

Application Name: Tamkaliks Side Channel and Wetland Complex

By: Nez Perce Tribe

Offering Type: Open Solicitation

Application Type: Restoration

OWEB Region: Eastern Oregon

County: Wallowa

Coordinates: 45.571936,-117.52125

Applicant:

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Budget Summary:

OWEB Amount Requested: \$0
Total Project Amount: \$0

Administrative Information

Abstract

Provide an abstract statement for the project. Include the following information: 1) Identify the project location; 2) Briefly state the project need; 3) Describe the proposed work; 4) Identify project partners.

The proposed project site is located adjacent to the Wallowa River, in the town of Wallowa, and is part of a 320 acre parcel belonging to the Wallowa Band Nez Perce Trail Interpretive Center, Inc. (the Homeland Project). The local non-profit organization, chartered in 1995, is supported regionally by private citizens, local government, and representatives from the Nez Perce Tribe, Confederated Tribes of the Umatilla Indian Reservation and Confederated Tribes of the Colville Reservation. This land provides a place for Nez Perce people ranging from Washington, Oregon and Idaho, to exercise traditional cultural practices – such as the annual Tamkaliks Celebration – in their historical homeland territory.

Due to extensive channelization in the project area habitat for juvenile salmonid rearing and spawning is severely limited. This project seeks to address multiple habitat, water quality, and stream function deficiencies associated with this middle reach of the Wallowa River. Proposed work includes constructing a multi-connection side channel, installing large wood, inlet boulders, and alcoves, and enhancing and creating emergent wetland communities. Three recent habitat restoration projects (Wallowa-Baker, McDaniel, and 6-Ranch) have been completed within 15 miles both upstream and downstream of the project reach to increase fish habitat. This project will further enhance the Wallowa River by increasing habitat quantity in the form of back water pools, large wood debris, and re-connection of the river to the existing floodplain, providing year round juvenile rearing and potential spawning habitat for ESA listed fish species. These actions will also intercept various forms of ground water and irrigation returns helping regulate water temperature, sequester excess sediment, and improve/promote riparian vegetation establishment, and hyporheic exchange.

Project partners: Nez Perce Tribe, Grande Ronde Model Watershed, USFS, BPA, and the Homeland Project.

Location Information

What is the ownership of the project site(s)?

Public land (any lands owned by the Federal government, the State of Oregon, a city, county, district or municipal or public corporation in Oregon)

Private (land owned by non-governmental entities)

Please select one of the following Landowner Contact Certification statements:

I certify that I have informed all participating private landowners involved in the project of the existence of the application, and I have advised all of them that all monitoring information obtained on their property is public record.

I certify that contact with all participating private landowners was not possible at the time of application for the following reasons: Furthermore, I understand that should this project be awarded, I will be required by the terms of the OWEB grant agreement to secure cooperative landowner agreements with all participating private landowners prior to expending Board funds on a property.

Please include a complete list of participating private landowners
Wallowa Band Nez Perce Trail Interpretive Center, Inc.

This grant will take place in more than one county.

Permits

Other than the land-use form, do you need a permit, license or other regulatory approval of any of the proposed project activities?

- Yes
 No

For Details Go to Permit Page

Racial and Ethnic Impact Statement

Racial and Ethnic Impact Statement

- The proposed grant project policies or programs could have a disproportionate or unique POSITIVE impact on the following minority persons. (indicate all that apply)
- The proposed grant project policies or programs could have a disproportionate or unique NEGATIVE impact on the following minority persons. (indicate all that apply)
- The proposed grant project policies or programs WILL HAVE NO disproportionate or unique impact on minority persons.

- Women
 Persons with Disabilities
 African-Americans
 Hispanics
 Asians or Pacific Islanders
 American Indians
 Alaskan Natives

Please provide the rationale for the existence of policies or programs having a disproportionate or unique impact on minority persons.

The Tamkaliks site is visited by hundreds of tribal members annually to attend the Tamkaliks powwow, youth cultural camps, and various ceremonies and gatherings. A side channel containing juvenile rearing habitat running through the property will provide a unique fisheries habitat restoration education and viewing opportunity to tribal members (especially Tribal youth). The additional rearing habitat sough through this project may contribute to an increase in adult escapement/abundance for local fisheries, potentially providing enhanced tribal harvest opportunities for future generations.

An onsite sweat lodge facility falls within the project footprint and has been approved for removal. Once the restoration is complete, the Homeland Project plans to seek funding for the construction of a more permanent and functional sweat lodge facility that will likely result in increased use by tribal members.

Please provide evidence of consultation with representative(s) of affected minority persons.

This project was initially brought to the sponsor's attention by a Nez Perce tribal member and former Homeland Project board member. This same tribal member has been part of the design review team and has provided feedback throughout project development.

Additionally, within the Nez Perce Tribal government, all actions involving contracts between the Tribe and other entities, including all proposed watershed restoration projects, must be approved by the Nez Perce Tribe Executive

Committee (NPTEC) Natural Resources Subcommittee. The previously submitted Tamkaliks OWEB TA grant application was reviewed and approved by NPTEC for designs with the ultimate goal of project implementation.

Insurance Information

- Working with hazardous materials (not including materials used in the normal operation of equipment such as hydraulic fluid)*
- Earth moving work around the footprint of a well*
- Aerial application of chemicals*
- Removal or alteration of structures that hold back water on land or instream including dams, levees, dikes, tidegates and other water control devices (this does not include temporary diversion dams used solely to divert water for irrigation)*
- Applicant's staff or volunteers are working with kids related to this project (DAS Risk assessment tool not required, additional insurance is required)*
- Applicant's staff are applying herbicides or pesticides (DAS Risk assessment tool not required, additional insurance is required)*

Additional Information

- This project affects Sage-Grouse.*

Problem Statement

Describe the watershed problem(s) that this restoration project seeks to address.

The proposed project site is located approximately 2.5 miles downstream from the confluence of the Lostine and Wallowa Rivers. Within this middle reach of the Wallowa River the stream course and drainage patterns have been simplified and severely altered as a result of agricultural practices (grazing, irrigation withdrawals), road and railroad construction, natural resource based economies (timber harvest), invasive weed species encroachment, and residential development. The channel lacks habitat complexity and, as a result, contains limited spawning and rearing habitat for ESA-listed steelhead, and Chinook salmon, recently re-introduced coho salmon, and lamprey. A large proportion of juveniles from at least three Grande Ronde Basin populations are known to overwinter in these habitats to feed in preparation of spring outmigration. An ODFW 1996 annual report (see page 8) indicates that the success of migration strategies may vary with annual changes in environmental conditions, thus highlighting the importance of maintaining a diversity of life history strategies within local populations. This recognized and recommended diversity is severely lacking within the project reach. The incised channel creates increased stream velocities and limits the river's ability for natural wood recruitment, sediment transport, and the creation of localized slow moving water and channel adjacent wetland communities. As a result pool abundance is low producing limited quantities of slow water holding habitat necessary for migrating salmonids. Sinuosity is low, and the river is significantly limited in its ability to sufficiently connect to the historic floodplain. Additionally, historic surveys indicate robust beaver activity within and adjacent to the proposed project site. Past removal of beavers and large wood have led to a loss of habitat complexity, pool creation, and floodplain connection.

How have past or current land management practices contributed to the problem?

Prior land use practices in the project area are largely responsible for its current condition. Between the 1930's and 1950's nearly 100% of the valley floor along the Wallowa river was channelized or altered in some capacity to promote agricultural practices including irrigation infrastructure and the creation of more crop and grazing lands. Within the project area the channel was re-located, straightened and disconnected from the floodplain. This configuration has persisted since that time.

Current land use practices have not promoted or exacerbated the problem. Since the Homeland Project acquired the property in 1997 farming and crop production has occurred to a much lesser extent resulting in less overall land disturbance. Given the level of anthropological change and lack of natural stream function assistance is required to restore or promote natural function and connectivity.

Does this project address one or both of the following:

Habitat needs for one or more Endangered Species Act-listed species and/or species of concern

Concerns identified on 303(d) listed streams

No

Project History

Continuation - Are you requesting funds to continue work on a project previously funded by OWEB where that work did not result in a completed project?

- Yes
 No

Provide OWEB Grant #(s)
217-5022

What was completed with previous OWEB grants?

A technical assistance grant was awarded for project design which is near completion. Due to unforeseen conditions in bedrock elevations greatly impacting project design, the awarded TA was extended. 100% design will be achieved through this extended TA grant allowing the project to move towards implementation in 2019.

Why is additional OWEB funding needed?

The awarded TA grant was specific to permitting and design only. Additional funds are being sought for project implementation.

Resubmit - Have you submitted, but were not awarded an OWEB application for this project before?

- Yes
 No

Phased - Is proposed work in this application a phase of a comprehensive watershed restoration plan or project?

- Yes
 No

Plans and Salmon

Is the proposed restoration activity(ies) identified in a local assessment or other plan?

- Yes
 No

Provide name of local plan, Watershed assessment or other locally relevant document.

In 2006, the Environmental Protection Agency (EPA) deemed the middle reach of the Wallowa River (0 - 53.7 miles up from the confluence), which the proposed project lies within, as 303(d) listed for temperature. The EPA's assessment rated this Core Cold Water Habitat designated reach as "impaired" for exceeding Total Maximum Daily Load (TMDL) of water temperature for fish.

The Wallowa County Salmon Habitat Recovery Plan (WCSHRP) (1995), the Northwest Power and Conservation Council Grande Ronde Subbasin Plan (GRSBP) (2004), and the Grande Ronde Subbasin Plan Supplement (2005) identify this reach of the Wallowa River as deficient for several habitat, water quality, and stream function parameters.

The WCSHRP (Wallowa River – Spring Creek to head of Wallowa Canyon, pages 108 to 110) identifies the following concerns that will be addressed by this project:

1. Water quality; temperature (high priority)
2. Water quality; excess fine sediment (high priority)
3. Stream structure; woody debris (high priority)
4. Stream structure; pool/riffle ratio (high priority)

5. Stream structure; channelization (low priority)
6. Stream structure; bank form (low priority)
7. Substrate; excess fine sediment (high priority)

The GRSBP Supplement further describes Wallowa River parameters of concern in the project area:

1. Table 3-1 page 14 (spring Chinook): Wallowa-Lostine, Mid Wallowa River. Identified key limiting factors are habitat diversity and key habitat quantity.
2. Table 3-2 page 15 (steelhead): Wallowa, Mid Wallowa River. Identified key limiting factor as key habitat quantity.
3. Table 3-3 page 16 (restoration priorities): Restoration impacts on Chinook abundance and productivity would be large with moderate impact on steelhead abundance, productivity and diversity.
4. Table 5-6 page 49: The Wallowa-Lostine watershed is identified as having the highest potential impact to steelhead and spring Chinook populations (abundance and productivity) from comprehensive habitat restoration.

The OWEB limiting factors document for the middle Wallowa River in the Grande Ronde Basin rates Floodplain Connection, Altered Habitat Complexity, and Altered Soil Condition/Compaction/ Fill as High Impacts from changes in channel confinement. Altered Thermal Regime and Loss of Shade/Cover were also rated as High Impact due to change in maximum temperature, while Altered Sediment Regime/Excessive Inputs and Limited In-Channel Wood were rated as Moderate Impacts.

ODFW annual reports dating from the mid nineties to current note the lack of diverse channels and complex over winter and over-summer rearing and holding habitat. Management recommendations the Grande Ronde Valley and Wallowa River below the mouth of the Lostine River include; "Maintenance of existing pool habitat and increasing habitat complexity should be a component of habitat management as juvenile salmon are more abundant in pools than glides or riffles during both summer and winter. ; A large proportion of juveniles from at least three Grande Ronde Basin populations overwinter in these habitats and grow substantially before leaving the system. Enhancing habitat conditions to improve overwinter survival should be given a priority in these habitats."

Will this project benefit salmon or steelhead?

- Yes
 No

- ✓ Snake River Basin - Steelhead
- ✓ Lower Columbia River - Coho Salmon
- ✓ Snake River Spring/Summer-run - Chinook Salmon

How will the resulting restoration project benefit salmon or steelhead or their habitat?

Juvenile spring Chinook and summer steelhead inhabit the project reach year-round. Both species utilize the limited habitat in the area for juvenile rearing, however, suitable spawning habitat also persists due to the riffle-dominated, high gradient nature of the channelized river. Bull trout are likely to inhabit the reach during winter and spring, using it as a migration reach, and the reach is considered habitat for bull trout foraging, migration and overwintering. Coho were reintroduced into the Wallowa River drainage spring of 2017 and are expected to utilize the side channel year round, similar to Chinook and steelhead. Other fish species such as mountain whitefish, chiselmouth, dace, Sculpin, pike minnow, and suckers could be present in the project reach as well. Lamprey have been documented in the project reach as well, there is potential they could also inhabit this reach of the Wallowa River in the future, as adults are being translocated annually throughout the subbasin.

Does the project address a restoration action identified in a regional assessment or recovery plan?

- Yes
 No

Regional Assessments or Recovery Plans

For each plan chosen above, describe how your project is consistent with specific recovery/restoration actions cited in that plan.

This project, at the reach scale, will address three of the six recovery strategies identified for Northeast Oregon in section 6.3.1 of the Proposed ESA Recovery Plan for Snake River Spring/Summer Chinook, including 1) restoring floodplain connectivity and riparian vegetation, 2) improving water quality, and 3) restoring instream habitat complexity.

As suggested in section 6.6.1.1 Grande Ronde/Imnaha Rivers Spring/Summer Chinook Salmon MPG of the Proposed ESA Recovery Plan, recovery strategies should include:

- improving quality and quantity of winter rearing habitats
- protecting/enhancing spawning and summer rearing habitats

The Tributary Habitat Recovery Actions for Northeast Oregon Snake River Spring/Summer Chinook Salmon and Steelhead lists planting riparian vegetation, increasing and improving habitat by relocating channelized structures, and reconnecting to the floodplain as priority actions to be taken in this section of the Wallowa River.

Proposed Solution

Goal, Objectives, and Activities

State your project goal. A goal statement should articulate desired outcomes (the vision for desired future conditions) and the watershed benefit.

Through creation of side channel and wetland habitat, this project aims to enhance and promote natural stream conditions and function, provide spawning and rearing habitat for ESA listed Chinook salmon and steelhead, reintroduced lamprey, coho, and other native fish species, as well as improve water quality at the reach scale. We seek to implement an engineered design for a side channel and adjacent wetlands incorporating backwater pools and alcoves, large wood, and floodplain connectivity. Interception of local springs, hill slope runoff, and irrigation return water throughout the project site is expected to contribute cold water in the new side channel. The inclusion of these water sources along with alcove and pool creation will enable and enhance both overwinter and summer refuge for juvenile salmon. To further enhance the existing wetland and riparian corridor, a series of blended terraces diverting irrigation water into the project area will promote vegetation establishment.

List specific and measurable objectives. Objectives support and refine the goal by breaking it down into steps for achieving the goal. (NOTE: If you quantify your objectives, ensure all numbers match the metrics listed in your selected habitat types.) Provide up to 7 objectives.

Objective #1

Objective

Objective # 1

Create approximately 1,500 feet of side channel including 12 pools, four off-channel wetland nodes, and two alcoves to improve stream structure and channel complexity for ESA listed salmonid rearing and spawning as well as potential lamprey spawning and rearing.

Objective #2

Five large wood structures and 20 whole trees will be placed throughout the side channel network to increase channel complexity to expand spawning and rearing habitat for salmon and steelhead.

Objective #3

Riffle habitat within the side channels will be constructed using 3,200 cubic yards of riffle substrate and 5 traverse boulders interspersed among the substrate. Additionally boulders will be installed in the mainstem Wallowa River at each of the three side channel inlets and outlet locations.

Objective #4

Bankline roughness treatments will be applied to 2,588 feet of the side channel banks. Roughness will be achieved through planting of 400 willow clumps, and 2,000 willow cuttings. In addition to the willow clumps and cuttings, three acres of project area and disturbed ground will be seeding with locally derived and adapted native seed.

Objective #5

Increase floodplain connectivity and wetland enhancement through interception of groundwater seeps/springs/runoff/irrigation returns, and development of 1 acre of roughened floodplain including the installation of eight ditch plugs.

Describe the project activities. Activities explain how the objective will be implemented.

Objective #1 - Side Channel Creation

The contractor will excavate approximately 1,550 feet of new channel consisting of one main side channel and two secondary side channels each with their own inlet/connection point to the main Wallowa River. A total of 12 pools will be dug to depths of 1-3 feet – eight within the main side channel and two in each of the secondary side channels. The main side channel will include one large alcove feature at the point of reentry into the main Wallowa River, along with four off-channel wetland nodes to enhance floodplain connection and habitat diversity. An additional stand-alone alcove will be created upstream from the main project area where the Whiskey Creek irrigation return water enters the mainstem. This will be created with minimal excavation and will be enhanced with a large wood structure to provide both cover and rearing habitat for juvenile salmonids and lamprey.

Objective #2 - Large Wood Installation

All large wood will be placed with use of an excavator. Five key large wood structures will be constructed – one at the three side channel inlets, one at the alcove outlet and one within the alcove. The four large wood structures at the side channel inlets and one at the outlet will be keyed into the bank to provide stabilization and control water entering and exiting the channels. An excavator will also be used to place individual whole trees throughout the side channel complex. Additional wood will be placed throughout the side channels and floodplain for roughness.

Objective #3 - Riffle and Rock Installation

The contractor will use an excavator to over excavate the glide sections of the side channels by eight inches, placing two to four inches of rounded river rock-gravel substrate over top. The riffle-run sections will be over excavated by 24 inches and replaced with riffle matrix rounded river rock. Approximately five traverse boulders will be placed within riffle-run units in the form of rock ribs at the top, bottom, and at 20 foot intervals along the riffle-run sections. Boulders will be embedded 50%-75% of effective boulder diameter. Mainstem boulder clusters will be placed at the inlet of the channel and each outlet. This will promote appropriate circular flow where juvenile and adult salmonids can rest and provide as a indicator of the side channel.

Objective #4 - Planting, Bankline Roughness Installation

Using an excavator, the contractor will dig an approximate 1.6 foot wide foundation footprint along the channel banks deep enough to ensure that $\frac{1}{4}$ to $\frac{1}{2}$ of the root mass reaches the low water table within the channel margins. Eight to 12 inch layers of willow cuttings will be placed at six to 12 inches on-center along the base of the trench. Individual cuttings will be 3.5 to four feet in length and $\frac{3}{4}$ to three inches in diameter. A four inch layer of loose earth will be placed over willow cuttings to support establishment. The previously excavated soil will be used to backfill the brush layering. All plantings shall be watered thoroughly after planting. Willow clumps will be harvested from a location close to the project location and will be eight to 20 feet tall and about the diameter of a backhoe bucket. Using a backhoe, the clumps will be dug out approximately two feet deep and wide enough to allow for a 10 inch buffer around the stem mass, harvesting as much of the root wad as possible. On site, the willow clumps will be planted about six to 15 feet apart with root masses in the saturated moisture zone and four to five feet of willow stem exposed above ground. Lastly, $\frac{1}{3}$ of the willow tops will be cut off to maximize root growth. Locally derived and adapted native seed will be applied across the three acre footprint at the rate of 20 lbs/acre.

Objective #5 - Wetland Creation and Floodplain Connection

One acre of roughened floodplain consisting of excavating ridges and furrows upon floodplain surfaces and excavating wood debris are dispersed throughout the project reach. Approximately 20 percent of the total surface area of each treatment area shall consist of furrows and approximately 20 percent shall consist of ridges. Furrow depths will be one foot below the floodplain surface grade, five feet long by three feet wide and ridges should be one foot above surface grade and of the same length and width as the furrows. Small LWD and brush shall be buried at 30%-50% of stem length throughout the roughened floodplain treatment area as shown on the design drawings. The foundation of each of the eight ditch plugs will be scarified to a minimum depth of two inches. Fill shall be brought to the preferred moisture condition and placed in approximately equal horizontal layers with each

layer not to exceed eight inches after compaction with an excavator. Plugs and adjacent irrigation channel fill shall blend to existing terrace elevation via a 3:1 slope.

List the major project activities and time schedule for each, including post project implementation.

Element	Start Date	End Date
Obtain Final Design and Specification	9/2018	12/2018
Project Permitting	10/2018	4/2019
Construction Bid Solicitation	1/2019	4/2019
Construction	5/2019	8/2019
Materials Acquisition and Mobilization	5/2019	7/2019
Construction Contracting	1/2019	12/2019
Demobilization	8/2019	11/2019
Inspection/Post Project Implementation Review	9/2019	9/2019
Closeout, Final Accounting, and Completion Report	10/2019	11/2019
Project Monitoring	12/2019	12/2022
Planting	7/2019	11/2019

Element	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022
Obtain Final Design and Specification	■	■																
Project Permitting			■	■														
Construction Bid Solicitation			■	■														
Construction				■	■	■												
Materials Acquisition and Mobilization				■	■													
Construction Contracting			■	■	■	■												
Demobilization					■	■												
Inspection/Post Project Implementation Review					■													
Closeout, Final Accounting, and Completion Report						■												
Project Monitoring							■	■	■	■	■	■	■	■	■	■	■	■
Planting					■	■												

Habitat Types

In which habitat type(s) are you proposing to work?

- Instream Habitat: below the ordinary high water mark (includes in-channel habitat restoration, bank stabilization, flow, fish screening, and fish passage) -- Details will follow.*
- Riparian Habitat: above the ordinary high-water mark of the stream and within the stream's floodplain. -- Details will follow.*
- Upland Habitat: above the floodplain and improves native habitat and watershed function.*
- Wetland Habitat: land or areas covered, often intermittently, with shallow water or have soil saturated with moisture. -- Details will follow.*
- Estuarine Habitat: tidally influenced areas.*

Instream Habitat

Select all applicable Instream categories.

- Bank stabilization**
- Fish passage improvement**
- Fish screening project**
- Instream Flow**

✓ **Instream habitat restoration**

Select all the actions you propose to implement to address the problem.

✓ *Placement of materials in channel*

Does the proposed project follow:

ODFW Guidelines

✓ *NOAA Guidelines*

Other

What types of instream habitat materials are you proposing to install? (select all that apply)

✓ *Large wood*

Number of structures.

5

Average number of logs per structure.

6

Average length of logs per structure (feet)

35

Average diameter of logs per structure (feet)

1.5

✓ *Boulders*

Number of structures.

3

Average number of boulders per structure.

20

Average size of boulders per structure (feet)

3

Combination log/boulder

Other materials: Materials that stabilize the streambed

✓ *Channel reconfiguration and connectivity, including alcoves and side channel reconnection*

What type(s) of change are you proposing to the channel configuration and connectivity?

This project proposes side channel establishment and floodplain connectivity. Due to adjacent landowner constraints main channel work other than boulder clusters is not proposed at this time. The project seeks to establish side channel creation and connectivity with the main channel as well as the development of a high functioning emergent wetland gallery to create juvenile rearing, thermal refugia, and improved water quality.

Acres off-channel or floodplain habitat connected

2.8

Number of pools created/added

12

Spawning gravel placement

- Beaver reintroduction
- Non-native plant control
- Nutrient enrichment
- Animal species removal

Is the primary purpose of the instream habitat restoration treatment(s) to address water quality limiting factors?

- Yes
- No

Total miles of stream to be treated with all instream habitat restoration treatments
.36

Stockpiling logs

Riparian Habitat

Select all applicable Riparian categories.

- Riparian road activities
- Fencing and other materials for habitat protection

Vegetation establishment or management

Select all the actions you propose to implement to address the problem.

- Planting
For Details Go to Plant Page

- Non-native plant control
- Prescribed burnings, stand thinning, stand conversions, silviculture
- Juniper treatment

- Livestock management
- Debris and Structure Removal

Is an objective of the riparian treatment(s) to address water quality limiting factors?

- Yes
- No

- Sediment
- High Temperature

Total linear stream miles to be treated.
0.36

Total riparian acres to be treated.
3.0

Left streambank miles to be treated.
.36

Right streambank miles to be treated.

.36

Wetland Habitat

Are you working in artificial or historic wetland habitat? (select one or both)

Artificial wetland

Historic wetland

Select all applicable Wetland categories.

Wetland road activities

Channel modification including creation

Type of modification to channel

The emergent wetland portion of the project will occur in four separate areas adjacent to the main channel of the Wallowa River. This wetland zone will include various features such as swales, large wood, floodplain excavation, plugs,, and additional plantings of various native species.

Length of channel created or modified

0.36

Miles of wetland habitat treated

0.25

Acres of wetland habitat connected

1.0

Vegetation establishment or management

Select all the actions you propose to implement to address the problem.

Planting

For Details Go to Plant Page

Non-native plant control

Fencing and other materials for habitat protection

Structure removal/modification/installation

Nonstructural removal and placement protection

Total wetland acres to be treated:

1.17

Wrap-Up

Public Awareness

Does this proposed project include public awareness activities?

- Yes
 No

Describe these activities, as well as any related products, and explain how the proposed activities relate to the project's objectives.

The proposed project provides a place for Nez Perce people ranging from Washington, Oregon and Idaho, to exercise traditional and cultural practices – such as the annual Tamkaliks Celebration – in their historical homeland territory within the Wallowa Valley. The property is crucial in a continuous effort to promote positive relations between tribes, Wallowa County residents, and visitors from outside of the county. The Homeland Project contracted with ODOT to install two donated foot bridges that lead up to and span the main channel of the Wallowa River adjacent to the proposed side channel site location. This foot bridge enables its patrons to travel from the Tamkaliks site to the town of Wallowa and also functions as an important detour along a Rail-with-Trail route, to the mutual benefit of the community.

The Wallowa Band Nez Perce Trail Interpretive Center is committed to showcasing the project through educational tours as well as informational boards and signs stating the objectives of the project and the species affected or enhanced.

Design

Were design alternatives considered?

- Yes
 No

Describe the design alternatives that were considered and why the preferred alternative was selected.

Discussions began in 2009 with the Nez Perce Tribe Watershed department, the Wallowa Band Nez Perce Trail Interpretive Center (the Homeland Project), and two additional landowners seeking a restoration project which would re-meander the main channel and provide habitat for multiple life stages of ESA listed salmonids. Surveys were conducted by Anderson Perry resulting in a design report however due to economic downturn and future plans to sell one of the properties the project was put on hold. Project discussions persisted and in 2015 the Homeland Project chose to pursue a project that could be done within the extent of their property. An OWEB Technical Assistance grant was secured seeking to design a side channel complex conducive to floodplain connectivity, juvenile salmonid rearing and potentially adult salmonid spawning.

During the development of side channel alternatives the design consultant conducted a geotechnical bedrock analysis to determine the depth of bedrock at the project site. Six test pits excavated throughout the project footprint indicated that bedrock is present approximately four feet above the OHW elevation at the upstream end of the project. and deepen below the OHW elevation toward the bottom half/downstream end of the project. As a result of these findings, two additional alternatives were developed (of which one was selected) based on bedrock depth that would improve and create fish habitat throughout the project reach. The chosen alternative incorporated additional design components including the establishment of an emergent wetland to meet the project team's objectives for improving fish habitat and hyporheic connection along this reach of the Wallowa River. The selected alternative focused the habitat improvements on the downstream half of the original project reach where the

bedrock elevation is lower.

Due to a need for additional inundation/water elevation modeling deemed by the review team and a lack of funding for the hired design contractor, BPA engineering staff volunteered to take over project design and see it through implementation. Taking the selected alternative, BPA engineering staff conducted HEC-RAS modeling which led to a modification of the previous project footprint moving it even further downstream ensuring greatest channel stability and perennial flows.

The resulting design includes three locations where the river, at flows exceeding the OHW level, will be allowed to flow into the side channel further watering the channel. These entrance points will be engineered to control water inflow by way of large wood structures and main stem boulder clusters, and will promote natural process for channel activation. The residual pool depths are expected to range from one to three feet. The downstream portion of the project will serve primarily as backwater and emergent wetland habitat with some flow contributed from the Whiskey Creek return flow, the groundwater drain, and regular groundwater.

The chosen design alternative will require the relocation of power lines and installation of a new power pole outside the project footprint. The existing pole is located near a key connection point within the bottom end of the project area. The old power pole will be left onsite and a nesting platform will be added to enhance raptor or geese habitat. The landowner approves the power pole installation and staff have confirmed the budget, timing, and feasibility with the local utility company.

Select the appropriate level of design for your project.

- No design is required.
- 10-30%: Conceptual design (evaluation of alternatives, concept-level plans, design criteria for project elements, rough cost estimates).
- 30-85%: Preliminary design (selection of the preferred alternative, draft plans, draft design report, preliminary cost estimates).
- 85-100%: Final design (final design report, plans, and specifications, contracting and bidding documents, monitoring plan, final cost estimate).

If work remains on the project's design, describe the work that remains to be done and when you expect to have it completed. If no design is required put "N/A"

Project design is approximately 60-80% complete.

We do not anticipate any major design changes. Additional overall detail including the topographical profile, planting plan, and emergent wetland species will be finalized. The BPA engineer will validate the design elevations produced in HEC-RAS modeling compared to existing LiDar elevation data. Minor changes to exact wood habitat structure design and placement and quantity of wood members is also likely to occur. Wetland determination will further guide key emergent wetland areas to create or enhance.

Describe the steps you will take to minimize adverse impacts to the site and adjacent lands during and after project implementation.

The project footprint is a large hay pasture without mature vegetation or trees. The proposed side channel will connect to the river in four locations, including all side channel inlets and the outlet. These connections will occur at natural breaks in riparian vegetation and will be relatively shallow in nature to help minimize mature vegetation disturbance and promote natural process for channel activation. Additionally willow clumps will be harvested and utilized when encountered during channel excavation. Post project rehabilitation will use regionally appropriate species for re-seeding. Weed management post project will be conducted by NPT Watershed and Homeland

project staff and will include surveying, hand pulling, and chemical treatments where appropriate or necessary.

Project Management

List the key individuals, their roles, and qualifications relevant to project and post project implementation. At a minimum include the following: project management, project design, project implementation, and project inspection.

Role	Name	Affiliation	Qualifications	Email	Phone
Project sponsor	Katie Frenyea	Nez Perce Tribe Fisheries	Katie has a B.S. in Fisheries Management and has worked extensively in eastern Oregon for fisheries agencies for 16 years. She has 6 years of restoration implementation and project management experience.	kathrynf@nezperce.org	(541) 432-2506
Grande Ronde Model Watershed Wallowa County Project Coordinator	Coby Menton	Grande Ronde Model Watershed	Coby has extensive experience in water quality and stream flow gauging. He is a key member of the partnership seeking implementation and monitoring projects while managing contracting, engineering, and design.	rcoby@grmw.org	(541) 398-0151
Project Engineer	Jadon Herron	Anderson Perry and Associates	Jadon has a B.S. in Civil Engineering, with a focus on stream restoration and hydraulic design.	jherron@andersonperry.com	(541) 963-8309
Project management	Montana Pagano	Nez Perce Tribe Fisheries	Montana has a B.S. in Fishery Resources from the University of Idaho. She has over ten years of experience working on various research and habitat projects in the Oregon, Idaho, and Washington.	montanap@nezperce.org	(541) 432-2507
Engineering consultant - Permitting and fisheries expertise.	Mitch Daniel	Cardno	Mitch has over 20 years of experience in fisheries and watershed. Mitch brings a varied and valuable skillset, including project management and coordination, permitting, consultation, landowner relations, and aquatic organism habitat restoration.	mitch.daniel@cardno.com	(208) 630-4077

Project Design	Winston Morton	Oregon Department of Fish and Wildlife	Winston has worked for ODFW Grande Ronde Fish Habitat for 13 years, serving 8 years as the program biologist. He has a B.S. in Biology with an emphasis in Stream Ecology from Oregon State University.	winston.h.morton@state.or.us	(541) 962-1837
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Optional Monitoring

OPTIONAL: Restoration Project Monitoring

- Salmonid Monitoring*
- Non-salmonid biological monitoring*
- Water (quantity) flow monitoring*
- Water quality monitoring*
- Rangeland monitoring*
- Onsite*
- Downstream*
- Upstream*
- Upslope*

Will effectiveness monitoring will be conducted for this project?

- Yes
- No

Budget

Item	Unit Type	Unit Number	Unit Cost	OWEB Funds	External Cash	External In-Kind	Total Costs
Salaries, Wages and Benefits							
			\$0	\$0	\$0	\$0	\$0
Category Sub-total				\$0	\$0	\$0	\$0
Contracted Services							
			\$0	\$0	\$0	\$0	\$0
Category Sub-total				\$0	\$0	\$0	\$0
Travel							
			\$0	\$0	\$0	\$0	\$0
Category Sub-total				\$0	\$0	\$0	\$0
Materials and Supplies							
			\$0	\$0	\$0	\$0	\$0
Category Sub-total				\$0	\$0	\$0	\$0
Equipment and Software							
			\$0	\$0	\$0	\$0	\$0
Category Sub-total				\$0	\$0	\$0	\$0
Other							
			\$0	\$0	\$0	\$0	\$0
Category Sub-total				\$0	\$0	\$0	\$0
Modified Total Direct Cost Amounts				\$0	\$0	\$0	\$0
Indirect Costs							
Federally Negotiated Indirect Cost Rate		0%			Indirect Cost Total: \$0		
Total				\$0	\$0	\$0	\$0

If the budget includes unusually high costs and/or rates, provide justification for those costs and/or rates.

If the budget identifies a contingency amount for specific line item(s) within the Contracted Services and Materials and Supplies budget categories, explain the specific reasons a contingency is needed for each line item. Contingencies are line-item specific and cannot be used for other costs.

Funding and Match

Fund Sources and Amounts

Organization Type	Name	Source Note	Contribution Type	Amount	Description	Status
State	Oregon Watershed Enhancement Board		Cash	\$158,000	OWEB funds will be sought for planting and habitat features.	Pending
Federal	Bonneville Power Administration		Cash	\$198,250	Funds will be used for wetland plant establishment and side channel habitat features.	Pending
Fund Source Cash Total				\$356,250	Fund Source In-Kind Total	
					\$0	

Match

Contribution Source-Type: Description	Amount
Oregon Watershed Enhancement Board-Cash: OWEB funds will be sought for planting and habitat features.	\$0
Bonneville Power Administration-Cash: Funds will be used for wetland plant establishment and side channel habitat features.	\$198,250
Match Total	\$198,250

Do match funding sources have any restrictions on how funds are used, timelines or other limitations that would impact the portion of the project proposed for OWEB funding?

- Yes
 No

Do you need state OWEB dollars (not Federal) to match the requirements of any other federal funding you will be using to complete this project?

- Yes
 No

Does the non-OWEB funding include NOAA/PCSRF funds?

- Yes
 No

Uploads

Photos: [Tamkaliks overview April 2008.pdf](#) - [View from above Tamkaliks grounds looking up the Wallowa River to the SE.](#)

Photos: [Tamkaliks panoramic.pdf](#) - [Panoramic view near bottom of project area looking South.](#)

Photos: [Power Pole Information.pdf](#) - [Series of photos and captions outlining proposed relocation of power pole.](#)

Map: [Tamkaliks location map.pdf](#) - [Locator map for Tamkaliks project area.](#)

Plant Page

Planting Questions

Relationship to other conservation programs

This project will use OWEB funds to increase the planting density on CREP acres.

Planting Activities

Describe the current condition of the site(s) to be planted.

The existing riparian area adjacent to the side channel and wetland complex has alternating areas of reed canary grass, and mature tree and shrub species. Channel connection points will take place in areas where reed canary grass exists, attempting to remove or impact these areas while preserving mature native vegetation. The proposed side channel and wetland footprint are in a hay field devoid of trees or riparian vegetation. Planting along the side channel and within the wetland complex will be extensive. The projection and enhancement of the existing riparian area as well as the establishment of a high functioning side channel, floodplain and wetland will require a robust planting plan and will greatly contribute to the establishment and future function of the project.

Describe how you will prepare the site(s) prior to planting and how those activities are appropriate considering the site conditions described in the previous question.

All temporary access roads and cut and fill areas will be obliterated or stabilized as stated in the project plan set. Once stabilized planting areas will be harrowed to aerate soil and eliminate compaction. Native seed mix including rush, sedge and bulrush will be applied at a rate of 2.2 lbs/acre. Container plants and willows (see planting plan for species) will be used during planting which will occur in the fall contingent upon dormancy and appropriate conditions.

Fill out the table below. Identify the vegetation communities you plan on planting in, the acres each vegetation community encompasses, and the density of your planting.

Vegetation Community	Acres	Density
Riparian	3 acres	2,000 stems/acre
Emergent Wetland	1.0	20 lbs seed/acre
Emergent Wetland	1.1	900 plugs/acre

Fill out the table below for each vegetation community listed in the table above, provide the common and scientific names of up to five plants that will be planted, the form(tree, shrub, grass), type of plant (bare root, cutting, etc) and the planting timing.

Vegetation Community	Plants: Common Name	Plants: Scientific Name	Form	Type	Year	Month
Riparian + Emergent Wetland	Coyote Willow	Salix exigua	Tree	Cutting	2018	October-November
Emergent Wetland	Rush (Baltic, small-fruited, Alkali)	Juncus balticus, Juncus microcarpus, Schoenoplectus maritimus)	Forb	Seeds	2018	October-November

Emergent Wetland	Rush (Bulrush, Common, Baltic))	Scirpus microcarpus, Juncus effusus, Juncus balticus	Forb	Plugs	2018	October-November
Riparian + Emergent Wetland	Coyote Willow	Salix exigua	Tree	Bareroot	2018	October-November

Plant Stewardship

After the plantings are installed, will you conduct plant stewardship (“free to grow”)?

- Yes
- No

Are you requesting OWEB funds for plant stewardship activities?

- Yes
- No

Fill out the table below to provide information on the proposed plant stewardship activities to be completed after the plantings are installed.

Vegetation Community	Years	Month	ActivityHeader
Riparian	10	June	% Survival, photo points
Wetland	10	June	% Survival, photo points

Measures of Planting Success

Use the table below to explain how you will document and determine success for the plantings.

Vegetation Community	Parameter	Percentages
Riparian	Percent Survival	70%
Emergent Wetland	Percent Survival	70%

If, in the course of the 3-5 years following planting, the success rate falls below your standard, what is your plan?

The scope and scale riparian and wetland planting in the project area is extensive. Currently, at 60% design the extent of planting success or protection is still in process. The design team is working to determine an extensive monitoring and plant protection plan by the completion of 100% designs (by November 2017). Parameters include % survival, browse height, and plant protection.

Permit Page

Project Activity Requiring a Permit or License	Name of Permit or License	Entity Issuing Permit or License	Status
Side channel and floodplain construction	ACOE 404 permit	Army Core of Engineers	In Progress
Side channel and floodplain construction	Oregon DSL removal/fill permit	Oregon Department of State Lands	In Progress
Side channel and floodplain construction	ESA Section 7 Consultation - Chinook & steelhead	National Marine Fisheries Service	In progress. HIP 3 programmatic
Side channel and floodplain construction	ESA Section 7 - bull trout	US Fish and Wildlife Services	In progress. HIP 3 programmatic
All ground disturbing activities	Cultural resources consultation and clearance	State & Tribal Historic Preservation Offices	Complete







Existing Telephone Pole



ID Number



Power Pole and Vicinity. Stars indicate potential new sites if moved



Alignment of poles leading to 116200

