Colorado River Endangered Fish Recovery Program.
- Letter 4. Previous Letter of Support from Moffat County Board of County Commissioners.
- Letter 5. Previous Letter of Support from the Yampa-White-Green Basin Roundtable.

Letter 1. Letter of Partnership from Maybell Irrigation District.

MAYBELL IRRIGATION DISTRICT
PO BOX 131, MAYBELL, CO 81640

Bureau of Reclamation
Funding Opportunity No. R22AS00026
WaterSMART Environmental Water Resources Projects for FY22

November 30, 2021

Dear Bureau of Reclamation WaterSMART Review Team:

The Maybell Irrigation District (MID) is incorporated in the State of Colorado. The Maybell agricultural diversion provides water for 18 producers in northwest Colorado. The diversion structure, built in 1896, channels water into the Maybell Ditch, an 18-mile long canal that flows roughly in line with the river and irrigates hay pasture and ranchlands. Maybell is one of the largest irrigators for over two hundred river miles on the Yampa River in Colorado. We hold a pre-Federal Land Policy and Management Act (FLPMA) Right-of-Way in perpetuity for our diversion and canal, which was constructed on public lands now overseen by the Bureau of Land Management.

We qualify as a Category A applicant under this Notice of Funding Opportunity. Because MID has no paid employees we are working in partnership with The Nature Conservancy as a Category B applicant for our proposed Environmental Water Resources Project.

This letter serves to certify the following:

- 1) We are working in partnership with The Nature Conservancy to implement this project: "Modernization of the Maybell Irrigation District's Diversion from the Yampa River in Colorado".
- 2) We fully support and agree to the submittal and content of this grant application.
- 3) We intend to continue to participate actively in this project by providing input and feedback on the design, working collaboratively with the construction contractor to enable access, and operating and maintaining the diversion and headgate.

Over the past three years, MID worked to improve and modernize our irrigation system by installing a wastegate, several check structures, and lining critical sections of the historic Maybell ditch with geomembrane material. Through these advances, MID can better work with the river to control the amount of water diverted on a real-time basis – generating positive impacts for habitat along the Yampa River as well as benefiting the Maybell irrigators. We are also designing the diversion improvements (the subject of this grant) to facilitate fish and boat passage as well as provide a reliable water source to the irrigators. Thank you for your consideration of our proposal.

Sincerely,



Mike Camblin
President
Maybell Irrigation District

Letter 2. Letter of Support from Friends of the Yampa.



Friends of the Yampa

PO Box 774703

Steamboat Springs, CO 80477

US Bureau of Reclamation
WaterSMART Grant Program - Environmental Water Projects
Funding Opportunity R22AS00026 FY2022
Denver, CO 80203

November 19, 2021

Dear US Bureau of Reclamation WaterSMART Grant Review Committee:

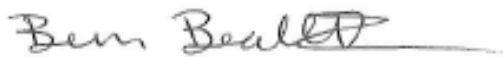
On behalf of Friends of the Yampa (FOTY), we wholeheartedly support The Nature Conservancy's (TNC) proposal to improve the Maybell diversion and replace the headgate on the Maybell Ditch. We have partnered with TNC on this project from its onset three years ago and improvement to this structure is identified as a goal of our organization's strategic plan. It would be difficult to find a project in Colorado that better aligns with an objective to improve infrastructure and riverine habitat through a multi-benefit lens. Moreover, this project would address a *significant* safety concern created by the in-channel Maybell diversion structure that is in place today.

The current Maybell diversion presents a nearly impassable and, if unfamiliar with the area, surprising rapid due to its inconsistency with the relatively calm river surrounds. During high flows its spillway arrangement and flow spread presents confusing, dramatic, and scary conditions. The current head gate arrangement presents another hazard as the force of the river pushes toward the structure creating a potential issue for any user that finds itself in an unfortunate situation of being pulled toward it. In low water conditions a less forceful but similarly dangerous condition presents itself to river users in the form of jagged boulders and rubble formed at a diagonal to the river's path. Due to the safety issues present to river users and the private property that surrounds the diversion, recreationalists currently face the lose-lose situation of choosing to disregard their personal safety or illegally trespassing on the streambank to scout and, more often than not, portage the diversion. The current structure presents the most significant barrier to safe, passable recreation along the approximately 200-mile stretch of the Yampa River leading from the headwaters to Maybell and Cross Mountain. Improvement to the diversion structure will vastly improve river user safety and reduce private property trespass.

Your consideration is greatly appreciated to award a WaterSMART grant to construct a new diversion and contribute to making the Maybell reach of the Yampa River safer for boating and better for fish passage. This project will generate positive impacts for endangered fish and other species in the Yampa River as well as benefiting downstream irrigators.

We believe this project aligns with the Bureau of Reclamation's commitment to fund projects that generate benefits for agriculture, drought resilience, water management, and riparian habitat in the Yampa River. Additionally, it has strong potential to preserve water security for agricultural producers while benefiting the natural environment – both of which are goals of the Colorado Water Plan. It is with the utmost enthusiasm that we submit this letter of support for consideration of allocation of grant dollars toward this worthy cause. If you have any further questions about Friends of the Yampa or our support for this request, I can be reached at bensbeall@gmail.com. Thank you for your consideration of this important project.

Warmest Regards,

A handwritten signature in black ink that reads "Ben Beall" with a long horizontal flourish extending to the right.

Ben Beall
President, Friends of the Yampa
257 Spruce Street
Steamboat Springs, Colorado 80487

Friends of the Yampa's mission is to protect and enhance the environmental and recreational integrity of the Yampa River and its tributaries, through stewardship, advocacy, education and partnerships.

Letter 3. Letter of Support from Upper Colorado River Endangered Fish Recovery Program.



Upper Colorado River Endangered Fish Recovery Program

Matt Hogan, Chairperson
Implementation Committee

Julie Stahl
Program Director

U.S. Fish and Wildlife Service – 44 Union Blvd – Lakewood, Colorado 80228 – 303-236-9881

November 24, 2021

US Bureau of Reclamation
Funding opportunity R22AS00026
WaterSMART FY 22 Environmental Water Resource Projects

Re: Maybell Diversion Structure and Headgate Rehabilitation Project

Dear Reclamation Grant Reviewers:

This letter of support is to encourage the CWCB Water Plan grantors to help fund this important reconstruction project of the Maybell Canal diversion structure in Moffat County, Colorado. The Maybell Irrigation Company, The Nature Conservancy, the Upper Colorado River Endangered Fish Recovery Program (Recovery Program), and many other partners have a long history implementing conservation actions and improving flow conditions for native fish in the Yampa River in accordance with the intent and conservation actions described in the Yampa River Management Plan and Programmatic Biological Opinion (USFWS, 2004). The Program Director's Office of the Recovery Program supports this project, which will improve the operations and management of the Maybell Canal diversion and facilitate fish and boat passage at the point of diversion.

The Yampa River is vital to four endangered species in the upper Colorado River system: humpback chub (*Gila cypha*), bonytail (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), and razorback sucker (*Xyrauchen texanus*). The U.S. Fish and Wildlife Service has designated critical habitat for all four of these species within the lower reaches of the river, and critical habitat for Colorado pikeminnow extends through the reach where the Maybell Canal diversion is located. Adequate base flows are important to ensure sufficient resting and foraging habitat for these species, along with opportunities to move up and down the river while avoiding predation. Yampa River flows and sediment also benefit habitat for endangered fishes in the middle Green River downstream from the Yampa River confluence.

This proposed project has great potential to benefit instream flow conditions for the endangered fish during the irrigation season. The Recovery Program, in coordination with various Yampa River

Colorado River Energy Distributors Association - Colorado Water Congress - National Park Service - State of Colorado
State of Utah - State of Wyoming - The Nature Conservancy - U.S. Bureau of Reclamation - U.S. Fish and Wildlife
Service
Utah Water Users Association - Western Area Power Administration - Western Resource Advocates - Wyoming Water
Association

Upper Colorado River Endangered Fish Recovery Program

U.S. Fish and Wildlife Service – 44 Union Blvd – Lakewood, Colorado 80228 – 303-236-9881

water interests, seeks to maintain certain minimum flows for through critical habitat during the irrigation season on the Yampa River, and storage releases are made from Elkhead Reservoir for this purpose. This proposed project, together with other improvements that have recently been made to the Maybell Canal delivery system, will allow irrigators to more reliably utilize their full allotment of water and minimize over-diversion at the headgate, which will translate into improved flow conditions down river for native fish. As noted above, this rehabilitation effort also offers a welcome opportunity to improve fish and boat passage at the diversion.

We are particularly pleased that these improvements benefiting endangered fish also will benefit agricultural water users and recreational interests in the lower Yampa River. The Recovery Program strongly supports solutions that benefit multiple water interests.

Feel free to contact me at (303) 236-4573 with any questions. Thank you for your interest in this effort.

Sincerely,

Julie Stahl

Julie Stahl
Program Director
Upper Colorado River Endangered Fish Recovery Program

Letter 4. Previous Letter of Support from Moffat County Board of County Commissioners.



November 24, 2020

Colorado Water Conservation Board
1313 Sherman St., Room 718
Denver, CO 80203

Dear CWCB Water Plan Grant Reviewers,

The Moffat County Commissioners offer our support of Maybell Irrigation District (MID) and The Nature Conservancy's (TNC) efforts to rehabilitate the diversion and replace the headgates on the Maybell Ditch. This project has been a priority in Moffat County for quite some time as the current headgates do not operate properly and large-scale repairs are needed to update the diversion. We are appreciative of TNC's proposal to jointly work with the Maybell Ditch Company and CWCB to improve the Maybell Diversion and associated headgates.

The *Maybell Diversion Restoration and Headgate Modernization* project is a prime example of the importance of working collaboratively in the basin with many agencies, organizations, and private entities. The project is a locally driven, multi-benefit project to protect water security and increase efficiency for agricultural producers on the Maybell Canal while benefiting the natural environment, recreation, and fish passage. Maybell has a vested, long-term commitment to agriculture and the environment as they are one of the largest and oldest water users on the Yampa.

If you have any questions about Moffat County's support for the Maybell project, please contact any of the Moffat County Commissioners, or our Natural Resources Director, Jeff Comstock at the number listed below.

Respectfully,

Ray Beck, Chairman
Moffat County Commissioner

Don Cook, District 1
Moffat County Commissioner

Donald Broom, District 3
Moffat County Commissioner

221 West Victory Way, Ste 130
Craig, CO 81625
(970) 824-5517
(970) 824-9191 (fax)

Don Cook
District 1

Ray Beck
District 2

Donald Broom
District 3

Letter 5. Previous Letter of Support from the Yampa-White-Green Basin Roundtable.



Bureau of Reclamation
Financial Assistance Support Section
Attn: Mr. Matthew Reichert
P.O. Box 25007, MS 84-27814
Denver, CO 80225

February 20, 2019

Dear Mr. Reichert,

I am writing on behalf of the Yampa/White/Green Basin Roundtable in support of the partnership effort to rehabilitate the Maybell Ditch diversion structure and headgate being undertaken by the Maybell Irrigation District, The Nature Conservancy, Friends of the Yampa, and Ranch Advisory Partners. The Yampa / White / Green Basin Roundtable is one of nine Basin Roundtables created in Colorado by the Colorado Water for the 21st Century Act (2006-HB-1177) to encourage locally driven collaborative solutions to water supply challenges in Colorado.

The diversion structure and headgate improvement project proposed by the Maybell Irrigation District, The Nature Conservancy, Friends of the Yampa, and Ranch Advisory Partners will increase the efficiency and ease of operation of the historic Maybell Ditch – as well as improve boater and fish passage. By rehabilitating the in-channel diversion structure and installing a modern headgate, irrigators will be able to better control the amount of water diverted from the Yampa on a real time basis – creating water savings that will generate positive impacts for the Yampa River as well as the Maybell ditch irrigators. Improvements to the Maybell ditch were identified as a priority through a Basin Roundtable planning effort and will not only help meet local concerns but will contribute to improving water efficiencies in the Colorado River Basin in general.

If funded, the diversion and headgate rehabilitation project will modernize existing infrastructure in order to address water reliability concerns. The Maybell Irrigation District has been engaged in a broader, multi-year effort to rehabilitate the Maybell ditch – with the ultimate goal of improving overall efficiencies and function to benefit the irrigation district while making the Maybell headgate and diversion structure safer for boating on the Yampa River. The Basin Roundtable supports these types of efforts that generate benefits for the agricultural community, outdoor recreation interests, and the endangered fish of the Yampa River.

I respectfully urge you to positively consider the Maybell Irrigation District and The Nature Conservancy's grant application to the WaterSMART Large-scale Efficiencies grant program and to provide funding for this project. This project has strong potential to preserve water security for agricultural producers on the Maybell ditch while benefitting the natural environment – both of which are goals of the State of Colorado Water Plan.

Please don't hesitate to contact me at (970) 819-2484 with questions.

Sincerely,

Jackie Brown

Yampa White Green Basin Roundtable, Chair