

# SEPA ENVIRONMENTAL CHECKLIST

## ***Purpose of checklist:***

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

## ***Instructions for applicants:***

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

## ***Instructions for Lead Agencies:***

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

## ***Use of checklist for nonproject proposals:***

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

## **A. Background**

1. Name of proposed project, if applicable:

**Taneum Creek Rag-Heart Habitat Enhancement Project**

2. Name of applicant:

**Yakama Nation (YN) through the Yakima/Klickitat Fisheries Project (YKFP)**

3. Address and phone number of applicant and contact person:

**Primary**

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4. Date checklist prepared:

May 27, 2021

5. Agency requesting checklist:

Washington Department of Fish and Wildlife

6. Proposed timing or schedule (including phasing, if applicable):

**The project will be implemented for up to ten years, beginning in 2021.**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

**The overall goal of this property is to reconnect the floodplain and recharge the groundwater aquifer.. Construction will begin in 2021 and include channel spanning wood structures and riparian planting to enhance instream habitat for ESA listed steelhead trout and long term large wood recruitment to the stream. Future phases of work will be developed with WDFW and other partners.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- **Guidelines for Unanchored Large Wood Placements (Natural Systems Design 2021)**
- **Taneum Creek Habitat Enhancement – Ragheart Site Final Design Memorandum (Natural Systems Design 2021)**
- **Taneum Creek Habitat Enhancement – Wetland and Stream Report (GG Environmental 2020)**
- **Yakima Basin Managed Aquifer Recharge Assessment Final Report (Jacobs et al. 2020)**
- **Stream Habitat Restoration Guidelines (Washington State Aquatic Habitat Guidelines Program 2004)**
- **Design Considerations for Large Woody Debris Placement in Stream Enhancement Projects (Hilderbrand et al 1998 North American Journal of Fisheries Management 18: 161-167)**
- **Haring, D. 2001. Habitat limiting factors: Yakima River watershed water resource inventory areas 37-39, final report. Washington State Conservation Commission.**
- **Oregon Department of Forestry/Oregon Department of Fish & Wildlife. 2010. Guide to Placement of Wood, Boulders and Gravel for Habitat Restoration**
- **Yakima Basin Fish & Wildlife Recovery Board. 2009. Yakima Steelhead Recovery Plan. Extracted from the 2005 Yakima Subbasin Salmon Recovery Plan with Updates.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

- Land Use Authorization – BOR
- SEPA – WDFW
- NEPA – BPA
- NEPA – BOR
- Right of Entry - WDFW
- Section 106 of the National Historic Preservation Act – BPA
- Fish Habitat Enhancement, Hydraulic Project Approval – WDFW
- Endangered Species Act– Programmatic Section 7 Consultation - Habitat Improvement Program (HIP)/Biological Opinion IV (HIP BO III). US Department of Energy – Bonneville Power Administration – National Marine Fisheries Service (NMFS) and US Fish and Wildlife Service (USFWS)
- Clean Water Act Sections 404 (USACE) and 401 (DOE)
- Kittitas County Floodplain Development

11. Give brief, complete description of your proposal, including the **proposed uses and the size of the project and site**. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Yakama Nation is proposing a habitat restoration and floodplain improvement project along a 1.4 mile-long segment of Taneum Creek between river miles (RM) 1.95 to 3.4 in Kittitas County, Washington. River Miles 1.95-2.4 is owned by Washington Department of Fish and Wildlife (WDFW) and is within the LT Murray Wildlife Area. River Miles 2.4-3.4 are primarily owned by BOR. The Kittitas Reclamation District operates irrigation infrastructure within the project area, including a siphon, flume and associated outfall near RM 2.85, a diversion facility below RM 2.7 and associated canals to the north and south of the valley bottom. The property was acquired for restoration of Taneum Creek and water conservation. WDFW and BOR have been mowing and spraying the thistle, knapweed, houndstongue and Scotch broom to abate the noxious weeds while encouraging woody recruitment. The proposed Taneum Rag-Heart Restoration Project would include in-stream wood placement, riparian planting and riparian corridor protection measures that are targeted to improve fish habitat for Endangered Species Act-listed summer steelhead, as well as Spring Chinook, Coho, cutthroat trout, and rainbow trout.

Wood for the project will be acquired from a private contractor. Wood will be delivered to the staging area via logging trucks for the project using Thorp Cemetery Road. Implementation will begin in September 2021 and will include the use of heavy equipment to place wood including skidders, excavators, and log loaders. Following construction, riparian plants will be installed using an expandable stinger mounted to the bucket of an excavator planting live stakes and container plants 4'-6' to groundwater depth. Hand crews may also access the site by foot for shallow plantings and the construction of a temporary elk enclosure to protect plantings from browse.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Taneum Creek is a right bank tributary to the Yakima River that flows in to the Yakima River approximately 10 miles northwest of Ellensburg. The project reach is partially located within Washington Department of Fish and Wildlife's LT Murray Wildlife Area starting at River Mile 1.95 near the mouth of Taneum Creek just upstream of I-90 bridge and Thorp Cemetary Road extending upstream onto the United States Bureau of Reclamation's Heart K property, within T18N. R17E. Section 5 and 6. It is contained with Kittitas County parcels 20651, 599133, 609133, 663633, and 070536. The project will treat approximately a 1.45-miles of Taneum Creek and its floodplain between -120.736162, 47.081560 and -120.760324, 47.084307 within WRIA 39 in Kittitas County.

## B. ENVIRONMENTAL ELEMENTS

### 1. Earth

a. General description of the site:

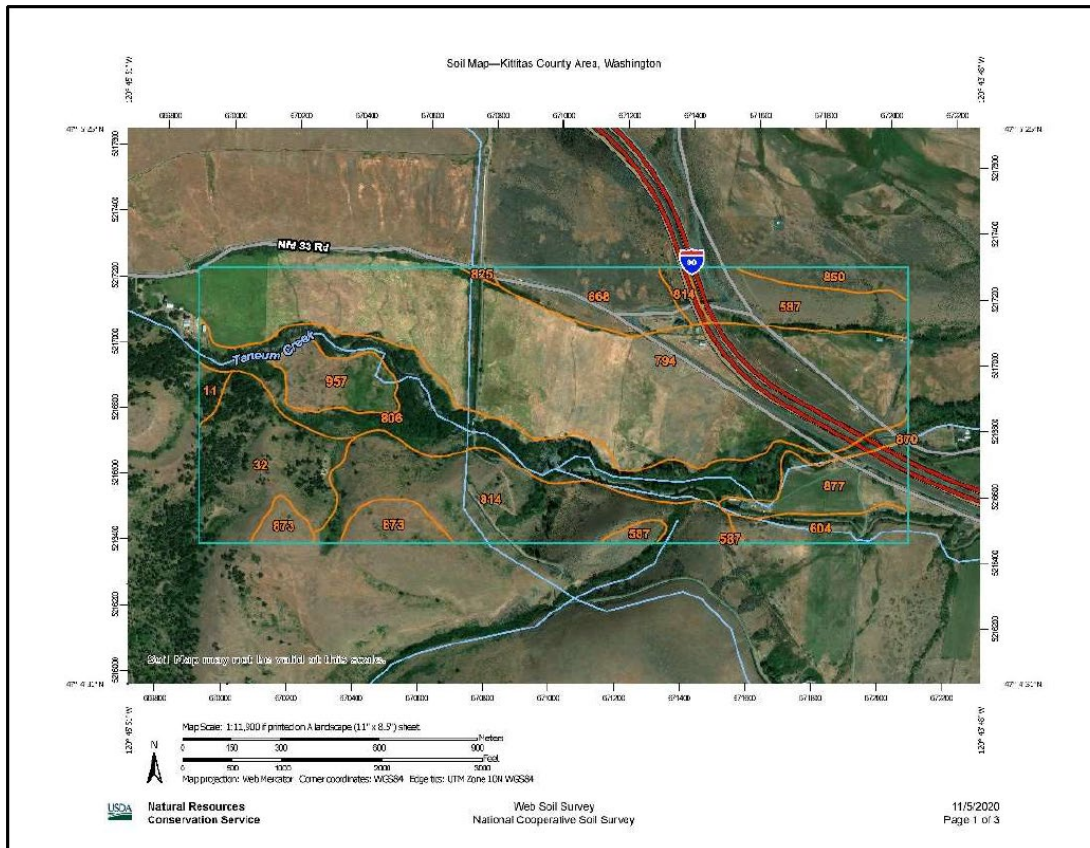
(circle one): Flat, rolling, hilly, steep slopes, mountainous, other \_\_\_\_\_

**The wood placement reach is flat and is located within the valley bottom of Tanuem Creek.**

b. What is the steepest slope on the site (approximate percent slope)?

**The slope is moderate 1-4%**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.



### Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
11	Sapkin-Rubble land complex, 30 to 75 percent slopes	2.7	0.6%
32	Stemilt ashy loam, 25 to 45 percent slopes	38.4	8.5%
587	Argixerolls, 15 to 30 percent slopes	25.1	5.6%
604	Reeser ashy clay loam, 5 to 10 percent slopes	12.0	2.7%
784	Kayak-Weirman complex, 0 to 2 percent slopes	174.1	38.7%
806	Weirman complex, channeled, 0 to 2 percent slopes	63.3	14.1%
814	Argixerolls, moist, 30 to 70 percent north slopes	58.5	13.0%
825	Pachneum ashy loam, 10 to 15 percent slopes	0.7	0.2%
850	Reelow ashy clay loam, 2 to 5 percent slopes	7.4	1.6%
868	Reelow-Reeser-Labue complex, 3 to 10 percent slopes	21.1	4.7%
870	Millhouse-Metser complex, 0 to 5 percent slopes	0.0	0.0%
873	Labue-Sketter-Reelow complex, 3 to 15 percent slopes	12.4	2.8%
877	Maxhill ashy loam, 0 to 5 percent slopes	19.1	4.2%
957	Kayak-Weirman complex, rarely flooded, 0 to 2 percent slopes	14.8	3.3%
<b>Totals for Area of Interest</b>		<b>449.6</b>	<b>100.0%</b>

**The proposal will not result in the removal of these soils.**

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

**Soils appear stable. There are areas of channel incision due to erosional downcutting within the wood placement reach; large wood should help to slow down the water and aggrade the channel bed.**

- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

***Channel Spanning Wood Structures – Type 1 ELJs (Engineered Log Jams) consist of a matrix of key logs with rootwads, racking wood, and batter piles that are installed directly on the channel bed of the low flow channel. The individual logs each span ~80-90% of the channel and are spaced at 4-6' longitudinally, thus effectively creating a channel spanning wood matrix with small gaps between the logs which will ensure fish passage upon completion. The Type 1 ELJs are proposed to halt channel incision, trap, and store incoming sediment, raise the water table, and elevate stream stage to increase the frequency of connection to available floodplain and off channel features. The structures will also generate and maintain pools with complex cover because of plunging flow over discrete log steps. These structures consist of single logs placed on the channel bed orthogonal to flow and stabilized with driven timber batter (inclined) piles. The batter piles secure in-stream wood by providing vertical resistance to buoyancy and lateral resistance to drag forces. Racking and slash will be incorporated into the structure to reduce porosity, create interstitial space for habitat, and benefit the riparian corridor ecosystem. No excavation is anticipated for Phase 1 construction.***

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

**Minimal erosion may occur due to disturbed soils. Sediment and erosion control best management practices (BMPs) will be used during all phases of construction. If needed, temporary erosion controls will be in place before any significant alteration of the project site and appropriately installed downslope of the project activity within the riparian buffer area until site rehabilitation is complete. Sediment barriers will be installed and maintained for the duration of project implementation. Temporary erosion control measures may include fiber wattles, silt fences, jute matting, wood fiber mulch and soil binder, or geotextiles and geosynthetic fabric.**

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

**0%**

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

**Sediment and erosion control best management practices (BMPs) will be used during all phases of construction. If needed, temporary erosion controls will be in place before any significant alteration of the project site and appropriately installed downslope of the project activity within the riparian buffer area until site rehabilitation is complete. Sediment barriers will be installed and maintained for the duration of project implementation. Temporary erosion control measures may include fiber wattles, silt fences, jute matting, wood fiber mulch and soil binder, or geotextiles and geosynthetic fabric.**

## **2. Air**

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

**Source wood will be acquired by a contractor. Transportation of logs, slash and racking material to the wood staging locations via logging trucks, dump trucks and other heavy equipment will cause temporary dust on roads and vehicle emissions. Large wood and slash will be placed in Taneum Creek using heavy equipment such as skidders, log loaders and possibly excavators, which will also cause temporary emissions when in use. There will be no additional emissions to the air upon completion of the project.**

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

**Only emissions from transportation of work vehicles to and from the project site, as described in the previous answer to question 2a.**

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

**Project personnel will carpool to the work areas as much as possible and vehicles/equipment will be turned off when not in use.**

### **3. Water**

- a. Surface Water:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

**Yes, the trees will be placed within the channel and in the floodplain of Taneum Creek, a tributary to the Yakima River. Taneum Creek is a year-round stream.**

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

**Yes, work is proposed in and adjacent to Taneum Creek.**

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

**The only material proposed to be brought in to the site is large wood and wood slash. The wood will be locally-sourced, site-appropriate species such as Douglas Fir and ponderosa pine. This project will include placement of 65 logs with rootwads, logging slash, and racking material. A compacted cubic yard of slash will weigh approximately 570 lbs per cubic yard. Racking material will include ~550 logs. Logs will be Western Red Cedar, Douglas fir, or Western Hemlock, red alder, Big Leaf Maple, or Cottonwood. Racking logs will be between 6 and 10 inch in diameter, with only 20% of the pieces being greater than 8". Length of individual pieces of racking may vary between 20-40 ft.**

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

**Yes all of the work proposed is within the 100-year floodplain of Taneum Creek.**

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

**No. Sediment and erosion control BMPs will be implemented at all phases of construction.**

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

**None, not applicable.**

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

**Precipitation will likely be the main cause of stormwater runoff associated with the proposed project. If storm events should occur or are forecast to occur during project implementation, immediate BMPs would be applied according to the Stormwater Management Manual for Eastern Washington (2004, 2018 update).**

2) Could waste materials enter ground or surface waters? If so, generally describe.

**There is a chance that petroleum products could leak from miscellaneous vehicles and heavy equipment onto the ground. All equipment will be kept in good working condition to minimize this risk. All equipment will have an approved spill kit to contain and clean up spills if they should occur. Refueling will follow BMPs.**

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.



No

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

**Erosion control measures will be applied during project implementation to limit the negative ecological impacts caused by runoff.**

#### 4. Plants

a. Check the types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- Orchards, vineyards or other permanent crops.
- wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

**Wood staging areas for the project are previously disturbed locations, where vegetation is minimal or absent. These areas will be accessed using established routes to minimize new disturbance. However, minor disturbance to riparian vegetation will occur due to delivery of wood using heavy equipment at identified locations.**

c. List threatened and endangered species known to be on or near the site.

**None are known to occur at this site.**

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

**Following project implementation, Yakama Nation fisheries technicians will be responsible for reseeding any disturbed areas with native seed to prevent invasion of noxious weeds.**

**The addition of large wood to the creek channel will help to reconnect the stream with its floodplain, recharging shallow groundwater and encouraging the growth of riparian plant species.**

e. List all noxious weeds and invasive species known to be on or near the site.

**Potential noxious weeds/invasive species that may be on or near the project site include:**

**White Top  
Canada thistle  
Bull thistle  
Chicory  
Common mullein**

Diffuse knapweed  
Spotted knapweed  
Scotch broom  
Ventenata dubia  
Oxeye daisy

## 5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

- **Birds:** Northern spotted owl, Northern goshawk, flammulated owl, great horned owl, golden eagle, White-headed woodpecker, songbirds, grouse, turkey
- **Mammals:** Elk, mule deer, gray wolf, beaver, bear, cougar
- **Fish:** summer steelhead, rainbow trout, spring Chinook salmon, westslope cutthroat, coho salmon
- **Reptiles and amphibians:** Northern alligator lizard; western fence lizard; western rattlesnake; ring-necked snake; racer; common garter snake; Columbia spotted frog; rubber boa; western toad

Examples include:

birds: hawk, heron, eagle, songbirds, other:

mammals: deer, bear, elk, beaver, other:

fish: bass, salmon, trout, herring, shellfish, other \_\_\_\_\_

b. List any threatened and endangered species known to be on or near the site.

Northern spotted owl  
Steelhead

c. Is the site part of a migration route? If so, explain.

**Taneum Creek is part of the summer steelhead migration route to spawning grounds.**

d. Proposed measures to preserve or enhance wildlife, if any:

**As proposed, the project will increase the amount of large wood in the channel and will also increase the vigorous riparian thicket that is present along streambanks, providing additional cover for many songbirds and other wildlife species. Increased pool frequency and channel complexity, due to large wood placement, will greatly enhance instream habitat for threatened salmonids such as steelhead, coho and chinook salmon. The project is designed as a habitat enhancement project and no long-term negative impacts to wildlife are anticipated.**

e. List any invasive animal species known to be on or near the site.

**No known invasive animal species are present.**

## 6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

**Upon completion, there will be no need for an energy source at the project site.**

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

**Not applicable; the proposed project would not likely affect the potential use of solar energy.**

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

**All equipment and vehicles will be turned off when not in use. Upon completion, there will be no consumptive uses of energy or natural resources.**

## 7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

**Heavy equipment poses a potential risk of a petroleum spill if the gas tank leaks. All equipment will be kept in good working condition to reduce the risks of a chemical spill or sparks causing a fire. All equipment will have an approved spill kit to contain and clean up spills if they should occur. Refueling will follow BMPs.**

- 1) Describe any known or possible contamination at the site from present or past uses.

**None known.**

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

**None known.**

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

**Petroleum will be utilized for the vehicles and heavy equipment during project implementation. However no toxic or hazardous chemicals will be stored on site after implementation.**

- 4) Describe special emergency services that might be required.

**The contractor responsible for placing the wood will have a fuel spill plan in place and will have an adequate supply of absorbent pads, shovels, pumps, hoses, visqueen, fire extinguishers,**

and first aid equipment in the event of emergency.

**In the event of an emergency situation, the contractor will assess the incident and, if necessary, work with the National Response Center to appropriately respond to the incident. In the event of spill, the Washington Department of Ecology and Washington Department of Fish & Wildlife will be notified immediately.**

5) Proposed measures to reduce or control environmental health hazards, if any:

**All equipment and vehicles will be kept in good working condition and will be turned off when not in use.**

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

**There is minimal noise from recreational vehicle traffic; it will not affect the project.**

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

**The short-term noise associated with this project will include operation of vehicles and heavy equipment. The project will take place during daylight hours. There will be no long-term increase in noise due to this project.**

3) Proposed measures to reduce or control noise impacts, if any:

**Equipment will be operational during normal working days and during daylight hours. Vehicle noise will be reduced by carpooling as much as possible to the project sites and turning off equipment when it is not in use.**

## 8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

**The project area lies within the historic floodplain of Taneum Creek and is surrounded by land managed by the United States Bureau of Reclamation, Washington Department of Fish and Wildlife, and private property. A private landowner uses the adjacent land for agriculture. Currently, the WDFW managed property is used for hunting, hiking, and recreation. The BOR property is managed for conservation and irrigation supply.**

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

**The project site is on Washington Department of Fish and Wildlife managed lands and United State Bureau of Reclamation. While the land surrounding the project area are private landowners, the project will occur within the floodplain of Taneum Creek. Therefore the project**

**will not impact the current or long term status of these lands. The project site was used as working farmland prior to 2016 when WDFW purchased the property for conservation.**

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

**No**

c. Describe any structures on the site.

**The project is just upstream of Interstate 90 and Thorp Cemetary Road bridge. The Kittitas Reclamation District operates irrigation infrastructure within the project area, including a siphon, flume and associated outfall near RM 2.85, a diversion facility below RM 2.7 and associated canals to the north and south of the valley bottom.**

d. Will any structures be demolished? If so, what?

**No**

e. What is the current zoning classification of the site?

**Rural recreation and commercial Agriculture**

f. What is the current comprehensive plan designation of the site?

**Rural recreation and commercial Agriculture**

g. If applicable, what is the current shoreline master program designation of the site?

**Rural Conservancy**

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

**Yes, Taneum Creek and its floodplain are designated as wetlands, frequently flooded areas, and fish and wildlife habitat conservation areas (elk winter range).**

i. Approximately how many people would reside or work in the completed project?

**N/A**

j. Approximately how many people would the completed project displace?

**None**

k. Proposed measures to avoid or reduce displacement impacts, if any:

N/A

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

**The goal of this project is to improve ecological function of Taneum Creek and provide habitat to sensitive species of fish and wildlife that are of cultural, ecological and economic importance. This project is a collaborative effort between Yakama Nation Fisheries, Washington Department of Fish and Wildlife, United State Bureau of Reclamation, and Kittitas Reclamation District.**

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

N/A

## 9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

N/A

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

N/A

c. Proposed measures to reduce or control housing impacts, if any:

N/A

## 10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

**It is unlikely that the tallest large wood jam would exceed 5 feet in height.**

b. What views in the immediate vicinity would be altered or obstructed?

**The view would be temporarily altered during project implementation when heavy equipment is placing wood in the stream and on the floodplain. There will be no long-term alteration or obstruction of the view.**

c. Proposed measures to reduce or control aesthetic impacts, if any:

**The goal of this restoration projects is to mimic the natural recruitment of large wood to a stream and restore natural stream processes. After decades of unnatural human alteration to the watershed, this project will help restore the historic aesthetics of Taneum Creek**

### 11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

**Additional glare and light will only occur during project implementation. Trucks accessing wood staging areas and heavy equipment used for excavations and to place large wood instream and on the floodplain will be equipped with normal lights to meet safety requirements.**

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

N/A

- c. What existing off-site sources of light or glare may affect your proposal?

N/A

- d. Proposed measures to reduce or control light and glare impacts, if any:

N/A

### 12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?

**Hiking, hunting, and wildlife watching occurs in the immediate vicinity of the project.**

- b. Would the proposed project displace any existing recreational uses? If so, describe.

**This property is difficult to access and thus doesn't get much hunting or recreation but signs will be installed prior to the project that will alert them of the short term closure**

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

**Project implementation will occur prior to the beginning to modern firearm season for deer and elk to reduce potential impacts on hunters.**

### 13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

**85618 Taneum Canal is a linear historic structure that is recommended Eligible for the National Register of Historic Places (NRHP).**

45KT04407 is a precontact lithic scatter identified in three positive STP containing two pieces of lithic debitage and a single flake tool. Artifacts were recovered from 40-50 cm. The site boundary measures 20-x-20-m and was delineated through the excavation of radial shovel probes. The site is recommended Potentially Eligible for the NRHP.

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

The project area was surveyed for cultural resources over the course of three investigations (Barrick 2020a, b; 2021). A total of seven archaeological sites were identified within the area of potential effects (APE; 45KT04393, 45KT04405, 45KT04406, 45KT04407, 45KT04498, 45KT04499, 45KT04500). Precontact site types include lithic isolate and lithic scatter. Historic sites include a fieldstone piles, an agricultural implement, and refuse scatter. 45KT04407 is recommended Potentially Eligible for the NRHP, the remaining sites are recommended Not Eligible.

### References

Barrick, Wilbur

*2020a Cultural Resources Inventory of the Taneum Creek, Heart-K Restoration Project, Kittitas County, Washington.* Prepared by Yakima Nation Fisheries.

*2020b Cultural Resources Inventory of the Taneum Creek, Ragland Fish Passage Project, Kittitas County, Washington.* Prepared by Yakima Nation Fisheries.

*2021 Cultural Resources Inventory of the Taneum Creek, Ragheart Add-on Project, Kittitas County, Washington.* Prepared by Yakima Nation Fisheries.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

An archaeologist with the Yakama Nation conducted a Cultural Resources Survey of the entire Area of Potential Effect (Cultural Resources Inventory for the Taneum Creek, Ragland, Heart K, and Ragheart Add-on, Kittitas County, Washington by Wilbur Barrick, 2020-2021). In addition, a background review of historic maps and state records was conducted ahead of fieldwork. The lead agency (BPA) is consulting with DAHP, land managers, and local tribes. Project implementation will not occur until the National Historic Preservation Act Section 106 Consultation is complete.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Project activities will avoid cultural resources that are Eligible or Potentially Eligible for the NRHP (85618 Taneum Canal; 45KT04407).



## 14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

**The project will have no impact on roads surrounding the site. Thorp Cemetary Road and Taneum Road is the main access road that will be used during wood staging and project implementation. No vehicles will be stopped on these roads. Heavy equipment and logging trucks will turn off the main road on approved access routes within the project reach.**

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

No.

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

N/A

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). \_\_\_\_\_

No.

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

N/A

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

- h. Proposed measures to reduce or control transportation impacts, if any:

N/A

## 15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

N/A

b. Proposed measures to reduce or control direct impacts on public services, if any.

N/A

**16. Utilities**

a. Circle utilities currently available at the site:  
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,  
other \_\_\_\_\_


**There are electric lines under the adjacent private landowner's farm access road.**

b. Describe the utilities that are proposed for the project, the utility providing the service,  
and the general construction activities on the site or in the immediate vicinity which might  
be needed.

None

**C. Signature**

The above answers are true and complete to the best of my knowledge. I understand that the  
lead agency is relying on them to make its decision.

Signature: \_\_\_\_\_  \_\_\_\_\_

Name of signee \_\_\_\_\_Melissa M Babik\_\_\_\_\_

Position and Agency/Organization \_\_\_\_\_LT Murray Wildlife Area Manager\_\_\_\_\_

Date Submitted: \_\_6/28/2021\_\_\_\_\_