

Bureau of Reclamation
WaterSMART Environmental Water Resources
Projects for Fiscal Year 2023
(R23AS00089)



Southern Ute Indian Tribe Proposal
Nannice Canal Diversion and Fish Passage
Project
3/16/2023

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Attachments:

Attachment A – Nannice Canal Diversion and Fish Passage 75% Engineering Design

Technical Proposal and Evaluation Criteria

Executive Summary

Applicant information

Applicant name: Southern Ute Indian Tribe - Water Resources Division

Date: March 1, 2023

Project Name: Nannice Canal Diversion and Fish Passage Project

City, State, County: Ignacio, Colorado, La Plata County

Applicant Category: Category A

The Southern Ute Indian Tribe is a Federally recognized tribe and will be coordinating work on this project with the Bureau of Indian Affairs.

Project Summary

A one-paragraph project summary that provides the location of the project, a brief description of the work that will be carried out, any partners involved, concerns in your project area and how this project is expected to help alleviate impacts of those conditions, and identification of any planning documents that support the project.

The Nannice Canal Diversion and Fish Passage Project is in southwest Colorado on the Southern Ute Indian Reservation in Ignacio, Colorado. The Nannice Canal is part of the Pine River Indian Irrigation Project, which is owned and operated by Bureau of Indian Affairs for the benefit of Southern Ute tribal irrigators. The Nannice Canal Diversion is a low head dam that sweeps across the Los Pinos River and creates a significant fish barrier (Figure 1). During drought and irrigation season, the structure diverts the Nannice Canal's decreed 8 cubic feet per second which typically prevents fish and excess water in Los Pinos River from passing the structure leading to fish entrainment in the Nannice Canal. The Southern Ute Water Resources Division, in partnership with Southern Ute Wildlife Resource Management Division, Bureau of Indian Affairs, and The Nature Conservancy, is proposing a project to construct a diversion structure to improve river connectivity, improve fish passage, and eliminate fish entrainment during low flows while continuing to divert Nannice Canal's decreed water. The project includes engineering and modifying a portion of the Nannice Canal headgate structure to incorporate a Coanda screen and fish passage ladder (see Figures 2 and 3). This will allow for controlled bypass of flows that exceed the diversion amount during irrigation season to flow through the structure and allow all water to flow past the structure during the off-season. The project's Coanda screen and fish ladder design will improve fish passage and eliminate fish entrainment even during low flows while also providing a self-cleaning mechanism improving safety, maintenance, and operation of the diversion structure.



Figure 1: Current Nannice Canal Diversion.



Figure 2: Coanda Fish Screen example.



Figure 3: Fish Passage Ladder example.

Length of Time and Estimated Completion Date

State the length of time and estimated completion date for the proposed project including the construction start date (mm/yr). Note: proposed projects should not have an estimated construction start date that is prior to September 30, 2023.

If awarded, the proposed project will require additional site review and design evaluation before preparing the environmental documents and bidding. The Water Resources Division will facilitate finalizing the engineering design which will take approximately 3 months (October 2023 - December 2023). The Water Resources Division will secure the necessary permissions and contract a construction company which will take approximately 9 months (January 2024 - September 2024). Construction will occur in Fall and Winter when irrigation is turned off in October 2024 and will be completed no later than April 2025. Project closeout and final reports will follow project completion and will be completed by October 2025 (see Table 1).

Table 1: Proposed Project Schedule

	Milestone Name	Start	Finish	Duration	2022		2023				2024				2025			
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Engineering Work to Finalize the Design	7/15/2022	12/29/2023	76.2w														
2	Project Permitting and Planning	1/1/2024	8/30/2024	35w														
3	Construction Contracting	3/1/2024	9/30/2024	30.4w														
4	Construction of Nannice Diversion	10/1/2024	4/30/2025	30.4w														
5	Project Close Out	5/1/2025	10/1/2025	22w														

Federal Facility

Whether or not the proposed project is located on a Federal facility.

Yes, the proposed project is located on the Pine River Indian Irrigation Project which is a Bureau of Indian Affairs Indian Irrigation Project that delivers irrigation water primarily to the Southern Ute tribal membership and some non-tribal irrigators.

Project Location

Provide specific information on the proposed project location or project area, including a map showing the geographic location. For example, [project name] is located in [county and state] approximately [distance] miles [direction, e.g., northeast] of [nearest town].

The project latitude is {##°##'N} and longitude is {###°##'W}.

The Nannice Canal Diversion and Fish Passage Project is in southwest Colorado on the Southern Ute Indian Reservation in Ignacio, Colorado. The Nannice Canal is part of the Pine River Indian Irrigation Project. (See Figure 4 below).

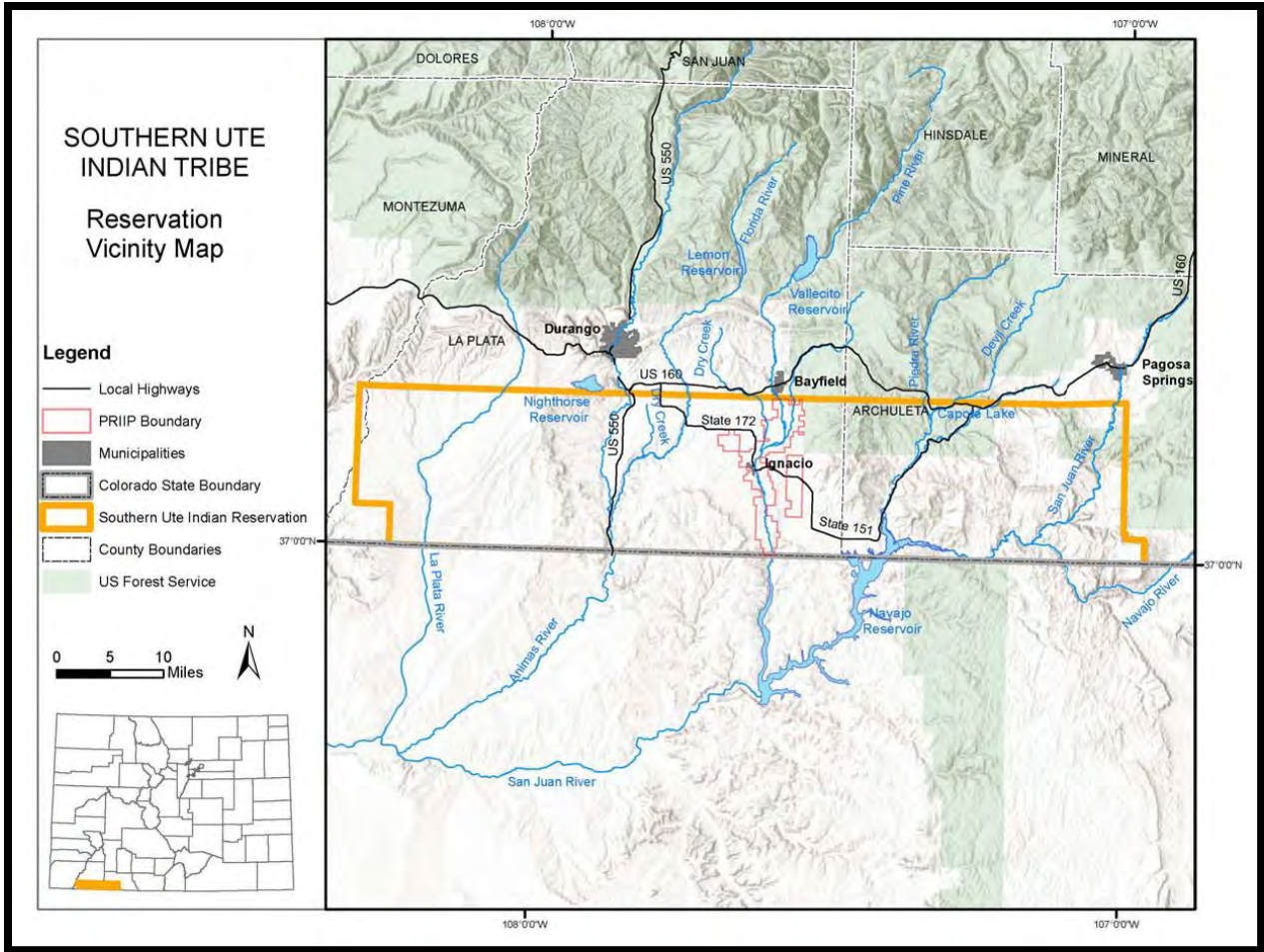


Figure 4: Southern Ute Reservation Map.

The Nannice Canal Diversion and Fish Passage Project is in La Plata County, Colorado on the Southern Ute Indian Reservation approximately 0.5 miles north of County Road 518 in Ignacio, Colorado. The project location is UTM zone 13, coordinates 270259.0, 4118287.4. The project Latitude is {37°10'58.3"N} and the Longitude is {107°35'15.2"W}, which can be found in the NE ¼ of the NE ¼ of the SE ¼ of Section 22, Township 34 North, Range 7 West, NMPM. The diversion structure is in the Los Pinos River of the Upper San Juan Watershed (HUC 14080101); Region 14, Subregion 08. (See Figure 5 below).

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 section provides an opportunity for the applicant to provide a clear description of the technical nature of the project and to address any aspect of the project that reviewers may need additional information to understand

Background Information: The Pine River Indian Irrigation Project was constructed in 1884 on the Southern Ute Indian Reservation. During that time, Buckskin, Severo, La Boca, and Nannice were the first canals to be established. In 1908, the US Supreme Court case *Winters v. United States* established that tribal reservations have implied water rights with a priority date based upon the establishment of the reservation. This gave the Pine River Indian Irrigation Project senior water rights on the Los Pinos River with an 1868 priority date. In 1940, Vallecito Dam was completed which provided 21,617-acre feet of storage water for the Tribe and Pine River Indian Irrigation Project. From 1960 to 1966, a major rehabilitation project occurred on the Pine River Indian Irrigation Project which is when most of the current concrete structures were built. The Nannice Canal carries 8 cubic feet per second of decreed water in a 3.2-mile system that serves approximately 562.1 acres of irrigable land for tribal members. The current diversion structure is a low head dam, built in 1965, that stretches across the width of the Los Pinos River and a headgate that diverts water into the Nannice Canal.

Native fish species are historically found throughout all Southern Ute reservation waters and face serious conservation threats from habitat loss, non-native predation, competition, hybridization, and entrainment in irrigation diversions. This project's primary objective is to improve fish passage and eliminate fish entrainment for many fish species (Rainbow Trout, Brown Trout, Roundtail Chub, Flannelmouth Sucker, Bluehead Sucker, Speckled Dace, Mottled Sculpin and Kokanee Salmon) at the Nannice Canal diversion structure off the main stem of the Los Pinos River. The native fish of concern are the Flannelmouth Sucker, Bluehead Sucker and Roundtail Chub. These species are protected under the Southern Ute Indian Tribe's Fishing Proclamation and identified in the Southern Ute Indian Tribe's Natural Resource Management Plan as a species of concern. The low head dam makes it nearly impossible for native fish species to travel upriver during irrigation season. Furthermore, fish traveling downstream are funneled into the Nannice Canal where they become entrained in unsuitable water with higher temperatures and lower dissolved oxygen. Fish entrainment in the Nannice Canal ultimately leads to lower fish populations and this proposed project will help alleviate that.

Project Description: The existing concrete low head dam prevents fish passage in the Los Pinos River and leads to fish entrainment in the Nannice Canal. The proposed project will improve fish passage, eliminate fish entrainment, and improve the functionality and safety of operations for irrigation delivery in the Nannice Canal diversion. The Water Resources Division has contracted an engineer to develop engineering designs for the proposed project. The Water Resources Division currently has a 75% engineering design which includes removal of the existing inlet headgate and removing a portion of the existing low head dam wall. Once removed, a Coanda screen will be installed with the top of the screen sitting at 6,720.33 ft elevation. This elevation would have the screen sitting approximately 6 inches lower than the existing weir wall to direct flow over the Coanda screen during irrigation season to ensure maximization of diverting the decreed 8 cubic feet per second flow into the Nannice Canal. Being a screen, the system is self-cleaning resulting in minimal maintenance for irrigation staff and a safer alternative than getting into the river to clean debris from the headgate. For high flow scenarios, a gate valve would be installed to control total flow into the canal and measured using a Parshall flume already installed on the Nannice Canal. A sluice gate would also be installed to flush sediment when needed. Steel walkways and handrails would be installed at gate valves to ensure safety of operation. This project would protect 100% of all free-swimming fish in the river, eliminate fish entrainment, and improve the safety and efficiency of operations on the Nannice Canal.

Responses to Evaluation Criteria

Applicant Category and Eligibility of Applicant

1) Identify whether you are a Category A applicant, Category B applicant, or Category C applicant and provide a short narrative summary describing how you meet the eligibility requirements of that applicant category.

Category (A) Applicant: The Southern Ute Indian Tribe is applying as an Applicant (A) in coordination with Bureau of Indian Affairs. Our eligibility as an applicant is the Southern Ute Indian Tribe is a federally recognized Tribe with its reservation located in Colorado. The project described qualifies under this grant opportunity because it will improve river conditions for aquatic wildlife, improve aquatic ecosystem habitat, and improve the safety and efficiency of the delivery of irrigation water into the Nannice Canal for the Southern Ute tribal membership and other irrigators on the Pine River Indian Irrigation Project.

Evaluation Criterion A: Project Benefits (25 points)

Subcriterion A.1: General Project Benefits

1) 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.

This project will improve fish passage, eliminate fish entrainment, and increase river connectivity while also creating a safe and effective method of delivering irrigation water through the Nannice Canal to Southern Ute tribal irrigators. Currently, the Nannice Canal Diversion structure is a low-head dam on the Los Pinos River, which is a fish barrier during normal conditions but is exacerbated during drought when flows are low. The installation of a fish ladder will allow for fish passage. During irrigation season, the diversion also causes fish entrainment into the Nannice Canal. The installation of a Coanda screen should eliminate fish entrainment.

Benefits and Objectives of the project include:

- Improve fish passage
- Eliminate fish entrainment
- Improve safety and efficiency of canal operations
- Improve instream aquatic ecosystem habitat and wildlife conditions

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

Yes, Los Pinos River flows are controlled by Vallecito Dam which is a Reclamation-owned project. Vallecito Dam can adversely impact the river by creating a highly variable flow regime throughout the year. This project would improve instream conditions and watershed health for the benefit of fish, wildlife, and aquatic ecosystem habitat.

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

No, the project is not for the purpose of meeting environmental mitigation or compliance obligations under Federal or State law.

4) If the project will benefit aquatic or riparian ecosystems within the watershed (e.g., by reducing flood risk, reducing bank erosion, increasing biodiversity, or preserving native species), explain the extent of those benefits (i.e., magnitude and geographic extent). Estimate expected project benefits to ecosystems and provide documentation and support for this estimate, including a detailed explanation of how the estimate was determined.

The project will benefit the aquatic ecosystem and biodiversity within the Los Pinos watershed by increasing native fish populations, improving fish passage, and eliminating fish entrainment which will lead to an increase in fish biodiversity and aquatic ecosystem health. The extent of these benefits will be at the watershed scale since fish populations will increase and be able to freely move throughout the river corridor without a barrier. Fish surveys will be conducted before and after construction to understand the project's effectiveness.

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

The project will benefit game fish (Brown Trout, Rainbow Trout, and Kokanee Salmon) and native fish (Flannelmouth Sucker, Bluehead Sucker, Roundtail Chub, Mottled Sculpin, and Speckled Dace) within the Los Pinos watershed. The Roundtail Chub has a “Colorado State Special Concern” status. The Southern Ute Tribe also has a “Protected Species” status for the Roundtail Chub, Flannelmouth Sucker, and Bluehead Sucker. Currently, the Water Resources Division does not have data to support the expected benefit of the project; however, Southern Ute Wildlife Resource Management Division will use Passive Integrated Transponder tags and electrofishing techniques before and after construction to document fish entrainment in the Nannice Canal and fish passage past the new structure. The Wildlife Resource Management Division will also Passive Integrated Transponder tag two hundred 4” Rainbow Trout and will release the fish above the inlet of the Nannice Canal to study entrainment. The Wildlife Resource Management Division will also Passive Integrated Transponder tag two hundred 4” Rainbow Trout post construction to study successful movement past the new structure and elimination of entrainment in the Nannice Canal.

6) Will the proposed project benefit federally listed threatened or endangered species?

The proposed project does not involve federally listed threatened or endangered species. However, the Roundtail Chub has a “Colorado State Special Concern” status, and it has been suggested for federally threatened or endangered status. The Southern Ute Indian Tribe also has a “Protected Species” status for Roundtail Chub, Flannelmouth Sucker, and Bluehead Sucker. The proposed project will benefit multiple species that have state and tribal significance for conservation threats from habitat loss, non-native predation, competition, and hybridization.

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

Yes, the project will address drought related impacts on water supplies, aquatic habitat, native fish species, and the whole ecosystem. Past and current drought has led to less flows in the Los Pinos River preventing water from passing the current structure and causing a barrier to fish passage. The barrier also leads to fish funneling into the Nannice Canal and becoming entrained. This project will help build drought resilience by diverting the decreed 8 cubic feet per second into the Nannice Canal while also allowing aquatic organisms and excess water to pass the structure. The Coanda screen will also prevent fish becoming entrained in the canal. This project will ultimately lead to a more resilient ecosystem.

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

This project has components that will mitigate sedimentation, flood, and drought impacts throughout the Los Pinos watershed. Lowering the diversion dam's height and installing a Coanda screen will decrease the amount of material deposited upstream of the dam and allow debris to flow over the dam and continue downstream. The placement of boulders, re-establishing the left bank, and constructing a fish passage will help create a long-term solution for stabilization of the river channel. These robust erosion control measures will help reduce sediment in the river by anchoring the riverbank, decreasing the likelihood of the bank failing and the potential for flooding. Allowing flows more than 8 cubic feet per second to pass the structure will also benefit the river during drought by increasing flows downstream of the structure.

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

Other project benefits not addressed in the preceding questions would be restoring fish health for recreational fishing on the Southern Ute Reservation. This would benefit tribal membership and non-tribal recreators by restoring stream access and stream health to fishing grounds on the Los Pinos River. The Southern Ute Indian Tribe also issues fishing permits to non-tribal anglers on the Los Pinos River; an improvement in the fishery and fishing opportunities would provide economic benefits to the Tribe.

Subcriterion A.2: Multiple Benefits

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

The project will benefit multiple water uses including aquatic ecological health, 18+ Tribal irrigators applying irrigation water to 562.1 acres of agricultural land, and tribal and non-tribal recreators on the Los Pinos River year-round. The project would provide Tribal irrigators decreed irrigation water while also improving fish passage and eliminating fish entrainment benefitting the aquatic ecosystem within the entire watershed. The project would also benefit recreation and fishing access by maintaining flow beyond the barrier and increasing fish populations. The Southern Ute Indian Tribe also issues fishing permits to non-tribal anglers on the Los Pinos River; an improvement in the fishery and fishing opportunities would provide economic benefits to the Tribe.

2) If the project will provide multiple restoration benefits (e.g., benefits to ecological values or watershed health; fish and wildlife habitat; protection against invasive species; enhancement to commercial, recreational, subsistence, or Tribal ceremonial fishing; enhancement of river-based recreation), explain how.

The project will provide restoration benefits such as enhancing aquatic ecological habitat by improving river connectivity and fish passage past the structure. Eliminating fish entrainment in Nannice Canal will help restore watershed health by increasing aquatic community composition and biodiversity within the river. The project will also increase recreational fishing opportunities to parts of the Los Pinos River by allowing flows and fish to pass the structure during irrigation season.

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

The project would reduce water conflicts within the watershed by allowing Tribal irrigators to receive their decreed amount of irrigation water in the Nannice Canal while also improving gamefish populations and restoring fishing access locations for anglers on the Los Pinos River. The Coanda screen would also reduce water conflicts because it is essentially self-cleaning, so Bureau of Indian Affairs staff would not have to go clean the structure each day providing more time to help other Tribal irrigators and water users within the Pine River Indian Irrigation Project.

Evaluation Criterion B: Collaborative Project Planning (20 Points)

Strategy or Plan:

1) Is your proposed project supported by a specific strategy or planning document? If so, identify the strategy or planning document by name and address the following questions: When was the plan or strategy prepared and for what purpose? What types of issues are addressed in the plan? For example, does the plan address water quantity issues, water quality issues, and/or issues related to ecosystem and watershed health or the health of species and habitat within the watershed? Is one of the purposes of the strategy or plan to increase the reliability of a water supply for ecological values?

Since 2007, the Southern Ute Indian Tribe, along with various western states, federal agencies, and Tribal nations, has been a signatory to the Three Species Recovery Group that proactively applies conservation actions to Roundtail Chub, Bluehead Sucker, and Flannelmouth Sucker. The Three Species Recovery Group established a conservation agreement to expedite implementation of conservation measures for the three species throughout their respective ranges as a collaborative and cooperative effort among resource agencies. Threats that warrant the three species from being listed as sensitive by state and federal agencies or that lead to listing by the U.S. Fish and Wildlife Service as threatened or endangered under the Endangered Species Act should be minimized through implementation of the conservation agreement.

In 2008, Bureau of Indian Affairs had an assessment of the Pine River Indian Irrigation Project completed by HKM Engineering. Nannice Canal Diversion was classified as a critical structure and needed repair for delivery of irrigation water. In 2013, rehabilitation work was performed by the Water Resources Division which added boulders and rock material to the left bank of Los Pinos River to stabilize and improve the low head dam structure. In 2016, the Water Resources Division installed 300 feet of new closed pipe from the head gate replacing the old, degraded pipe. In 2018, The Nature Conservancy and the Tribe conducted an ecological study on the Los Pinos River which identified the Nannice Canal low head dam diversion structure as a fish barrier. In 2021, the Water Resources Division received grant funding from The Nature Conservancy to redesign the Nannice Canal diversion structure to increase the reliability and efficiency of fish passage, eliminate fish entrainment, and increase reliability and safety of irrigation water delivery.

Strategy or Plan Development:

Was the strategy or plan developed through a collaborative process?

The plan for this project was developed with collaboration between the Southern Ute Water Resources Division, Bureau of Indian Affairs, Southern Ute Wildlife Resource Management Division, and The Nature Conservancy. The project design was prepared by a contract engineer the Water Resources Division hired after receiving grant funding from The Nature Conservancy in 2021.

- 2007- Southern Ute Indian Tribe became a signatory to the Three Species Recovery Group that proactively applies conservation actions to the Roundtail Chub, Bluehead Sucker, and Flannelmouth Sucker.
- 2008- Bureau of Indian Affairs had an assessment of the Pine River Indian Irrigation Project completed by HKM Engineering. Nannice Canal Diversion was classified as a critical structure in need of replacement or rehabilitation.
- 2013- Rehabilitation work on the existing structure was performed by Southern Ute Water Resources Division in collaboration with the Bureau of Indian Affairs. Work consisted of installing boulders and rock material to Los Pinos River left bank to improve the low head dam operations.
- 2016- The Water Resources Division installed 300 feet of closed pipe from the inlet of the headgate.
- 2018- The Nature Conservancy and the Tribe conducted an ecological study on Los Pinos River and the report identified the Nannice Canal Diversion low head dam as a fish barrier.
- 2021- The Water Resources Division applied for and received a grant from The Nature Conservancy to implement a design for a fish friendly structure to be installed at the Nannice Canal Diversion.

Strategy or Plan Support for Project:

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

The proposed project implements the same goals outlined in the engineering plans. That goal is to restore and improve fish passage and to eliminate fish entrainment, while also improving irrigation water delivery, efficiency, and safety for the Nannice Canal Diversion. This project is a high priority based on the 2008 HKM study that deemed the Nannice Canal Diversion “Critical” for replacement or rehabilitation. It also is a high priority based on the status of the Roundtail Chub being classified in Colorado as a “Special Concern” and has been solicited for listing as an endangered and threatened species. There is also a high priority from the results of the 2018 Pine River Ecological Study that The Nature Conservancy wrote for the Tribe which identified the Nannice Canal Diversion as a fish barrier.

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

1) 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?

This project has support from the Bureau of Indian Affairs, the Southern Ute Wildlife Resource Management Division and The Nature Conservancy. Stakeholders are not providing cost share; however, the Bureau of Indian Affairs contributed input on the engineering design and a letter of support. The Nature Conservancy provided contribution through their 2018 ecological survey, the grant that the Water Resources Division received from them for engineering design, and a letter of support. The

Southern Ute Wildlife Resource Management Division is also contributing by using Passive Integrated Transponder tags and electro-fishing techniques to provide data on fish entrainment and fish passage before and after project completion.

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

The project is supported by a diverse set of stakeholders. For example, the Bureau of Indian Affairs supports the functionality of the project for their irrigation staff as well as the efficiency of irrigation delivery to tribal members for agricultural use. Southern Ute Wildlife Resource Management Division and The Nature Conservancy also support the project for the purpose of watershed health and aquatic ecosystem habitat on the reservation in the Los Pinos watershed.

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

Yes, the project is supported by the Bureau of Indian Affairs, who is responsible for irrigation water management in the project area, and the Southern Ute Wildlife Resource Management Division who is responsible for fish and wildlife management on the Southern Ute Indian Reservation. The project is consistent with the policies of those organizations.

4) 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 opposition to the proposed project.

Evaluation Criterion D: Readiness to Proceed (20 Points)

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

Currently, the project has a 75% design from the Water Resources Division's contract engineer. We are set to have 95% design by December 2023.

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

This project requires a letter of approval from the Bureau of Indian Affairs since they own and operate the Pine River Indian Irrigation Project.

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

The Southern Ute Water Resources Division received a grant in 2021 from The Nature Conservancy for design and engineering plans. The Water Resources Division currently has 75% design from our contract engineer and will have 95% by December 2023.

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

The Water Resources Division has permission from the Bureau of Indian Affairs to access the project location. Access would be on Pine River Indian Irrigation Project access roads which fall under the Bureau of Indian Affairs' prescriptive ditch easement. The Water Resources Division will also coordinate with the Bureau of Indian Affairs for permissions to access the allotment where the Nannice Canal Diversion is located.

5) 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.

The local Reclamation office was not contacted regarding the associated costs for environmental and cultural resource compliance requirements for this specific project. The Southern Ute Indian Tribe and the Tribe's Water Resources Division have worked with Reclamation previously on other irrigation related projects. The Water Resources Division has a good understanding of the associated compliance activities necessary and has included these costs in the budget under an environmental compliance line item. Several of the activities can be coordinated with or performed by Tribal staff such as United States Army Corps of Engineers 404 permit application through the Water Resources Division, Threatened and Endangered species surveys through the Tribe's Wildlife Resource Management Division, and cultural resources compliance through the Tribal Historic Preservation Office.

6) Is the project completely or partially located on Federal land or at a Federal facility? If so, explain whether the agency supports the project and has granted access to the Federal land or facility, whether the agency will contribute toward the project, and why the Federal agency is not completing the project. Note: Other sources of Federal funding cannot be included within the scope of the project proposed for Reclamation funding under this NOFO. Other Federal agencies can contribute toward the completion of environmental and cultural resource compliance, provide access to land, and provide

project oversight as necessary; however, any costs associated with these activities should not be included within the project budget.

The project involves a structure owned and operated by the Bureau of Indian Affairs Southern Ute Agency which technically makes it a federal facility. Bureau of Indian Affairs Southern Ute Agency supports the project and has contributed the 2008 assessment study completed by HKM Engineering and a letter of support. The Bureau of Indian Affairs is not completing the project due to understaffing, lack of project dollars, and many other critical infrastructure needs on the Pine River Indian Irrigation Project.

Evaluation Criterion E: Performance Measures (5 Points)

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

The Performance Measures that will be documented by the Southern Ute Water Resources Division and Wildlife Resource Management Division are:

1. A decrease in the number of fish entrained in the Nannice Canal post construction.
2. An increase in fish passage around the Nannice Canal Diversion post construction.

These Performance Measures were chosen because they effectively document the new structure's performance with the resources the Tribe currently has at its disposal while quantitatively documenting the Performance Measures.

Monitoring Performance Measures will be completed using pre-project and post-project electrofishing surveys to determine species presence/absence in the Nannice Canal. In addition, remote portable Passive Integrated Transponder antennas will be placed in the Nannice Canal. Two hundred 4" rainbow trout will be Passive Integrated Transponder tagged and released above the inlet to the Nannice Canal, pre-project, to determine entrainment. Post-project, two hundred 4" Passive Integrated Transponder tagged rainbow trout will be released to evaluate the success of preventing entrainment. The Wildlife Resource Management Division will also use electrofishing and Passive Integrated Transponder tagging to gauge successful fish passage around the structure.

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

The Water Resources Division and Wildlife Resource Management Division of the Southern Ute Indian Tribe will work together to complete surveys for documenting the long-term effects of the project. Field assessments will be completed both pre- and post-construction to document fish entrainment into the Nannice Canal. During year 1, a comprehensive survey will be conducted to track passage in the fish ladder. During

years 1-5, visual inspections will also be conducted to ensure proper operations of the fish ladder, Coanda screen and diversion structure. Photo documentation will be recorded over years 1-5 using repeatable points of capture. The repeated surveys will also be used as a visual for the accumulation or passage of river debris and for the stabilization and revegetation of the riverbank.

Evaluation Criterion F: Presidential and DOI Priorities (15 Points)

Subcriterion No. E1: Climate Change

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

The project would build a long-term resilience to drought by having a structure that allows for the safe and effective passage of fish species even in times of low flow on the river. It will also allow the Nannice Canal to divert the decreed amount of tribal water even in drought scenarios. The project will continue to provide benefits for approximately 60 years based off the current concrete structure's condition.

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

The proposed project does not include other natural hazard risk reductions.

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

The proposed project does not establish and use a renewable energy source.

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

The proposed project does not reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation.

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

The proposed project will incorporate a self-cleaning inlet which would result in less staff time to drive to the Nannice Canal heading to check for debris and become a safer more efficient system. Reduced travel to the structure for maintenance will also reduce vehicle emissions.

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

The proposed project does not seek to reduce or mitigate climate pollutions. There will be an ancillary reduction in air pollution due to reduced vehicle emissions due to less required trips to clean the structure's inlet.

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

The proposed project does not have a conservation or management component to promote healthy lands and soils or serve to protect water supplies and its associated uses.

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

The proposed project does not contribute to climate change resiliency in other ways not described above.

Subcriterion No. E2: Disadvantaged or Underserved Communities

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

Yes, the proposed project directly serves a federally recognized tribe that is a disadvantaged and historically underserved community. The Tribe benefits economically from the sale of fishing permits to non-tribal anglers. The Nannice Canal Diversion and Fish Passage Project will improve the instream aquatic habitat and promote a healthy fishery in the Los Pinos River which will improve tribal natural resources and provide economic benefits to the Tribe. The Tribe benefits economically from agricultural production on tribal lands. The project will also increase the reliability of available irrigation water delivery to the tribal membership.

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

The Southern Ute Indian Tribe is a federally recognized tribe. The Tribe benefits from the Nannice Canal Diversion and Fish Passage Project in the following ways: 1) the project will improve the tribe's natural resources by improving fish passage and eliminating fish entrainment; 2) the project will improve the function of the diversion for the benefit of tribal irrigators. This project also benefits the surrounding community of rural irrigators.

Subcriterion No. E.3: Tribal Benefits

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

Yes, the proposed project will directly benefit the Southern Ute Tribal membership. The project will improve stream health, aquatic ecosystem habitat, and improve the efficiency and safety of irrigation water delivery to tribal members.

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

Yes, the proposed project supports Reclamation's tribal trust responsibilities. The United States Department of Interior, which the Bureau of Reclamation is under, has a trust responsibility to tribes. The proposed project is on a Bureau of Indian Affairs Indian Irrigation Project and receives its irrigation water from Vallecito Dam which is a Bureau of Reclamation owned project.

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

Yes, the proposed project does support Tribal resiliency to climate change and drought by promoting and improving river health on the Southern Ute Indian Reservation. By eliminating fish entrainment, improving fish passage and aquatic ecosystem health, and creating reliable irrigation delivery, this project will benefit Tribal and non-tribal recreators on the Los Pinos River. By improving river health, more tribal members and non-tribal members can recreate on the Los Pinos River more frequently all year. The Tribe sells fishing permits to non-tribal anglers which provides economic opportunity to the Tribe. By improving irrigation delivery, this project will improve the Tribe's resilience to drought impacts. Improved irrigation delivery will also provide the Tribe economic opportunities through agricultural production on Tribal lands.

Project Budget

Budget Proposal

Nannice Canal Diversion and Fish Passage Project Budget Summary			
Budget Object Category	Total Cost	Federal Estimated Amount	Non-Federal Estimated Amount
a. Personnel	\$0		
b. Fringe Benefits	\$0		
c. Travel	\$0		
d. Equipment	\$0		
e. Supplies	\$0		
f. Contractual	\$869,226		
g. Construction	\$0		
h. Other Direct Costs	\$0		
i. Total Direct Costs	\$869,226		
j. Indirect Charges	\$0		
Total Costs	\$869,226	\$651,919	\$217,306
Cost Share Percentage		75%	25%

Budget Narrative

For this project, all costs will be contractual. For the construction phase, Water Resources Division will select a contractor.

- **Administrative and legal expenses:** The monitoring of project performance measures will be approximately \$10,000.
- **Architectural and Engineering fees:** The cost of environmental and cultural permitting/clearances will be approximately \$60,000.
- **Construction:** According to the preliminary engineers estimated cost, construction will be approximately \$799,226.

The total proposed budget is \$869,226. Of that, the federal 75% share is \$651,919, and the Tribal match of 25% is \$217,306.

Environmental and Cultural Resource Compliance

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

Yes, the proposed project will require excavation in the Los Pinos River to build the fish ladder. There will also be some minor impacts during the installation of the new inlet tied to the existing structure and the installation of the Coanda screen. The Water Resources Division will coordinate with the Southern Ute Environmental Programs Division which has Environmental Protection Agency approved water quality standards, 401 certification authority, and air quality enforcement authority on the Reservation to implement appropriate best management practices for the project. The Water Resources Division will also work with the United States Army Corps of Engineers to acquire necessary 404 permitting for the project.

2) 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?

There may be New Mexico Meadow Jumping Mouse habitat, nesting eagles, and other potential concerns. The Water Resources Division will closely coordinate with the Southern Ute Wildlife Resource Management Division on Threatened and Endangered Species compliance since they have the authority to do so on the reservation. If the Southern Ute Wildlife Resource Management Division determines that consultation with the United States Fish and Wildlife Service is required, the Water Resources Division will work with the Wildlife Resource Management Division on the consultation process.

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

Due to the installation of a fish ladder, the scope of the project may not fall under the Irrigation exemption for 404 permitting. The Water Resources Division plans on consulting with the United States Army Corps of Engineers on the requirement for a 404 permit if deemed necessary, and Project Construction Notice will be submitted to the United States Army Corps of Engineers for a 404 permit.

4) When was the water delivery system constructed?

The Nannice Canal was originally constructed around 1884. Around 1911, the Bureau of Indian Affairs began planning the Pine River Indian Irrigation Project. In 1920, the Bureau of Indian Affairs began collecting O&M fees on the Pine River Indian Irrigation Project. Between 1960 and 1966, the Bureau of Indian Affairs began a major rehabilitation project, and in 1965, the current Nannice Canal Diversion was

constructed. In 2008, the Bureau of Indian Affairs identified the Nannice Canal Diversion as “Critical” for rehabilitation or replacement in its HKM study.

5) 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 includes the rehabilitation of the Nannice Canal Diversion which was originally constructed in 1965. In 2008, the Bureau of Indian Affairs identified the Nannice Canal Diversion as “Critical” for rehabilitation or replacement in its HKM study. Over the years, there have been some modifications which include but are not limited to:

- 2013- Rehabilitation work on the existing structure was performed by Southern Ute Water Resources Division in collaboration with the Bureau of Indian Affairs. Work consisted of installing boulders and rock material to river left to improve the low head dam operations.
- 2016- The Water Resources Division in collaboration with the Bureau of Indian Affairs installed 300 feet of closed pipe from the inlet of the headgate.

6) 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.

The Nannice Canal Diversion was constructed in 1965 and is located on a Tribal Allotment. The Water Resources Division plans on consulting with the Bureau of Indian Affairs and the Southern Ute Tribal Historic Preservation Office to see if the Nannice Canal Diversion is listed or eligible for listing on the National Register of Historic Places.

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

The Water Resources Division will coordinate with the Bureau of Indian Affairs and the Southern Ute Tribal Historic Preservation Office for this project since it is located on a Tribal Allotment.

Official Resolution

RESOLUTION NO. 2023-046

**RESOLUTION
OF THE
COUNCIL OF THE SOUTHERN UTE INDIAN TRIBE
March 14, 2023**

WHEREAS, authority is vested in the Southern Ute Indian Tribal Council by the Constitution adopted by the Southern Ute Indian Tribe, and approved November 4, 1936, and amended October 1, 1975, and August 27, 1991, to act for the Southern Ute Indian Tribe; and

WHEREAS, pursuant to Article VII, Section 1(h) of said Constitution, the Tribal Council “shall manage all funds within the control of the [T]ribe, and may appropriate available Tribal money for public, business, governmental or investment purposes...”; and

WHEREAS, pursuant to Article VII, Section 1(n) of said Constitution, the Tribal Council is authorized to “protect and preserve the property, wildlife, and natural resources of the Tribe and to regulate the conduct of trade and the use and disposition of tribal property upon the Reservation”; and

WHEREAS, pursuant to Articles X, Section 1(c) of the Constitution, the Tribal “Chairman shall serve as contracting officer of the Southern Ute Indian Tribe executing all contracts and agreements to which the Tribe is a party following approval by the Tribal Council”; and

WHEREAS, the Southern Ute Indian Tribal Council and its Water Resources Division (WRD) are committed to providing for the management, conservation, and utilization of the Tribe’s water resources; and

WHEREAS, the condition and priority for the rehabilitation of the Nannice Canal Heading has been identified as critical in the 2008 BIA HKM Study; and

WHEREAS, the impact of the Nannice Canal heading on fish passage and entrainment has been documented in the 2018 Pine River Ecological Study; and

WHEREAS, the WRD has been working with the BIA on an engineering design for the rehabilitation of the Nannice Canal Heading, which is projected to cost \$869,226; and

WHEREAS, the WRD seeks to improve fish passage, reduce fish entrainment, and improve the operation and condition of the Nannice Canal Heading; and

WHEREAS, the Bureau of Reclamation (BOR) is accepting applications for grant funding of \$3,000,000 for WaterSMART Environmental Water Resource Projects for Fiscal Year 2023 (Notice of Opportunity Number R23AS00089); and

RESOLUTION NO. 2023-046

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March 14, 2023

WHEREAS, the WRD has prepared a grant application and seeks to apply for grant funding from the BOR in the amount of \$651,920 for construction of the Nannice Canal Heading, which requires a participant cost share of \$217,306; and

WHEREAS, Tribal Council finds it in the best interest of the Tribe to apply for grant funds in the amount of \$651,920 for construction of the Nannice Canal Heading, and to fund the required 25% participant cost share in the amount of \$217,306 from tribal funds.

NOW, THEREFORE, BE IT RESOLVED, that the Southern Ute Indian Tribal Council hereby approves the WRD to apply for the BOR WaterSMART Environmental Water Resource Projects for Fiscal Year 2023 grant in the amount of \$651,920 for construction of the Nannice Canal Heading.

BE IT FURTHER RESOLVED, that the Tribal Council approves a 25% participant cost share in the amount of \$217,306 that will be funded from the Tribe and included in the FY24 tribal budget.

BE IT FURTHER RESOLVED, that the Tribal Council authorizes the Contracts & Grants Manager to submit the required documents, after legal review, to the Bureau of Reclamation and authorizes the Water Resources Division Head to manage the grant funds in accordance with the grant requirements.

BE IT FURTHER RESOLVED, that the Chairman of the Southern Ute Indian Tribal Council or, in his absence, the Vice Chairman, or, in the absence of both the Chairman and the Vice Chairman, a duly appointed Acting Chairman is hereby authorized to sign the necessary documents and take all necessary actions to carry out the intent of this resolution.

This resolution was duly adopted on the 14th day of March, 2023.



Mr. Melvin A. Baker, Chairman
Southern Ute Indian Tribal Council

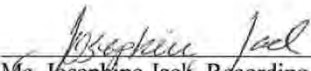
RESOLUTION NO. 2023-046

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March 14, 2023

C E R T I F I C A T I O N

This is to certify that there were (7) of the regularly elected Southern Ute Indian Tribal Council members present at the above meeting, at which (6) voted for, and (0) against, it being a quorum and the above resolution was passed, the Chairman not being permitted to vote in this instance due to a Constitutional provision.



Ms. Josephine Jack, Recording Secretary
Southern Ute Indian Tribal Council

Letters of Support and Letters of Partnership

- The Nature Conservancy- Carlos Fernandez, Colorado State Director
- Bureau Of Indian Affairs Southern Ute Agency- Priscilla Bancroft, Superintendent



The Nature Conservancy in Colorado
2424 Spruce Street
Boulder, CO 80302

tel (303) 444-2950
fax (303) 444-2985
nature.org/colorado

US Bureau of Reclamation
Funding Opportunity R23AS00089
WaterSMART FY 23 Environmental Water Resources Projects
Financial Assistance Management Branch, PO Box 25007, MS 84-27852
Denver, CO 80225

February 28, 2023

Dear Reclamation Grant Reviewers:

The Nature Conservancy (TNC) is providing this letter to express its full and enthusiastic support for the Southern Ute Tribe's 2023 application for funding through the Bureau of Reclamation's WaterSMART Environmental Water Resources Projects opportunity. This funding will allow the Southern Ute Tribe to complete the Nannice Canal Diversion and Fish Passage Project (Project), which is a water management and infrastructure project with significant benefits for ecological values and watershed health.

TNC has partnered with the Southern Ute Tribe since 2016 to explore how TNC can support Tribal water management and ecological goals on the Pine River. TNC fully supports the Southern Ute Tribe's extensive planning work that has identified the Project as a high priority for Tribal ecological values and the health of the Pine River watershed, and TNC provided grant funding to the Southern Ute Tribe for the design phase of this Project. The Project will provide multiple benefits for Pine River water users and the environment, including restored fish passage and river connectivity for sportfish and sensitive native fish; reduction of fish entrainment; increased control of diversions and bypass flows at the diversion and improved water administration; and improved safety, maintenance, and operation of the diversion structure.

TNC is especially excited about the Project because it is an example of how Tribal Nations are leading the development of solutions for people and nature in places like the San Juan River Basin (which is facing significant challenges from a changing climate). As people and nature face escalating threats of water stress, efforts like the Project can serve as a model of how Tribal Nations can increase resilience to climate change at a critical time for the people and wildlife in the region. TNC is pleased to support a Tribally-led project that will benefit and increase the climate resilience of Tribal (and non-Tribal) communities in the Pine River watershed.

We strongly encourage the Bureau of Reclamation to support the Southern Ute Tribe's 2023 grant proposal. Questions can be directed to Celene Hawkins via email at celene.hawkins@tnc.org. Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Carlos E. Fernandez".

Carlos Fernandez
Colorado State Director, The Nature Conservancy



United States Department of the Interior
BUREAU OF INDIAN AFFAIRS
Southern Ute Agency
P.O. Box 315
Ignacio, Colorado 81137

IN REPLY REFER TO:
Office of the Superintendent

February 17, 2023

TO: U.S. Department of Interior: Bureau of Reclamation
Southern Ute Indian Tribe: Water Resources Division

FROM: U.S. Department of Interior: Bureau of Indian Affairs, Southern Ute Agency
Superintendent *Husella Kanev*

SUBJECT: Approval for the Water Resources Division to apply for Bureau of Reclamation
WaterSMART Environmental Water Resources Projects for Fiscal Year 2023

The Bureau of Indian Affairs (BIA) owns and operates the Pine River Indian Irrigation Project which delivers irrigation water to Southern Ute Indian Tribe's land within the Pine River watershed which is in the Upper San Juan Watershed (HUC 14080101).

The BIA is pleased to provide full support for the Water Resources Division's (WRD) grant proposal for the Bureau of Reclamation's WaterSMART Environmental Water Resources Projects for Fiscal Year 2023. The WRD's proposal for the construction of the Nannice Ditch Diversion will improve the function of safety and operation of the diversion and reduce its impact to fish by preventing entrainment in the ditch and by improving fish passage in the Los Pinos River.

Should you have any questions, please contact Vickie Begay, Supervisory Civil Engineer, Branch of Roads/Irrigation at (970) 563-9484.