Paris Creek Hydropower Decommissioning and Instream Flow Restoration

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## Table of Contents

1. Executive summary ............................................................................................................... 1

2. Project location .................................................................................................................. 1

3. Technical project description ............................................................................................... 2
   3.1 Decommissioning of the hydropower plant and associated features .......................... 2
      3.1.1 Decommissioning of the power canal diversion structure on the creek ....... 2
      3.1.2 Power canal recontouring, snowshed removal, and decommissioning of the forebay ............................................................................................................................... 2
      3.1.3 Removal of the penstock, powerhouse equipment, other buildings, and unneeded tailrace diversion features ................................................................................................. 3
   3.2 Construction of an irrigation diversion on the creek ..................................................... 4
   3.3 Installation of new stock-water systems ......................................................................... 5
      3.3.1 Paris Canyon Pipeline ............................................................................................... 6
      3.3.2 Bloomington-Paris Cattle Association stock-water well ..................................... 7
   3.4 Addressing a sinkhole along the creek .......................................................................... 8
   3.5 Water transaction between the Bear River ECC and PacifiCorp ................................. 8

4. Performance measures ........................................................................................................... 8

5. Evaluation Criteria ............................................................................................................... 9
   5.1 Evaluation Criterion A—Project Benefits ...................................................................... 9
      5.1.1 Sub-criterion A.1—Benefits to Ecological Values ................................................... 9
      5.1.2 Sub-criterion A.2—Quantification of Specific Project Benefits by Project Type 10
   5.2 Evaluation Criterion B—Collaborative Project Planning ............................................. 13
   5.3 Evaluation Criterion C—Stakeholder Support ............................................................... 15
   5.4 Evaluation Criterion D—Readiness to Proceed ............................................................ 16
   5.5 Evaluation Criterion E—Performance Measures ......................................................... 18
   5.6 Evaluation Criterion F—Presidential and Dept. of the Interior Priorities ........................ 19

6. Project Budget ..................................................................................................................... 20
   6.1 Funding Plan and Letters of Commitment ................................................................. 20
   6.2 Budget Proposal .......................................................................................................... 21
   6.3 Budget Narrative ......................................................................................................... 22

7. Environmental & Cultural Resources Compliance ............................................................. 23

8. Required Permits or Approvals .......................................................................................... 23

9. Letters of Support and Partnership ....................................................................................... 24

10. Official Resolution ............................................................................................................. 25

Appendix A: Letters of Partnership and Commitment .............................................................. 26
A.1. PacifiCorp Partnership Letter .................................................................27
..............................................................................................................................................28
A.2. Bonneville Environmental Coordinating Committee letter of commitment .........29
Appendix B: Project Agreements .................................................................32
1. Executive summary
Date: 09 December 2021
Applicant Name: Trout Unlimited
City, County, and State: Paris, Bear Lake County, Idaho

Trout Unlimited is a Category B applicant (non-profit) that is partnering with PacifiCorp a Category A applicant (see Partnership letter, Appendix A).

A one-paragraph project summary:
Stream flows will be restored to four miles of the headwaters of Paris Creek with the decommissioning of the Paris Hydropower Plant in Bear Lake County, Idaho. This project is a collaborative endeavor among the owners of the plant - PacifiCorp, the Bear River Environmental Coordinating Committee (ECC: federal, state, non-profit, and tribal representatives), canal companies, and stock-water interests. PacifiCorp and the Bear River ECC have been working together to address the decline of Bonneville Cutthroat Trout (BCT) in the Idaho portion of the Bear River Watershed since 2004. Over one hundred conservation projects have been funded by the Bear River ECC with an emphasis on those that benefit BCT and other aquatic resources. The decommissioning of the Paris Hydropower Plant will restore stream flows that are currently diverted 4 miles upriver. The current hydropower practices result in the partial or complete diversion of the base flows of Paris Creek for about nine months out of the year. The decommissioning of the hydropower plant will restore a normative hydrograph to this reach of Paris Creek. Irrigation and stock-water interests that currently use hydropower plant features for the delivery of their water rights will be addressed with the construction of a new irrigation diversion on Paris Creek and two new stock-water systems. A sinkhole found in the bypass reach will also be addressed. The basis for all project actions is outlined in the Paris Creek Restoration Agreement among PacifiCorp and the Bear River ECC and a Memorandum of Understanding Regarding Paris Creek Project Decommissioning among those involved with the new irrigation diversion.

Fabrication of the fish screen for the new irrigation canal diversion will begin during October 2022. Construction of the new irrigation diversion and stock-water systems will occur during summer 2023. The hydropower plant will be decommissioned after a connection is made to the new irrigation system. The new irrigation diversion will be operational for the 2024 irrigation season and adjustments to the new system and fish screen will be made during that time. Project completion will be the end of the irrigation season, September 30, 2024.

The BOR funds proposed will be used primarily to support the construction of the new irrigation diversion on the creek. Trout Unlimited has successfully completed dozens of irrigation diversion rebuilds in the Bear River Watershed to benefit fish passage. Trout Unlimited will then coordinate the diversion rebuild and fish passage aspects of this project and serve as the applicant for the proposed BOR funds. TU is also an active participant in the Bear River ECC.

The proposed project is not located on a Federal (BOR) facility.
2. Project location

The Paris Hydropower Plant (42.217935° -111.444327° (WGS-84)) is in the Bear River Watershed within Bear Lake County, Idaho about 2.5 miles west of Paris, Idaho. About four miles upstream, water is diverted on the Caribou-Targhee National Forest and is currently carried in a canal along the hillside on private, Bureau of Land Management, and PacifiCorp lands where it enters a forebay and then drops into the penstock for the hydropower plant (Figure 1). Stock water is currently provided by the 3.6 miles of open canal and Paris Creek. New stock-water systems will be developed in the uplands to the south of the power canal. The sinkhole to be addressed is downstream of the national forest on private land just upstream of the Paris Canyon Road crossing (Figure 1).

Figure 1. Location map (inset) and project area map of the Paris Hydropower Plant features and sinkhole along Paris Creek.
3. Technical project description
The goal of restoring stream flow to four miles of Paris Creek is supported by the following project elements: 1. Decommissioning of the hydropower plant and associated features; 2. Construction of an irrigation diversion on the creek; 3. Installation of new stock-water systems; and 4. addressing a sinkhole along the creek. In addition, a water transaction (element #5) between the Bear River Environmental Coordinating Committee and PacifiCorp will be used to assist with decommissioning costs.

3.1 Decommissioning of the hydropower plant and associated features
The Paris Hydropower plant (capacity of 715kW with an annual average generation of 2,278 MWh) will be entirely decommissioned. This process includes: 1. Decommissioning of the power canal diversion structure on the creek; 2. Power canal recontouring, snowshed removal, and decommissioning of the forebay; and 3. Removal of the penstock, powerhouse equipment, other buildings, and unneeded tailrace diversion features. The empty powerhouse and garage will likely be sold with the property at the conclusion of the project.

3.1.1 Decommissioning of the power canal diversion structure on the creek
This diversion structure is located a few hundred yards downstream of where Paris Spring emerges from the mountain side. A spring box is located at the source that provides drinking water to the city of Paris, Idaho and this structure will remain undisturbed as part of this project. The power canal point of diversion on Paris Creek (Figure 2) is on the Caribou-Targhee National Forest and is authorized under a Special Use Permit.

![Figure 2. Photo of the diversion structure for the power canal during June 20, 2013. The log timbers and headgate will be removed as part of the decommissioning process. Note that most of the streamflow is being directed into the headgate and power canal with little stream flow downstream of the diversion structure.](image)

3.1.2 Power canal recontouring, snowshed removal, and decommissioning of the forebay
From the instream diversion to the forebay, the 3.6-mile-long power canal crosses lands that are owned by the Bureau of Land Management, the U. S. Forest Service, and private interests.
Wooden decking was historically placed over the lower third of this length to prevent snowfall into the canal for flow conveyance during the winter. All wooden decking will be removed as part of the decommissioning process. The forebay concrete structures will be demolished and the forebay berms will receive light grading and seeding.

3.1.3 Removal of the penstock, powerhouse equipment, other buildings, and unneeded tailrace diversion features

The 1,300-foot long, metal penstock and its concrete saddles will be completely removed from the hillside and any disturbed ground re-graded and re-seeded. All equipment will be removed from within the hydropower plant (Figure 3) and the building will be left onsite. The employee house will be removed, but the garage and fencing will be left on site.

Figure 3. Photo of the Paris Hydropower plant as taken from the tailrace on November 17, 2021. The tailrace is piped under the graveled Paris Canyon Road. The buildings, pipe under the road, and some tailrace features will be removed with decommissioning.

The existing tailrace features include a concrete splitter structure with headgates (Figure 4). One headgate is used to divert water to the Upper Southfield Canal on the same side (stream right) of the creek as the tailrace. Another headgate is used to control water flows to a 60-foot long 36-inch diameter metal pipe that is supported over Paris Creek and connects to the Paris Relief Canal on stream left. Water that is not diverted to either canal is spilled back to Paris Creek.
Figure 4. Photo of the Paris Hydropower plant tailrace taken on November 17, 2021. As shown, all power plant flows are being returned to the creek after the irrigation season. The portion of the concrete flume with the headgates will likely remain with the new irrigation pipeline entering at this point to send water to both canals.

3.2 Construction of an irrigation diversion on the creek

A new irrigation diversion structure will be constructed about 0.25 stream miles upstream of the existing tailrace. The new diversion structure will be located on private property, where the irrigation structures were located prior to being moved to the tailrace with the development of the hydropower plant in the early 1900s. A specific location for the new diversion structure has been agreed upon with both the landowners and the canal companies (Figure 5).

Figure 5. Paris Creek on the Mattson property on November 17, 2021. The new irrigation diversion will be located slightly upstream of this spot. The diversion structure and fish screen will be installed on stream right with the irrigation pipeline running along the Paris Canyon Road to connect to the tailrace splitter structure.
The new irrigation diversion structure will be composed of a large rock cross vane with a cross step that will provide the necessary elevation for water diversion and provide for fish passage. A headgate will be installed on stream right to provide for water regulation into the canal. In the canal behind the headgate, a fish screen will be installed to protect fishes over the full range of canal flows with appropriate velocity criteria as outlined in BOR’s Fish Protection at Water Diversions (2006). A concrete support structure will be poured in the canal for the installation of the fish screen. The screen will be designed for 37 cfs, the total maximum allowed divertible flow for both canals combined (29.14 cfs for Paris Relief and 7.5 cfs for Upper Southfield). One screen type being considered is a rotary drum screen that can be turned by paddlewheels in the canal flows (Figure 6).

![Figure 6](image_url). Photo of the Treasureton Diversion fish screen installed by Trout Unlimited on Cottonwood Creek (Idaho) in 2014. Three rotary drums (12' length x 36" diameter) are turned by two paddlewheels (the lower wheel drives the lowest-drum, and the upper wheel drives the top two drums). The screen was designed for a maximum diversion rate of 40 cfs. A similar type and size of screen is being considered for the new irrigation diversion on Paris Creek.

Downstream of the fish screen, the screened flows will enter a 36-inch diameter PVC pipe. The pipe will then run along the Paris Canyon Road for about 1,000 feet to the existing tailrace and headgate structure where flows can be regulated to the two irrigation canals. Some new concrete work will be required to retrofit the existing concrete structure. The Paris Relief Canal pipe over the stream will be covered with a protective epoxy coating to prevent corrosion. Parshall flumes will be installed in both canals for flow measurement. Locks will also be installed on screw gates to prevent tampering.

3.3 Installation of new stock-water systems
Currently, water is supplied to stock-water uses from the power canal as well as directly from Paris Creek. With the decommissioning, the power canal will no longer convey water. PacifiCorp worked with stock-water users and the land management agencies to develop two new stock-water systems: 1) Paris Canyon Pipeline; and 2) Bloomington-Paris Cattle
Association stock water well. The final details of these systems are still being developed and the stock-water users are taking the lead in these efforts.

3.3.1 Paris Canyon Pipeline
The new pipeline system will provide well water to the private uplands from two solar stations and a series of tanks and troughs (Figure 7). The labor and materials for the pipeline systems will be provided under a construction contract and will include over 23,500 feet of pipeline, eight rubber-tire water troughs, 32,000 gallons of water storage in tanks, and a backup generator for water pumping.

Figure 7. Paris Canyon Pipeline stock-water features for both the east and west upland areas on private ground.
3.3.2 Bloomington-Paris Cattle Association stock-water well
The new stock water well and trough system will use ground water to replace the existing surface water use from the power canal and the creeks on the Caribou-Targhee National Forest. A new well will be drilled, along with the installation of a solar panel pump, a length of pipeline and a stock trough (Figure 8).

Figure 8. Map of the Bloomington-Paris Cattle Association Stock Water well system. The new well and trough system will deliver water to cattle in the Paris and Bloomington creeks drainages on the Caribou-Targhee National Forest.
3.4 Addressing a sinkhole along the creek
A sinkhole along the creek upstream from the Paris Canyon Road crossing currently results in the loss of surface water with an unknown place of return flow (Figure 9). When the overall project is completed, then it will be necessary to limit the flow going into this hole to ensure timely delivery of water to the new irrigation diversion, especially during base flow conditions in the summer. The concept plan for the sinkhole is to construct another stream channel of about 50 feet in length that will take the stream-flows away from the sinkhole area. In addition, rock and cobble fill will be placed in the hole to reduce the likelihood of stream-flows being diverted into it. The private landowner agrees with this proposal.

![Figure 9. Photograph of the sinkhole looking upstream on November 17, 2021. The water drops into the hole located at the bottom of the photo.](image)

3.5 Water transaction between the Bear River ECC and PacifiCorp
The Bear River ECC intends to contribute toward the decommissioning of the Paris Hydropower Project and the resulting restoration of Paris Creek stream flows and habitat by agreeing to an amendment of the Bear River Settlement Agreement to reduce the minimum stream flow in the Grace bypass of the Bear River Project by 15 cfs (Restoration Agreement, Appendix B). The present value of these Bear River flows to PacifiCorp is estimated to be $258,000 through the year 2033. This is an integral part of the overall project, but BOR funds will not be used for this water transaction.

4. Performance measures
A brief summary describing the performance measures that will be used to quantify actual benefits upon completion of the project.
Several performance measures will be used to quantify project benefits of the restored instream flow on Paris Creek. Because this is a flow restoration project, we will measure instream flows at
several locations along the creek both before and after the project completion. Floodplain and riparian expansion benefits will be measured with a combination of remotely sensed and on-the-ground indices. Lastly, habitat, macroinvertebrates and fish community assessments will be completed.

5. Evaluation Criteria

5.1 Evaluation Criterion A—Project Benefits

5.1.1 Sub-criterion A.1—Benefits to Ecological Values

Please provide a general description of how your project will benefit ecological values. The project will restore perennial stream flows to four miles of the headwaters of Paris Creek. Currently this stream length is completely or almost completely dewatered for most of the year because of diversion for hydropower production. The decommissioning of the hydropower plant will restore a normative hydrograph that will once again be able to support highly valuable aquatic and riparian habitat (Figure 10). This will support the expansion of Bonneville Cutthroat trout into this habitat, along with other native fishes. The increase in base flows will provide for the expansion of beavers and their dams throughout the reach. This will significantly increase the quantity of stream habitat and support an increase in riparian area extent and quality that will benefit a myriad of wildlife species.

![Figure 10. Paris Creek looking upstream at part of the Paris Meadows restoration project that was completed in 2016 by the Forest Service. The photo was taken on September 26, 2017. That was a very high runoff year in the Bear River Watershed and the amount of stream flow was well above average for that time of year. The pictured flows give some sense of what the creek flows may look like for average year base flows with the decommissioning and instream flow restoration project.](image-url)

The project will increase water supply reliability for ecological values by restoring a normative hydrograph to the headwaters of Paris Creek in perpetuity. Increased water quantity, especially from these spring-sourced waters, will provide high quality cold water to benefit native fishes like cutthroat trout. In addition, the development of new stock-water irrigation systems will
result in little to no cattle grazing along the stream and riparian areas, which will have a positive impact on recreation opportunities for the public. Historically, constant grazing pressure had resulted in the loss of woody vegetation, streambank erosion, bacterial contamination, and sedimentation to the stream. All of these grazing effects reduced stream habitat quality and recreational value, e.g., fishing, on Paris Creek.

The project will benefit hydropower use in that it allows PacifiCorp to exit a facility that is no longer economically viable for the company. The project will benefit water use for cattle grazing with the development of two new stock-water systems in the uplands. This will provide for better dispersal of grazing on upland areas and utilization of forage. A new irrigation diversion will also support and maintain agricultural land for haying and pasture for two canal companies.

5.1.2 Sub-criterion A.2—Quantification of Specific Project Benefits by Project Type
Explain the extent of project benefits.
This project could readily fit into any of the four different project types that are listed. The water efficiency type seemed to best fit the project benefits.

Project benefits for water efficiency projects that result in quantifiable and sustained water savings or improved water management—and which increase water supply reliability for ecological values.
Water that is currently diverted into the power canal for hydropower production will stay instream for about four miles of Paris Creek. The water volume to be restored to this section can then be estimated based on past flows through the Paris Hydropower Plant (Figure 11). The power plant has a maximum capacity of 36 cfs.

Figure 11. Paris Hydropower Plant generation flows for fifty-two years (1966 to 1972 and 1975 to 2019). The horizontal dashed line indicates the 12.9 cfs mean of annual average flows. Data provided by Connelly Baldwin, Water Resources Engineer for PacifiCorp.
Mean monthly flows for hydropower production were highest during May to July when snowmelt runoff increased stream flows. For the fifty-two full years of record available, the mean of annual average flows is 12.9 cfs (9,323 acre-feet) with a minimum annual flow being 4.5 cfs (3,253 acre-feet) during 1977 and a maximum annual flow of 20.4 cfs (14,743 af) during 1986.

Explain where the water that will be conserved is currently going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground) and how the water is currently being used. For example, are current losses returning to the system and being used by others? Are current losses entering an impaired groundwater table becoming unsuitable for future use? Are there any known benefits associated with where the current losses are going? For example, is seepage water providing additional habitat for fish or animal species?

Most of the water that is currently being diverted into the power canal is bypassing about four miles of stream. The flows that make it to the hydropower plant then provide water for the irrigation diversions at the tailrace and any unused water returns to Paris Creek at this point. Some of the currently diverted water in the power canal is seeping into the ground along the hillside and likely making its way back to the stream by way of groundwater. Paris Creek does appear to be a gaining reach moving down valley, though most of the upper reaches can be dry or nearly so because of the power canal diversion. Seepage has provided for the growth of shrubs and trees downhill of the power canal. This vegetation will likely senesce over time without constant canal seepage and then return to a more typical upland vegetation that occurred prior to the canal use.

Explain in detail how water conserved as a result of the project will be used to increase water sustainability for ecological values. Will the project commit conserved water to remain instream? If so, please provide detailed support for that commitment. Will a formal mechanism (e.g., collaboration with a state agency or nonprofit organization, or other mechanisms allowable under state law) be used? Or, if a formal mechanism will not be used, please describe the arrangement proposed to contribute conserved water for ecological benefits. Please explain the roles of any partners in the process and attach any relevant supporting documents.

The project will commit all water conserved to stay instream for four miles of Paris Creek. PacifiCorp will relinquish their water right (#11-86 for 70 cfs) to divert for hydropower production (Tailrace Agreement, Appendix B). This water will then stay instream below the current diversion structure and remain there until water can be diverted with the new irrigation diversion that will be built on Paris Creek. The senior irrigation water rights for Paris Relief Irrigation Company (#11-67 and #11-66A) and Upper Southfield (#11-69) have a total of about 37 cfs and would prevent junior water users from filing on the instream flows. The canal companies will submit a point of diversion change application to move their current diversion from the hydropower plant tailrace back to Paris Creek (Memorandum of Understanding Regarding Paris Creek Project Decommissioning, aka the Tailrace Agreement, Appendix B). Trout Unlimited will assist the canal companies with the point of diversion change application during the planning and design phase for the new irrigation diversion.

Describe the benefits that are expected to result from increased instream flows. Will increased instream flows assist in reducing basin-wide water supply and demand imbalances or in complying with an interstate compact? Will increased instream flows result in benefits to fish and wildlife? If so, please describe the species and expected benefit of the project. Will the increased instream flows...
result in benefits to habitat or other ecological benefits? If so, describe these benefits. Will the flows specifically benefit federally designated critical habitat?

The primary benefit of the instream flow will be to fish and wildlife. The resumption of a normative hydrograph for four miles of Paris Creek, especially increased base flows, will benefit Bonneville Cutthroat Trout. Cutthroat trout found downstream of the power plant (Figure 12) can then recolonize these upstream reaches that have been severely dewatered for decades. Cutthroat trout will be able to complete their life cycle in this part of Paris Creek. These headwaters will offer cold, clean water that comes out of the Paris Spring and then will flow uninterrupted downstream. For example, daily maximum stream temperatures of the spring sourced flows in the power canal were a fairly consistent 45°F whereas about 1.5 mile downstream in the nearly dewatered bypass reach water temperatures ranged from about 61°F to 68°F during July and August 2012 (Lyman and Carter 2015). The project will allow the cold spring source water to remain instream. Perennial flow will also promote the increase in diversity and abundance of aquatic macroinvertebrates that are the basis for trout diets. Restored flows will benefit all habitat features, but none that is federally designated critical habitat.

![Figure 12. A 16” migratory cutthroat trout captured downstream of the Paris hydropower plant on the Newberry property during electrofishing by the Idaho Department of Fish and Game and the Caribou-Targhee National Forest during 2012.](image)

Restored instream flows will also benefit stream and riparian habitat. Increased base flows will support stream side vegetation growth. Beavers will then benefit from the increased baseflows and riparian vegetation. Beavers will be able to build more dams that create pool habitat for their lodges and food caches that allows beavers to successfully overwinter (Figure 13). The increased beaver activity will then further reconnect stream flows to the riparian area, promoting the expansion and improvement of vegetation and stream habitat quantity, promoting a positive feedback loop.
Figure 13. Newly constructed beaver dam on Paris Creek in the meadow reach below the forest boundary during September 2017 (a high flow year).

Increased wetted stream habitat will support increased habitat for cutthroat trout, as well as other fishes like sculpin, and amphibians such as Columbia spotted frogs. An expansion of the riparian area and its vegetation will also promote increased wildlife use, especially neotropical songbirds.

5.2 Evaluation Criterion B—Collaborative Project Planning
The project was developed by several water users working in concert with the Bear River ECC, a stakeholder group with diverse interests. The primary water user is PacifiCorp - as the owner of the hydropower project and the principal proponent and developer of the project. PacifiCorp worked with the ECC to develop the decommissioning process and the water transaction to support it (Restoration Agreement, Appendix B). PacifiCorp also worked with the two canal companies, the City of Paris, private landowners, and Trout Unlimited to address irrigation interests (Tailrace Agreement, Appendix B). PacifiCorp, along with the Forest Service and the Bureau of Land Management, worked with stock water users to develop new stock water systems. In addition, the stock water users have collaborated with the Idaho Department of Environmental Quality to apply for a Clean Water Act section 319 Non-Point source grant to help fund the needed infrastructure. Lastly, PacifiCorp and ECC partners worked with the private landowner to receive agreement to address the sinkhole along the creek. In summary, the overall project development process has been very collaborative, and time consuming, with PacifiCorp’s goal to make all uses “whole” with the project.

In 2015, preparations of the plan and the resulting agreements were begun in order to address all issues related to the hydropower decommissioning. The Restoration Agreement has been signed by nine of fourteen authorized representatives of the parties as of December 9, 2021. The other parties are expected to sign within the coming weeks. The Tailrace Agreement has been signed by all applicable parties (Appendix B).
The primary purpose of the strategy and plans is to restore the reliability of water supply in Paris Creek to benefit ecological values. The plan addresses water quantity and quality issues along with related ecosystem health issues and the health of aquatic dependent species such as Bonneville Cutthroat Trout.

Neither a WaterSMART Basin Study nor a Water Management Options Pilot have been completed for this applicable area. The Nature Conservancy did prepare a collaborative Conservation Action Plan for the Bear River Basin (2010) that suggested an adaptation management strategy to increase water reliability and stream connectivity to support Bonneville Cutthroat Trout under a changing climate. This project specifically addresses that strategy.

The strategy and plan were developed collaboratively with input from diverse interests and stakeholders. The Bear River ECC was involved early and often in the 6-year planning process with PacifiCorp. The ECC has active and involved representatives from the Federal land management representatives (U. S. Forest Service and Bureau of Land Management), U. S. Fish and Wildlife Service, the Idaho Department of Fish and Game, the Idaho Department of Environmental Quality, and Trout Unlimited, among others. All ECC parties must agree to and sign the Restoration Agreement (Appendix B) because the included water transaction will involve an amendment to the Bear River Project license by the Federal Energy Regulatory Commission.

PacifiCorp and the Bear River ECC also worked with the stock-water users, canal companies (Tailrace Agreement, Appendix B), and private landowners to address all issues related to the decommissioning of the hydropower plant and instream flow restoration. The two agreements were prepared by PacifiCorp (Category A applicant for this proposal) specifically to address the goal of restoring instream flows to Paris Creek.

Another collaborative part of the project is the water transaction between the Bear River ECC and PacifiCorp. This transaction is based upon years of study and then discussion between the two parties. The minimum stream flow (MSF) in the Grace bypass of the Bear River has been extensively studied by ECC members, including the Idaho Department of Environmental Quality. Numerous monitoring reports are available on these studies in the Grace bypass. Reducing the MSF from 65 cfs to 50 cfs is not expected to markedly impact the existing thermal regime in the bypass reach of the Grace project as existing summer-time maximum temperatures coming down the river into the Grace reach limit BCT habitat in the Black Canyon until colder spring water inputs about 3.5 miles downstream from Grace Dam improve habitat conditions. Reducing the MSF by 15 cfs may actually improve in-river conditions in the lower Black Canyon by reducing warm water inputs on top of locations where coldwater spring inputs refresh the aquatic environment. The ECC is supportive of reducing the MSF by 15 cfs because it will have little to no negative effects to fisheries or the aquatic ecology in the Black Canyon reach of the Bear River.
5.3 Evaluation Criterion C—Stakeholder Support
The proposed project has complete support from all stakeholders involved. Letters of partnership/support are provided by PacifiCorp and the Bear River ECC, both of whom are providing significant cost-share contributions.

This is a complex and multifaceted project with support from a diverse set of stakeholders. The project is supported by entities representing agriculture (two canal companies and stock-water users), the City of Paris (municipal), and all represented interests on the Bear River ECC including environmental, recreational, and Tribal.

The project is supported by entities responsible for the management of land (U. S. Forest Service, Bureau of Land Management), management of fish and wildlife (Idaho Department of Fish and Game, U. S. Fish and Wildlife Service), and the management of water quality (Idaho Department of Environmental Quality). The signing of the Restoration Agreement (Appendix B) acknowledges that the project is consistent with agency policies.

The proposed project will complement other water management activities by several entities within the project area. The U. S. Forest Service completed a large-scale stream and riparian restoration project in the Paris Creek meadow below the forest boundary in 2016. This restoration project addressed cattle grazing impacts. Forest personnel have also been working in concert with the Idaho Department of Fish and Game and others to assess the effects of the hydropower plant water diversion on aquatic resources of Paris Creek for over twenty years.

The Bear River ECC, the U. S. Fish and Wildlife Service, and Trout Unlimited completed irrigation diversion upgrades with water rights holders to improve fish passage on Paris Creek downstream of the City of Paris from 2010 through 2015. These fish passage improvements will support the movement and migration of cutthroat trout from lower Paris Creek to the flow restored headwater reaches with the proposed project.

The project is partially located on U. S. Forest Service and Bureau of Land Management owned lands. Both agencies support the project and have been integral to the discussions with PacifiCorp with regards to the power canal and the development of the proposed new stock water systems. Both land management agencies have representatives on the Bear River ECC and support the contributions made through the group. The project area is primarily privately owned, including the hydropower plant. Therefore, there is not a complete and comprehensive federal nexus for either agency to complete the project, but rather they are fully supportive and participating to the extent applicable. For example, the Forest Service has extended the Special Use Permit for one year to facilitate the decommissioning timelines. The Forest Service has also provided NEPA to support stock-water and decommissioning on Forest Service lands.

There is no known opposition to the proposed project. The diligent and comprehensive approach taken by PacifiCorp, in concert with the Bear River ECC, has resulted in a project that is mutually beneficial to all interested parties.
5.4 Evaluation Criterion D—Readiness to Proceed
The implementation plan for the proposed project will focus on planning, permitting, design, and pre-project monitoring activities in 2022 and then construction in 2023 (Table 1). In 2022, the design for the irrigation diversion and sinkhole is planned to progress about equally. The stream alteration permit for these activities can then be submitted towards the end of 2022. Environmental compliance (SHPO, etc.) and FERC licensing amendments will also be completed in 2022. Fish screen fabrication will begin in October 2022 and progress through the winter 2022/2023.

Construction activities on the irrigation diversion, stock-water systems, and the sinkhole will occur during summer 2023. The new diversion will be completed, and the hydropower plant and all related facilities removed during autumn 2023. Instream flows will then be fully restored to Paris Creek during autumn 2023.

Trout Unlimited and PacifiCorp have access to all land and water sources where the project is located. PacifiCorp owns the land for the forebay, penstock, power plant, and tailrace. Landowner access for design and construction work has also been granted by the owners of the property for the new irrigation diversion (Tailrace Agreement, Appendix B) and the sinkhole work. Project partners are also working with stock-water users on their private property (Paris Canyon Pipeline) and Forest Service property (Bloomington-Paris stock-water well and allotment). The project partners will pursue a long-term access easement for the operation and maintenance of the fish screen at the new irrigation diversion structure.

A line item has been included in the budget for costs associated with environmental compliance. PacifiCorp has started these processes and will complete all compliance work. The local Reclamation office has not yet been contacted to discuss any specific compliance requirements related to potential BOR funding.

New administrative actions to be taken to implement the project include the FERC license amendments for the water transaction in Bear River and the decommissioning of the Paris Hydropower plant (Restoration Agreement, Appendix B).
Table 1. Paris Creek instream flow restoration implementation schedule.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Milestone</th>
<th>Start Date</th>
<th>End Date</th>
<th>Direct Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Signing of Agreements</td>
<td>NA</td>
<td></td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>Tailrace Agreement</td>
<td>All signatures</td>
<td>October 2021</td>
<td>November 2021</td>
<td></td>
</tr>
<tr>
<td>Restoration Agreement</td>
<td>All signatures</td>
<td>October 2021</td>
<td>December 2021</td>
<td></td>
</tr>
<tr>
<td>2: Irrigation diversion - design</td>
<td></td>
<td></td>
<td></td>
<td>$71,500</td>
</tr>
<tr>
<td>Topographic survey of site</td>
<td>Completion</td>
<td>December, 2022</td>
<td>December, 2022</td>
<td></td>
</tr>
<tr>
<td>Conceptual design</td>
<td>30% design</td>
<td>January 2022</td>
<td>March 2022</td>
<td></td>
</tr>
<tr>
<td>Detailed design</td>
<td>60% design</td>
<td>March 2022</td>
<td>June 2022</td>
<td></td>
</tr>
<tr>
<td>Completed design</td>
<td>100% design</td>
<td>June 2022</td>
<td>September 2022</td>
<td></td>
</tr>
<tr>
<td>3: Permitting</td>
<td></td>
<td></td>
<td></td>
<td>$10,000</td>
</tr>
<tr>
<td>FERC Bear River project license</td>
<td>Completion</td>
<td>January 2022</td>
<td>December 2022</td>
<td></td>
</tr>
<tr>
<td>FERC Paris Project exemption</td>
<td>Completion</td>
<td>January 2022</td>
<td>December 2022</td>
<td></td>
</tr>
<tr>
<td>Stream alteration permit</td>
<td>Received</td>
<td>October 2022</td>
<td>December 2022</td>
<td></td>
</tr>
<tr>
<td>4: Environmental and cultural compliance</td>
<td></td>
<td></td>
<td></td>
<td>$140,000</td>
</tr>
<tr>
<td>SHPO</td>
<td>Completion</td>
<td>September 2022</td>
<td>January 2023</td>
<td></td>
</tr>
<tr>
<td>Hazardous materials surveys</td>
<td>Completion</td>
<td>July 2021</td>
<td>November 2021</td>
<td></td>
</tr>
<tr>
<td>5: Stock-water systems - construction</td>
<td></td>
<td></td>
<td></td>
<td>$270,000</td>
</tr>
<tr>
<td>Paris Pipeline</td>
<td>Completion</td>
<td>August 2023</td>
<td>September 2023</td>
<td></td>
</tr>
<tr>
<td>Bloomington-Paris well</td>
<td>Completion</td>
<td>August 2023</td>
<td>September 2023</td>
<td></td>
</tr>
<tr>
<td>6: Sinkhole - design</td>
<td></td>
<td></td>
<td></td>
<td>$40,000</td>
</tr>
<tr>
<td>Topographic survey of site</td>
<td>Completion</td>
<td>April 2022</td>
<td>April 2022</td>
<td></td>
</tr>
<tr>
<td>Conceptual design</td>
<td>30% design</td>
<td>April 2022</td>
<td>June 2022</td>
<td></td>
</tr>
<tr>
<td>Completed design</td>
<td>100% design</td>
<td>June 2022</td>
<td>September 2022</td>
<td></td>
</tr>
<tr>
<td>7: Irrigation diversion – construction</td>
<td></td>
<td></td>
<td></td>
<td>$680,000</td>
</tr>
<tr>
<td>Construction bid tour</td>
<td>Selected bid</td>
<td>March 2023</td>
<td>March 2023</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Completion</td>
<td>August 2023</td>
<td>September 2023</td>
<td></td>
</tr>
<tr>
<td>Adjustments and modifications</td>
<td>Completion</td>
<td>May 2024</td>
<td>October 2024</td>
<td></td>
</tr>
<tr>
<td>8: Hydropower plant decommissioning</td>
<td></td>
<td></td>
<td></td>
<td>$1,464,336</td>
</tr>
<tr>
<td>Removal of all power canal diversion structure and instream flow restored</td>
<td>Completion</td>
<td>September 2023</td>
<td>perpetual</td>
<td></td>
</tr>
<tr>
<td>Removal of all other facilities</td>
<td>Completion</td>
<td>September 2023</td>
<td>December 2023</td>
<td></td>
</tr>
</tbody>
</table>
5.5 Evaluation Criterion E—Performance Measures
Discharge measurements will be taken at monitoring stations along the creek during baseflow periods before and after the project has been completed. Discharge measurements will be made at the following locations: 1) upstream of the power canal; 2) upstream of the sinkhole; 3) downstream of the sinkhole; and 4) upstream of the new irrigation diversion site at least twice per year prior to the completion of the project (2022 and 2023) and for five years after the completion of the project (2023 to 2027).

The upper-most location above the power canal will establish the nondiverted flow condition from the spring source. The next downstream location (#2) will document flow losses from the power canal diversion before the project is completed. This site will also establish the flow above the sinkhole to be compared to flows below the sinkhole (#3). In 2022 and 2023, measurements will establish pre-project flow effects of the sinkhole during the power canal dewatering/bypass conditions. After the project is completed, these measurements will be used to assess channel realignment and mitigation measures at the sinkhole. The most downstream site (#4) will be used to assess the overall flow gain or loss prior to the project and then after the project. It is anticipated that reach gains during baseflow conditions will increase with the restoration of the floodplain and the increase in water storage capacity during high stream flows that will then release slowly during the summer.

Remote sensing techniques will be used to measure the floodplain, riparian, and beaver expansion that is expected to occur in the flow restored reach. This increase should be greatest in the 1.5-mile, low-gradient stream reach in the meadow downstream of the Paris Springs Campground. In such settings, most riverscape health indicators are easily monitored using rapid field surveys and mapping from high resolution imagery (e.g. UAV flights and/or Google Earth). We will also evaluate the use of the normalized difference vegetation index (NVDI) from Landsat imagery that can show significant increases in riparian vegetation productivity (e.g., Dauwalter et al. 2018).

We will use the Low-Tech Process Based Restoration Implementation and Monitoring Protocol to monitor riverscape response and track indicators from pre- to post-project. Field measures and indicators such as number and height of beaver dams and measures of wetted channel will be used. Repeat measurements will also be made at channel cross-sections established by the Forest Service as part of their meadow restoration project.

Fisheries response will be measured by electrofishing at several sites within Paris Creek. One site within and one site below the bypass reach were established in 2001 by the Caribou-Targhee National Forest and the Idaho Department of Fish and Game and repeated in 2012 (Lyman and Carter 2015). These sites and potentially others will be sampled in 2022 for an updated pre-project condition. A multi-pass method will be used to produce a population estimate of trout for each site that can be compared to past years and after the instream flows are established.

The Idaho Department of Environmental Quality will monitor using their ambient water quality assessment protocols (Beneficial Use Reconnaissance Program – BURP), which occurs every 3 to 5 years to track project success. Part of this protocol is the sampling and analysis of macroinvertebrates. A comparison will then be possible of pre- and post-project data, which
should show an increase in the abundance and diversity of macroinverts with the completion of the project.

5.6 Evaluation Criterion F—Presidential and Dept. of the Interior Priorities

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

The Bear River Basin of northern Utah has warmed an average of 2°F Fahrenheit since 1971 (The Nature Conservancy 2010). The Paris project will build long-term resilience to climate change and drought by restoring instream flows to four miles of Paris Creek in perpetuity. A normative hydrograph will be reestablished with cold, clean water that will provide exceptional habitat for native trout. The increased flows will also support the restoration of floodplain and riparian functions that will further buffer the stream from a warming climate and the effects of wildfire and floods. Floodplain and wet meadow restoration will serve as a refugia and firebreak against the wildfire. Increased riparian shrubs and trees should increase the sequestering of carbon.

The stock water systems in the uplands will provide a conservation and management component that will promote healthy lands and soils. Cattle grazing will be distributed across a larger area that will prevent congregation and excessive trampling, especially along Paris Creek. This will further benefit the riparian improvements noted above.
6. Project Budget

6.1 Funding Plan and Letters of Commitment

PacifiCorp will be providing non-federal costs (partnership/commitment letter, Appendix A) for a total of $1,709,336 that includes the hydropower plant decommissioning ($1,464,336), development of the new stock-water systems ($50,000 Paris Pipeline system), and mitigation of the sinkhole ($25,000, Table 2). These funds will be directly spent on these project elements by PacifiCorp and are contingent upon the approval of the FERC as noted in the project MOU Restoration Agreement (Appendix B). The Bear River ECC (letter of commitment, Appendix A) will offset some costs ($258,000 present value) of PacifiCorp’s hydropower plant decommissioning costs by agreeing to provide additional flows at their Grace Hydropower Plant on the mainstem Bear River out of an existing minimum stream flow (Restoration Agreement, Appendix B). The Bear River ECC is also providing funding for the new stock water systems and the design of the new irrigation diversion (Table 2).

Table 2. Project funding source, cost type, amount, and status.

<table>
<thead>
<tr>
<th>Funding and cost type</th>
<th>Cost Type</th>
<th>Amount</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for requested BOR funding</td>
<td>Federal</td>
<td>$900,798</td>
<td>Proposed</td>
</tr>
<tr>
<td>Costs to be paid by PacifiCorp(^1)</td>
<td>non-federal</td>
<td>$1,709,336</td>
<td>Secured</td>
</tr>
<tr>
<td>Costs to be paid by Bear River ECC</td>
<td>non-federal</td>
<td>$176,500</td>
<td>Secured</td>
</tr>
<tr>
<td>Costs to be paid by partners(^2)</td>
<td>Federal</td>
<td>$55,128</td>
<td>Proposed</td>
</tr>
<tr>
<td>Value of third-party contributions(^3)</td>
<td>non-federal</td>
<td>$10,000</td>
<td>Secured</td>
</tr>
<tr>
<td><strong>TOTAL PROJECT COST</strong></td>
<td></td>
<td><strong>$2,851,763</strong></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Partial offset ($258,000) by the Bear River ECC of these costs incurred by PacifiCorp.

\(^2\) Pending grant proposal to Idaho DEQ for EPA 319 funding

\(^3\) Paris pipeline stock water system (cash and in-kind)

The stock-water user for the proposed Paris Pipeline currently has a pending funding proposal to the Idaho Department of Environmental Quality for 319 (Clean water Act) funding ($55,128). If the 319-funding proposal is not received, then it’s possible that an application would be made to the Bear River ECC for this amount. The Paris Bloomington Cattle Association will provide $10,000 of in-kind costs for the installation of their stock water well.

When all signatures are received for the Restoration Agreement (expected during December 2021), then the Bear River ECC funding awarded to Trout Unlimited will be available to begin the engineering design and planning ($71,500) of the new irrigation diversion. These expenditures will allow the timely project development and planning to meet project requirements such as stream alteration permitting during 2022.
### 6.2 Budget Proposal

Table 3. Project budget.

<table>
<thead>
<tr>
<th>Budget Item Description</th>
<th>$/Unit</th>
<th>Quantity</th>
<th>Unit</th>
<th>Total Cost</th>
<th>BOR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salaries and Wages</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TU Project Manager</td>
<td>$30</td>
<td>480</td>
<td>Hours</td>
<td>$14,400</td>
<td>$14,400</td>
</tr>
<tr>
<td>TU GIS and Science Team Support</td>
<td>$45</td>
<td>240</td>
<td>Hours</td>
<td>$10,800</td>
<td>$10,800</td>
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<tr>
<td><strong>Fringe Benefits</strong></td>
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<td></td>
<td></td>
<td>$12,096</td>
<td>$12,096</td>
</tr>
<tr>
<td>TU Project Manager</td>
<td>48%</td>
<td>$14,400</td>
<td>Percentage</td>
<td>$6,912</td>
<td>$6,912</td>
</tr>
<tr>
<td>TU GIS and Science Team Support</td>
<td>48%</td>
<td>$10,800</td>
<td>Percentage</td>
<td>$5,184</td>
<td>$5,184</td>
</tr>
<tr>
<td><strong>Travel</strong></td>
<td></td>
<td></td>
<td></td>
<td>$1,008</td>
<td>$1,008</td>
</tr>
<tr>
<td>TU travel (meetings, outreach, site visits)</td>
<td>$0.56</td>
<td>1,800</td>
<td>Miles</td>
<td>$1,008</td>
<td>$1,008</td>
</tr>
<tr>
<td><strong>Permitting</strong></td>
<td></td>
<td></td>
<td></td>
<td>$10,000</td>
<td>$0</td>
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<tr>
<td>Federal Energy Regulatory Commission, Stream Alt.</td>
<td>5,000</td>
<td>2</td>
<td>Permit</td>
<td>$10,000</td>
<td>$0</td>
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<tr>
<td><strong>Environmental and cultural compliance</strong></td>
<td></td>
<td></td>
<td></td>
<td>$160,000</td>
<td>$0</td>
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<tr>
<td>State Historic Preservation Office</td>
<td>15,000</td>
<td>8</td>
<td>Surveys</td>
<td>$120,000</td>
<td>$0</td>
</tr>
<tr>
<td>Hazardous materials</td>
<td>10,000</td>
<td>4</td>
<td>Surveys</td>
<td>$40,000</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Contractual / Construction</strong></td>
<td>$2,009,304</td>
<td></td>
<td></td>
<td>$753,676</td>
<td></td>
</tr>
<tr>
<td>Hydropower decommissioning - construction</td>
<td>1</td>
<td>Contract</td>
<td>$939,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrigation diversion - engineering design</td>
<td>1</td>
<td>Contract</td>
<td>$71,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrigation diversion - construction</td>
<td>1</td>
<td>Contract</td>
<td>$660,000</td>
<td>$660,000</td>
<td></td>
</tr>
<tr>
<td>Irrigation diversion - engineering oversight of construction</td>
<td>1</td>
<td>Contract</td>
<td>$20,000</td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>Paris Pipeline - construction</td>
<td>1</td>
<td>Contract</td>
<td>$203,804</td>
<td>$48,676</td>
<td></td>
</tr>
<tr>
<td>Bloomington Stockwater wells - construction</td>
<td>1</td>
<td>Contract</td>
<td>$65,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sinkhole - engineering</td>
<td>1</td>
<td>Contract</td>
<td>$10,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sinkhole - construction</td>
<td>1</td>
<td>Contract</td>
<td>$40,000</td>
<td>$25,000</td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>$525,336</td>
<td></td>
<td></td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Descommissioning ancillary (PacifiCorp)</td>
<td>$525,336</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Direct Costs</strong></td>
<td>$2,742,944</td>
<td></td>
<td></td>
<td>$791,980</td>
<td></td>
</tr>
<tr>
<td><strong>Indirect Costs (TU NICRA on BOR request items)</strong></td>
<td>13.74%</td>
<td></td>
<td></td>
<td>$108,818</td>
<td>$108,818</td>
</tr>
<tr>
<td><strong>Total (Direct and Indirect) Estimated Project Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td>$2,851,763</td>
<td>$900,798</td>
</tr>
</tbody>
</table>
6.3 Budget Narrative

Salaries and Wages
Funds from this grant will be used for the TU Project Manager salary to coordinate the design, planning, and construction of the new irrigation diversion, along with overall project monitoring and management of grants. Salaries also include costs associated with the participation of TU’s Science Team to assist with project monitoring, including the remote sensing applications and analysis to assess the physical and biological responses to the restored instream flow.

Fringe Benefits
TU’s current fringe benefit is 48% and is included in the budget on TU salaries and wages.

Travel
Travel costs are associated with the TU Project Manager position. Most travel will be from the Project Manager’s home office in Providence, Utah to the project site, a one-way distance of about 65 miles. Travel will also include meetings with the canal companies, landowners, and other partners in Paris or Montpelier, Idaho.

Permitting
PacifiCorp’s costs for the FERC and stream alteration permitting.

Environmental and Cultural Compliance
PacifiCorp’s costs for SHPO and hazardous materials surveys.

Contractual/Construction
Most of the decommissioning activities will be covered under construction or professional contracts that will be paid by PacifiCorp. Construction contracts (total of $939,000) will include those for removing: the power canal diversion structure, power canal boards, the penstock, powerhouse equipment, and tailrace features. Environmental and cultural clearance work (total of $160,000) will also be done under contract by PacifiCorp and include surveys of construction areas for the State Historic Preservation Office and for hazardous materials.

Most of the BOR proposed funds will be used for the construction of the new irrigation diversion on Paris Creek for the two canals that currently divert water from the hydropower plant tailrace. A single construction contract will be bid out to include the in-river diversion structure, fish screen, pipeline, and reconnection to the existing canals near the tailrace. The construction costs are currently projected based upon other diversion and fish screening projects in the area and recent associated costs (Table 4). These items will be refined during the planning and engineering design process in 2022. Final costs will be determined by the selected construction bid. Construction oversight ($20,000) will be provided by the project engineer. Construction costs and engineering oversight are being proposed for BOR funding for a total of $680,000.
Table 4. Irrigation diversion rebuild items and costs.

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish screen</td>
<td>$296,000</td>
<td>$8k/cfs of maximum design flow (37 cfs)</td>
</tr>
<tr>
<td>Irrigation pipe</td>
<td>$200,000</td>
<td>36” C900 PVC pipe, $155 per linear foot times 1,000 feet of bare pipe material equals $155k. $10/LF for installation and 20% for markup and fittings, so ballpark of $198,000 for pipe in place.</td>
</tr>
<tr>
<td>Stream work at intake</td>
<td>$15,000</td>
<td>Large rock cross vane</td>
</tr>
<tr>
<td>Steel or concrete framework for intake</td>
<td>$25,000</td>
<td>Steel or concrete framework for intake</td>
</tr>
<tr>
<td>Concrete rework at tailrace</td>
<td>$30,000</td>
<td>Using existing concrete as much as possible and tying into it</td>
</tr>
<tr>
<td>Splitter box with slide gates</td>
<td>$40,000</td>
<td>Modification of tailrace</td>
</tr>
<tr>
<td>Protection and improvement of steel irrigation pipe over stream</td>
<td>$40,000</td>
<td>Epoxy coating of pipe (~60' length x 36” diameter) outside and lining inside</td>
</tr>
<tr>
<td>Parshall flumes</td>
<td>$14,000</td>
<td>Unknown if and where current canal flow measurement devices are located</td>
</tr>
<tr>
<td></td>
<td>$660,000</td>
<td></td>
</tr>
</tbody>
</table>

Construction contracts will be used for the work on both stock water irrigation systems. Total costs are estimated at $203,804 for the Paris Pipeline system. It’s proposed that BOR fund $48,676 of the construction costs for the pipeline system. The Paris Bloomington stock-water well system is estimated to cost $65,000 and will be paid for by the Bear River ECC ($55,000) and in-kind contributions ($10,000) for the cattle association.

Other contracted work will include the design ($10,000) and construction ($40,000) for the new stream channel length and sinkhole mitigations. It’s proposed that BOR fund $25,000 of the construction costs for the pipeline system.

Other
All other ancillary activities related to the decommissioning such as price escalation (inflation), contingency, and legal services that will be paid by PacifiCorp are included in this category.

Indirect
TU’s Negotiated Indirect Cost Rate (NICRA) for federal grants is 13.74% and is applied to all BOR proposed direct costs.

7. Environmental & Cultural Resources Compliance
Environmental compliance, including SHPO and hazardous materials, will be completed by PacifiCorp.

8. Required Permits or Approvals
An application for a joint stream alteration permit (Army Corp of Engineers and Idaho Department of Water Resources) will be submitted by PacifiCorp for all activities below the
ordinary high-water mark (new irrigation diversion, sinkhole, and tailrace cleanup) towards the end of 2022. FERC licensing amendments will be completed in 2022 (see Restoration Agreement, Appendix B).

9. Letters of Support and Partnership
Please see Appendix A for letters of partnership/support from the following:
- PacifiCorp
- Bear River Environmental Coordinating Committee
10. Official Resolution
The official resolution of Trout Unlimited’s board signed on December 8, 2021

Trout Unlimited, Inc. Board of Trustees Resolution
Authorizing Application to Bureau of Reclamation Notice of Funding Opportunity
No. R22AS00025, Environmental Water Resources Projects for FY2022:

"Paris Creek Hydropower Decommissioning and Stream Flow Restoration."

Whereas: Trout Unlimited, Inc ("Trout Unlimited") has prepared an application for funding to restore flows and reduce native Bonneville cutthroat trout entrainment on Paris Creek in Idaho’s Bear River watershed through a multi-stakeholder project to decommission a hydropower plant and restore aquatic habitat;

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

1. Trout Unlimited is authorized to submit an application to the Bureau of Reclamation for grant assistance for the above-titled project.

2. Trout Unlimited has prepared and reviewed the application, and Chris Wood, President and Chief Executive Officer of Trout Unlimited, or his designee, is authorized to sign the application and enter into a funding agreement, if awarded.

3. Any grant assistance received under this application will be used for costs associated with implementation of the above-titled project. Trout Unlimited is authorized to commit to the provision of in-kind contributions and other resources identified in the funding application, and will work with Reclamation to timely meet all deadlines associated with an award of funding.

4. Trout Unlimited acknowledges that if the Bureau of Reclamation approves grant assistance for the project, the Bureau of Reclamation will pay Trout Unlimited only on a reimbursement basis. Trout Unlimited understands reimbursement basis means that Trout Unlimited will only request payment from the Bureau of Reclamation after Trout Unlimited incurs eligible and allowable costs and pays them.

Trout Unlimited
Board of Trustees

Attested by: [Signature]

Position: Secretary

Date: December 8, 2021

Trout Unlimited: America's Leading Coldwater Fisheries Conservation Organization
Appendix A: Letters of Partnership and Commitment
Date: December 9, 2021

Partner: PacifiCorp

Address: Mark Stenberg, PacifiCorp, 822 Grace Power Plant RD, Grace, ID 83241

Project Lead: Trout Unlimited
Address: 47 N 300 E, Providence, UT 84332

RE: WaterSMART: Notice of Funding Opportunity No. R22AS00026

Dear Project Leader:

I am writing to document PacifiCorp’s partnership with Trout Unlimited for activities related to the restoration of Paris Creek in Bear Lake County, Idaho. PacifiCorp has been working collaboratively with Trout Unlimited and a host of other parties to prepare a comprehensive plan to decommission the Paris Hydroelectric Project and restore flows that are currently diverted through the hydro project.

This project includes many activities, primary of which are removal of the hydroelectric project facilities that currently bypass water from 4 miles of Paris Creek and the construction of new irrigation intakes for the senior water rights that will be returned to Paris Creek. At the conclusion of the project, a normal hydrograph will be returned to the uppermost 4 miles of Paris Creek.

PacifiCorp understands that Trout Unlimited is submitting a proposal to the Bureau of Reclamation’s WaterSMART "Environmental Water Resources Projects for Fiscal Year 2022" Program, titled "Paris Creek Hydropower Decommissioning and Instream Flow Restoration." PacifiCorp is familiar with the proposal, understands general expectations, and supports the efforts to address the natural resource concerns identified therein.

PacifiCorp has been working with Trout Unlimited, the Bear River Hydroelectric Project Environmental Coordination Committee (ECC), irrigators and stock waterers since 2015 to prepare a comprehensive restoration plan for Paris Creek. This comprehensive plan will remove the hydroelectric project, address the needs of stock waterers and irrigators that currently rely on the hydro project for water delivery and restore flows in 4 miles of Paris Creek to benefit native fish. Trout Unlimited as well as ECC members, stock waterers, and irrigators have played a role in developing various aspects of the project plan.

PacifiCorp has developed the Paris Creek Restoration Agreement with the ECC to facilitate implementation of the project. This agreement is currently out to the members for signature. Specific to the irrigators that are returning to diversions on Paris Creek, PacifiCorp has developed an agreement that includes those parties, an affected landowner, and Trout Unlimited. That agreement, the Memorandum of Understanding Regarding Paris Decommissioning has been signed by all parties.
PacifiCorp’s monetary commitments to the decommissioning activities are listed in the table below.

<table>
<thead>
<tr>
<th>Applicant/Recipient</th>
<th>Cash vs. In-Kind</th>
<th>Amount ($)</th>
<th>Contribution Status</th>
<th>Funding Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>PacifiCorp - Decommissioning</td>
<td>Cash</td>
<td>1,634,336*</td>
<td>Funded</td>
<td>July 1, 2021</td>
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<tr>
<td>PacifiCorp - Stock Water</td>
<td>Cash</td>
<td>50,000</td>
<td>Funded</td>
<td>July 1, 2021</td>
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<tr>
<td>PacifiCorp - Sink Hole</td>
<td>Cash</td>
<td>25,000</td>
<td>Funded</td>
<td>July 1, 2021</td>
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</table>

*Project cost estimate as of the time of this letter. This amount may increase or decrease as the project proceeds.

PacifiCorp is hereby providing a letter of support for Trout Unlimited with the Bureau of Reclamation, WaterSMART fiscal year 2022 program.

If you have questions please contact Mark Stenberg, PacifiCorp’s Bear River Hydroelectric Project Environmental Coordinator, at mark.stenberg@pacificorp.com or (208) 339-9552.

Best Regards,

Mark Stenberg
PacifiCorp – Renewable Resources
Bear River Environmental Coordinator

Cc: Tim Hemstreet, Managing Director, Renewable Energy.

File: Paris Hydroelectric Project, Decommissioning, Trout Unlimited, FERC Project No. 703.
A.2. Bonneville Environmental Coordinating Committee letter of commitment
Date: December 8, 2021

Partner: Bear River Hydroelectric Project Environmental Coordination Committee (Committee members include PacifiCorp, U.S. Fish & Wildlife Service, U.S. Bureau of Land Management, U.S. National Park Service, USDA Forest Service, Shoshone-Bannock Tribes, Idaho Department of Environmental Quality, Idaho Department of Fish & Game, Idaho Department of Parks and Recreation, Trout Unlimited, Idaho Rivers United, Greater Yellowstone Coalition, American Whitewater) PacifiCorp Bear River Environmental Coordination Committee (ECC)

Address: Mark Stenberg, PacifiCorp, 822 Grace Power Plant RD, Grace, ID 83241

Project Lead: Trout Unlimited
Address: 47 N 300 E, Providence, UT 84332

RE: WaterSMART: Notice of Funding Opportunity No. R22AS00026

Dear Project Leader:

I am writing to document the ECC’s support of Trout Unlimited’s proposal to the Bureau of Reclamation’s WaterSMART “Environmental Water Resources Projects for Fiscal Year 2022” Program, titled “Paris Creek Hydropower Decommissioning and Instream Flow Restoration”. The ECC is familiar with the proposal, understands general expectations, and supports the efforts to address the natural resource concerns identified therein.

The Bear River Hydroelectric Project Environmental Coordination Committee (“ECC”) was formed out of a Settlement Agreement for the continued operation of PacifiCorp’s Bear River Hydroelectric Project (“the Project”). The Project is comprised of three hydroelectric developments along the Bear River in southeastern Idaho. The signatories to the Settlement Agreement comprise the membership of the ECC. The ECC has several coordination roles in the ongoing operation of the Project, including the administration of funds for habitat enhancement and land conservation provided annually by PacifiCorp through the 30-year term of the Federal Energy Regulatory Commission license.

The ECC has been working with PacifiCorp on the development of the Paris Project since 2015. Many of the ECC members have played a role in developing the various aspects of the project. The ECC is entering into the Paris Creek Restoration Agreement with PacifiCorp to facilitate the implementation of the project. The agreement is currently out to the members for signature.

The ECC is also providing or considering Habitat Improvement Funds for several aspects of the Paris Creek project (see Table below). The ECC has awarded $71,500 to Trout Unlimited for the design of the new diversion structure, fish screen, and related infrastructure on Paris Creek. ECC has also awarded $50,000 toward the Paris Pipeline. In addition, the Bloomington-Paris Cattle Association has recently applied to ECC to fund $55,000 towards their stock water well. This proposal will be reviewed and ranked by ECC funding subcommittee during March 2022, with a funding award made by ECC (if applicable) during April 2022.
Lastly, the ECC will be contributing 15 cfs flows of out of a minimum stream flow on the Bear River to be used at PacifiCorp’s Grace Hydropower Plant to offset some of the costs to PacifiCorp for the decommissioning of the Paris Hydropower plant.

<table>
<thead>
<tr>
<th>Applicant/Recipient</th>
<th>Cash vs. In-Kind</th>
<th>Amount ($)</th>
<th>Contribution Status</th>
<th>Funding Available</th>
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<tr>
<td>Trout Unlimited</td>
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<td>Paris Pipeline/Phillip Ward</td>
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<td>Bloomington-Paris Cattle Association</td>
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<td>Proposed</td>
<td>April 2022</td>
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<td>PacifiCorp</td>
<td>In-kind</td>
<td>$258,000</td>
<td>Secured</td>
<td>December 2023*</td>
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</table>

*Use of the 15 cfs of Bear River flows is contingent upon several criteria as described in the Restoration Agreement.

The ECC is hereby providing a letter of the support for Trout Unlimited with the Bureau of Reclamation, WaterSMART fiscal year 2022 program.

This memorandum is submitted by Mark Stenberg on behalf of the ECC, as approved on December 8, 2020. If you have questions please contact Mark Stenberg, PacifiCorp’s Bear River Hydroelectric Project Environmental Coordinator, mark.stenberg@pacificorp.com, (208) 852-5507, 822 Grace Power Plant RD., Grace, ID 83241.