SEPA ENVIRONMENTAL CHECKLIST

JUNE 2015

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: [help]

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 [help]

1. Name of proposed project, if applicable: [help]
   Teanaway Community Forest (TCF), Aquatic Restoration Project

2. Name of applicant: [help]
   William Meyer, Washington State Department of Fish and Wildlife

3. Address and phone number of applicant and contact person: [help]

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4. Date checklist prepared: [help]

June 30, 2016

5. Agency requesting checklist: [help]

Washington Department of Fish and Wildlife (WDFW)

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

Overall project implementation will be approximately July 2016 through end of 2018. Elements of the project will be responsive to such timing and restrictions found in the Industrial Fire Precaution Levels (IFPL), Wildlife windows (spotted owl, goshawk, etc.), and Hydraulic Project Approval and fisheries work windows, and other regulatory requirements as needed.

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

This restoration project is a stand-alone habitat stewardship proposal. The success of this project does not rely upon previously implemented or future restoration actions. However, WDFW, Washington Department of Natural Resources (DNR), and the Yakama Nation Fisheries will continue to implement elements in the Teanaway Community Forest Plan to achieve the watershed protection and habitat restoration goals identified in the TCF Management Plan (April, 2015).

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

The following is a list of documents that were used that are applicable to this document:

- Teanaway Community Forest Aquatic Restoration Project 60% Design Report, Yakama Nation Fisheries, May 2016.
- Teanaway Community Forest Management Plan, April, 2015.
- Deed of Habitat Restoration and Working Lands Easement (Teanaway) DNR Easement No. 58-090537.
- Yakima River Basin Integrated Water Resource Management Plant. Programmatic Environmental Impact Statement. March 2012. U.S. Bureau of Reclamation & Washington State Department of Ecology.
- Project Cultural Resouces Assessment and Surveys; Cultural Review Process.
- Teanaway Watershed Analysis, 1997. Boise Cascade Corporation.
- Habitat Limiting Factors: Yakima River Watershed Water Resource Inventory Areas pgs. 37-39, Final Report. 2001. Haring, D., Washington State Conservation Commission.

- Yakima Steelhead Recovery Plan. 2009. Extracted from the 2005 Yakima Sub basin Salmon Recovery Plan with Updates. Yakima Basin Fish & Wildlife Recovery Board.
- Yakima River Steelhead Radio Telemetry Study. 2012-2015. Yakama Nation & Washington State Department of Fish and Wildlife, Yakima/Klickitat Fisheries Project.
- Yakima River Steelhead Radio Telemetry Study. 1995. Yakama Nation & Washington State Department of Fish and Wildlife, Yakima/Klickitat Fisheries Project.
- Forest Practices Application/Notification # 2705900. 2016. Washington State Department of Fish & Wildlife (Landowner), and the Yakama Nation (Operator), on the L.T. Murray Wildlife Area.
- 303(d) Database List. 1996. Washington State Department of Ecology.
- Washington Department of Fish and Wildlife's Stream Habitat Restoration Guidelines (2012).
- Oregon Department of Forestry/Oregon Department of Fish & Wildlife. Guide to Placement of Wood, Boulders and Gravel for Habitat Restoration (2010).
- Washington State Department of Natural Resources Habitat Conservation Plan Environmental Impact Statement (1996).
- Washington State Department of Natural Resources Habitat Conservation Plan (1997).
- Washington State Department of Fish and Wildlife Wolf Recovery Plan (2011).
- United States Fish and Wildlife Service Revised Recovery Plan for the Northern Spotted Owl and Eastern Spotted Owl Emphasis Area (SOSEA).
- United States Fish and Wildlife Service Revised Recovery Plan for the Northern Spotted Owl, Critical Habitat.
- Washington State Department of Natural Resources – Policy for Sustainable Forests (2007).
- U. S. Department of Forest Service Spotted Owl Habitat Mapping (2011).
- The Teanaway Community Forest Plan SEPA File No. 15-040701.
- Washington Department of Fish and Wildlife's "Teanaway Fish and Wildlife Habitat Baseline Report" (2015).
- DNR Road Management and Abandonment Plan (RMAP).

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. [help]

Yes. See #10 below. Several Forest Practice Applications; a Hydraulic Project Approval for work affecting the bed, bank or flow and for the protection of fish life; Cultural Review (NHPA, DAHP).

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

- A Land Use License (LUL) between DNR and WDFW has been issued for work on previous year's work (2015) on the Indian Creek DNR Trust Section 16 (T21N R16E).
- For work on the Teanaway Community Forest (non-Trust land), WDFW/DNR and the Yakama Nation will develop a co-management agreement/arrangement for restoration of TCF lands using an adaptive management approach that includes monitoring project success and maintenance over time.
- Forest Practice Application for road improvement for equipment mobilization on TCF lands (acquisition in process)
- Ecology concurrence on SEPA determination

- Stormwater permit, if necessary
- WDFW Hydraulic Project Approval (HPA)
- Kittitas County Shoreline Permit and/or Exemption
- U.S. Department of Energy, Bonneville Power Administration, National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS) Programmatic Section 7 Consultation (Endangered Species Act) – Habitat Improvement Program (HIP) Biological Opinion (HIP BO III),
- US Army Corps of Engineers Joint Aquatic Resource Permit Application (JARPA).
- USFS Categorical Exclusion for salvage of hazard trees in Okanogan-Wenatchee National Forest

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.) [help]

Overview: The proposed Teanaway Community Forest (TCF) aquatic restoration project is a collaborative effort by the Yakama Nation, WDFW, and DNR to protect and enhance water supply and protect the watershed, while restoring fish habitat in eight headwater streams of the Teanaway River and Swauk Creek from 2016-2018. Approximately half the work will occur the first year, depending on permitting and logisitics, and the other half in future years, depending upon permitting and logistics. The proposed work will directly implement the water and fish habitat goals identified in the TCF Management Plan (April, 2015), utilizing the appropriate strategies and tools identified in the plan.

The work being proposed will treat approximately 8-10 miles of stream and ~150 acres of floodplain in eight sub-watersheds of the TCF (See Figure 1 Map). The cumulative effects of this work, in addition to future projects in the Swauk and Teanaway Watersheds, directly address the limiting factors faced by cold water fish species such as high water temperatures, minimum in-stream flows, channel diversity, and habitat complexity.

Background: The headwater tributary watersheds of the Teanaway have been degraded from past land use including, splash-dam logging, steam yarding, construction and management of a logging railroad in the 1920's, livestock grazing, farming, and tractor logging. The streams, floodplains, and associated meadows have lost the large trees and riparian shrubs that would provide roughness features during high flows. As a result, the stream channels have cut deeper into the valley alluvium and high flows are now trapped in the incised, flume-like channels, with the result of simplifying habitat and decreasing surface and groundwater water storage, and impairing water quality.

Approach: The water and habitat restoration goals will be achieved by placing woody material in the eight tributaries of the Teanaway River and Swauk Creek and on the adjacent floodplain surfaces to provide roughness and more natural fluvial processes (see Figure 2 Conceptual Design, in the attached PDF). A Hydraulic Project Approval (HPA) will be applied for to ensure protection of fish life. Installation of wood will follow Washington Department of Fish and

Wildlife's Stream Habitat Restoration Guidelines (2012) for LWM. Recommendations for log size and loading densities (relative to stream size and project lengths) and placement, anchoring (or not), and other measures to mitigate risks. The installed wood material will help capture mobile sediment and promote stream aggradation, create channel complexity, restore floodplain connectivity, recharge shallow groundwater (improve stream base flows), reduce peak flows, improve stream temperatures, attract beavers, and establish and maintain a robust and species rich riparian corridor (see Figure 2 Conceptual Design, in the attached PDF).

Restoration materials - Large Woody Material (LWM), and Small Woody Material (SWM) will be obtained from several sources. Some Large Woody Material (LWM) will be harvested from state owned upland forests (DFW's L.T. Murray Wildlife Area), which are densely forested due to a legacy of fire suppression (Forest Practices Application/Notification # 2705900 for thinning in the Taneum watershed, acquired). Additional LWM will be purchased from contractors, or obtained from USFS salvage of hazard trees. Fine Woody Material may come from planned pre-commercial thinning and shaded fuel break projects on the TCF (less than 8" diameter wood). A silvicultural harvest prescription will be implemented, which strives to reduce fuel loads through harvest of the least vigorous trees. Most of the dominant trees will be retained with adequate spacing to promote fire resiliency. Thus, this project achieves multiple objectives: stream/floodplain interaction will be improved by placing woody material that is harvested from overstocked upland forest stands, thus, improving forest health while reducing risk of wildfire.

Approximately 3,900 pieces of wood greater than 14 inches in diameter without rootwads, 1,300 pieces of wood greater than 14 inches in diameter with rootwads, and 9,900 pieces of wood less than 14 inches in diameter without rootwads will be placed in the eight tributaries. Four tributaries, Indian Creek, First Creek, Middle Creek, and Jungle Creek will be the focus of 2016/17 work, while Rye, Carlson, Dickey, and Lick Creek will be the focus of work in 2017/18, depending upon permitting and logistics. Work in 2018 will focus on any work that did not get finished as well as post-project monitoring. Please note that this phasing may change depending on issues that arise with environmental compliance, logistics, applications and permits etc.. More specific details of the number of wood pieces to be placed in each stream are available in in the 60% Design plans, with a breakdown of in-stream and floodplain wood for each tributary.

The materials will be transported via self-loading/unloading logging trucks to either staging areas or installation sites. Placement will occur with cranes, skidders, hydraulic excavator, small tractors and winches, depending on the site requirements, time of year and site conditions. Minimizing environmental impacts during project implementation is the goal.

Ditches, and incised natural watercourses that route surface water to the stream will also be filled with woody material to retard and retain surface runoff to the stream, thereby reducing flood peaks and erosion and promote groundwater infiltration. Placing complex log jams in treated stream is expected to promote more natural stream channel and floodplain configurations. This technique is referred to as large wood replenishment, and is described in WDFW's "Stream

Habitat Restoration Guidelines" Manual.

The proponent will primarily use existing roads for access. Abandoned/orphaned roads may be temporarily re-opened to access the project. If so, they will be abandoned at the completion of the project. In some instances, road improvements may be needed prior to or after project implementation, and we will work with DNR staff to achieve the necessary improvements. Floodplain and stream access may occur via equipment that is properly suited to provide access for the placement of wood, while not damaging floodplain soils. To achieve minimal impacts, the project will not have wheeled or tracked vehicles in areas that are wet. Additionally, operations will occur when conditions are dry or frozen, and no new roads will be constructed. Field personnel will be responsible, in consultation with DNR, for repairing any damage to roads or riparian area from heavy equipment. The DFW-YN co-management agreement will address these adaptive management and maintenance needs.

Outcome: Restoring floodplains, improving groundwater storage and natural fluvial processes in these headwater tributaries will contribute to a more normative flow regime in the mainstem Teanaway, will improve stream base flows, help moderate flood peaks, restore the density and species composition of riparian vegetation, increase pool habitat and cool water refugia during periods of high temperature, provide suitable habitat for beaver colonization, help stabilize channel and bank erosion, build up and reconnect the floodplain, increase water storage capacity across the floodplain, filter and store sediment inputs, and provide some overhead cover and shading on the stream. The proposed work directly implements the goals and objectives of the Teanaway Community Forest Management Plan, and the intent of restoration elements in the Yakima Basin Integrated Plan, as well as species recovery plans.

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. [help]

The project is located in Kittitas County in central Washington State on the Teanaway Community Forest. Restoration work will occur on eight tributary streams: Indian Creek, Middle Creek, Dickie Creek, Jungle Creek, Rye Creek, Lick Creek, Carlson Creek, and First Creek (see Sheets 3 – 11 in the 60% Design document). All streams, except First Creek are tributaries to the North Fork (NF) of the Teanaway River. First Creek is a tributary to Swauk Creek.

The project and project access is located within the following Township, Range, and Sections:
Indian Creek: Township 21, Range 16, sections 9, 10, 15, 16 (access only), 20, and 21.
Middle Creek: Township 21, Range 16, sections 21 and 22.
Dickie Creek: Township 21, Range 16, sections 28 and 29.
Jungle Creek: Township 21, Range 16, sections 5 and 6.

Rye Creek: Township 21, Range 16, sections 8, 17.
Lick Creek: Township 21, Range 15, section 25; and Township 21, Range 16, section 30.
Carlson Creek: Township 20, Range 15, sections 1 and 12.
First Creek: Township 20, Range 17, section 22.

The access road into the Teanaway Community Forest is the Teanaway Road off of SR 970 and First Creek Road off of SR 97. Access roads into each tributary watershed and staging areas, wood installation sites and intensities and floodplain wood placement areas are detailed in the 60% Design document.

B. ENVIRONMENTAL ELEMENTS [help]

1. Earth [help]

a. General description of the site: [help]
(circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____
The topography along the 8 tributary streams is generally hilly with some steep slopes and adjacent, flat meadow areas.

b. What is the steepest slope on the site (approximate percent slope)? [help]
Sloped topography is generally found within the Ordinary High Water Mark (OHWM) of the tributary streams which are often incised due to past land use activities (approximate slope = 90%). Access roads, approaches and work areas are generally of much lower slope (<30%).

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. [help]
The Teanaway series of soils consists of very deep, moderately well drained soils formed in loess over glacial till with a minor influnce of volcanic ash in the surface. Teanaway soils are on terraces, terrace escarpments and foothills[SW1]. Slopes are 0 to 50 percent. A query of soil maps (NRCS, 2012) identified the following dominant soil types within the project area: 139-Nard ashy loam (0-3% slope); 144-Nard ashy loam (5-25% slope); 146-Nard ashy loam (45-65% slope); 160-Cumulic Haploxerolls (0-3% slope); and 164-Nard ashy loam (25-45% slope).

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]
Soils in the wood gathering area appear relatively stable. Soils within the 8 tributary streams have vertical banks in many locations, and are experiencing accelerated erosion at higher flows. There are areas of erosion where the creeks have removed the toe of the bank.

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. [help]

Dry ditches within the elevated floodplain will be filled with woody material to obtain more natural floodwater distribution within the floodplain. Along some access roads, regrading recently installed water bars may be necessary in order to provide temporary access. The water bars and road contours will be rebuilt after restoration work is complete. Less than 50 cubic yards of earthen fill may be graded in historic ditches to reestablish the natural grade in order to restore naturally diffuse flow paths.

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

Yes, but limited. Some surface disturbance and associated erosion from gathering and transporting wood may occur but it is unlikely. The project aim is to restore floodplains, and when this occurs water will be diverted more readily onto those floodplains, so wood will also be placed on these surfaces to intercept water, spread it out and thus reduce erosion likelihood.

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

There are no impervious surfaces associated with this project.

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

Logs will be either lifted with a crane or excavator, or if necessary skidded to the project site with the leading end of the logs suspended to minimize earth disturbance to the extent possible. Logs will be placed instream either with hand tools or by full suspension using a crane or excavator boom and grapple to prevent bank and bed disturbance. This project is designed to reduce existing erosion occurring within the incised channel and floodplain.

Applicable Best Management Practices (BMPs) such as covering exposed erodible soils with an organic mulch/straw and replanting disturbed areas with native vegetation will be employed as necessary. In addition, erosion control BMPs will be implemented on all roads and deliverable spoils during the project to limit and prevent road-related erosion or mass wasting. Storm patrols on active roads are part of this maintenance program. As mentioned previously, erosion control BMPs will be employed to prevent or control erosion in uplands, the floodplain, and during placement of trees instream (for instance, limiting removal of existing vegetation, limiting turning and maneuvering of equipment, building temporary access on stable slopes, not working in the wet, applying weed-free straw, brush or logs to prevent erosion etc. Please see 60% design materials for additional details).

The Biologists managing the project will assure that staging areas are located in areas previously disturbed (such as the Indian Cr. staging area – flattened, rocked, not vegetated) to avoid impacts to existing habitat when available. In addition, Biologists will work with Conservation labor crews to place slash, and mulch for erosion control, and reseed, and build sediment trapping waddles or other techniques to minimize erosion.

Ground disturbance is not expected to be significant because wood gathering will be

conducted with the leading end of logs suspended to prevent plowing of earth, wherever possible. Trees will be placed instream using hand tools or with full suspension using a crane or excavator to avoid dragging trees through streams. Heavy equipment will operate from stable locations along the streambank but generally will not operate within the stream channel.

Any planned crossings/fordings of the channel must be previously flagged by the WDFW Area Habitat Biologist. The HPA for the project will approve any ford locations or construction requirements, if fords are necessary.

2. Air [help]

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. [help]

It is expected that machines used to bring in crews, equipment, plants, and bank stabilization supplies will release CO^2 emissions into the air; however the levels would be minimal.

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

None are expected.

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

The following is a brief list of expected BMPs that will be implemented by the contractor:

- Avoid clearing vegetation and minimizing earth disturbance
- Use water to wet down dry, exposed soils (unlikely due to damp conditions during fall/winter)
- Wash vehicles when necessary to avoid transferring soil materials, weeds, or contaminants to roads and/or other locations
- Vehicles/pumps/equipment, etc. will be turned off when not in use
- Apply slash and/or mulch/straw on loose, exposed soils
- Dust will be controlled through BMPs to avoid undo wind latent sediment.
- Replant disturbed areas with native vegetation in consultation with WDFW staff.

3. **Water** [help]

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. [help]

Yes. Wood/trees will be placed in and across 8 fish-bearing tributary streams, and on their floodplains (Indian Creek, Middle Creek, Dickie Creek, Jungle Creek, Rye Creek, Lick Creek, Carlson Creek and First Creek), the first seven streams are tributaries to the NF and WF Teanaway River (shorelines of the State), and First Creek is a tributary to Swauk Creek. The Teanaway and Swauk Creek are tributaries to the Yakima River,

which flows into the Columbia River. In addition, there are intermittent streams and wetlands within the proposed project area, which will be avoided during installation, and enhanced after project completion due to restored hydrology and natural process.

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. [help]

Yes. The project proposed is intended to restore floodplain function and groundwater storage capacity within the eight tributary streams and their floodplains. A Hydraulic Project Approval (HPA) will be obtained from WDFW Area Habitat Biologist, prior to the projects implementation for work in and around the streams. Trees will be placed directly in or across the streams, and on the floodplain following recommendations found in WDFWs Stream Habitat Restoration Guidelines, 2012. These trees will include large key pieces that will be expected to remain stable at all flow conditions. Vertical piles may also be driven at some locations, if required, to provide necessary added stability for large wood, especially where riparian vegetation is limited. YN fish habitat biologists, will determine the exact location of wood in the field, based on site conditions. The Channel Migration Zone (CMZ) Assessment completed by the YN indicated some creeks have an Avulsion Hazard Area and have the potential for channel migration across the valley floor to spread and dissipate flood energy. Restoration materials will be thinned from overstocked upland forests on state owned public lands (LT Murray Wildlife Area) to promote fire resiliency and forest health (Forest Practices Application/Notification # 2705900). Please see plans: "Teanaway Community Forest Aquatic Restoration Project 60% Design Report", and the Final Teanaway Community Forest Plan: http://file.dnr.wa.gov/publications/em_tcf_managementplan.pdf. For more information. In addition, some fill material consisting of gravel, rock, dirt, and/or trees may be temporarily graded/placed in waterbars on roads to allow temporary access of large flatbed and/or logging trucks. This fill will be removed/reshaped upon completion of the project. Rye Creek and Jungle Creek are tributaries where this activity is most likely to occur.

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. [help]

Less than 50 cubic yards of fill material may be graded into artificial ditches in order to increase groundwater recharge and to reestablish natural floodplain topography and flood flow distribution. The source of this fill will be from existing man-made non-functinal berms or fill on the floodplain or other local material.

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

No.

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

Yes. This is a groundwater storage/floodplain restoration project and occurs in the geomorphic floodplains of the project streams; however, no regulatory floodplains (FEMA

100-year) have been delineated in the project area. All wood structures will be placed in the stream or within geomorphic floodplain of the streams to restore floodplain function. These tributaries are not gauged; therefore, delineating an accurate floodplain without a hydrologic record cannot currently be completed. There is a stream gauge near the mouth of Indian Creek, but the period of record is too short (~ 2 years, and only spring to fall) to have any level of confidence in predicting the magnitude of a 100-year flood recurrence.

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. [help]

It is anticipated that restoring groundwater storage capacity and placing wood structures will reduce discharge of eroded materials into the streams identified for restoration, over time, as energy and shear forces within the incised stream channel will be reduced; there may be minimal and temporary waste water generated from this project; a minimal amount and very short term increase in turbidity may result from surface disturbance associated with placing wood and walking in streams.

Any discharge from cleaning equipment or reducing/controlling upland erosion will have proper BMP's associated in order to prevent discharge to surface waters. Equipment will be staged in upland areas that do not slope toward surface waters. Trees, piles, or large wood will all be placed using full suspension (no dragging or plowing of wood within the streambed or banks) or by hand using hand-held equipment.

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. [help]

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. [help]

There is expected to be no waste material produced by this project.

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. [help]

It is possible that the work areas that are disturbed will have some limited runoff, but we will apply proper BMP's in order to prevent or mitigate the amount of this runoff. This project is designed to reduce shear and erosive velocities within the stream channel, including dissipating stormwater

from runoff events. By reconnecting floodplains, floodwater and sediment will be deposited on upland areas and allowed to soak into the floodplain or filter out.

In addition, ground disturbance will be minimal and there will be no excavation or impervious surfaces that might impact runoff and/or stormwater management. Log and trees will be transported either fully suspended, or with the leading ends of the trees suspended to preclude plowing earth. Trees and logs will be placed by hand or with equipment using full suspension with an excavator or crane. Exposed soils from surface disturbance from equipment use with delivery potential will be covered with slash/mulch to provide short-term erosion control and will be seeded with natural grass mixes to provide long-term erosion control. Grass seed will be applied, where necessary, in the season that facilitates the highest success of establishment.

Moreover, runoff and direct delivery of sediment from existing dry ditches within the floodplain will be decreased by placing wood and small slash strategically to delay and retain runoff and increase natural distribution and infiltration surface water, thus decreasing and dispersing runoff. Deployment of BMP's will further reduce the likelihood that waste materials from equipment, supplies, crew, and soil disturbance will enter the creek bed. Please see the TCF Aquatic Restoration Project Plan for a detailed list of BMP's that describe site layout and flagging, temporary road and access, stream crossing details, staging, storage and stockpile sites, equipment operation and maintenance, site preparation, closeout, and Industrial Fire Precaution Levels (IFPL) considerations.

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

It is unlikely that waste materials would enter streams identified for restoration. Equipment will be staged in upland areas that do not slope toward surface waters and trees and wood will be placed using full suspension to preclude plowing of the streambed and banks. There is a chance that petroleum products could unexpectedly leak from chainsaws or vehicles from ruptured hydraulic lines etc., an Ecology approved spill kit will be on-site. Refueling of any/all equipment will occur at a minimum of 150 feet away from the OHWM of the tributary streams.

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

One purpose of the project proposal is to restore more normative drainage patterns within the project floodplains which have been altered by a century of logging practices and road/railroad construction, ditching and berm construction. Old drainage ditches within the floodplain will have large wood/trees and slash placed in and around them to reduce erosion potential and spread and dissipate flood waters and thus energy across the floodplain, as well as infiltrate overland surface and flood flow. The result will be improved floodplain re-charge, reduced runoff, lower peak flows downstream, and cooler base flows as the hydrograph reaches summer low flows. Thus, drainage patterns will be restored to an improved condition reducing delivery of sediment to surface water.

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

The project is planned to enhance habitat, and best management practices will be applied to eliminate negative impacts to water quality. Erosion control measures to be applied include:

- Log and trees will be transported to the site from upland areas with the leading ends of the trees suspended above ground to preclude plowing/disturbing earth.
- Trees and logs will be placed by hand held equipment or with an excavator or crane using a grapple and full suspension.
- Slash will be added to existing ditches and to wood treatment areas to help naturally capture native organic material (leaves, branches, vegetation) in order to reduce sediment entrainment and to rebuild floodplains.
- Spinning and turning of equipment near the stream or other wet or muddy areas will be avoided when placing trees/wood/pile.
- Equipment placing wood/trees in the stream will operate on firm or frozen soils out of muddy/wet or wetland areas.
- Exposed soils with delivery potential will be covered with slash/mulch to provide short-term erosion control and will be seeded with native grass mixes to provide long-term erosion control.
- large wood will be strategically placed to restore normative flood flow distribution, retention, and infiltration, thereby improving water quality and quantity.

4. **Plants** [help]

a. Check the types of vegetation found on the site: [help]

_X__deciduous tree: alder, maple, aspen, other (cottonwood)
_X__evergreen tree: fir, cedar, pine, other
_X__shrubs
_X__grass
_X__pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
_X__ 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? [help]

It is anticipated that minimal, if any, native vegetation will be removed or altered at the restoration sites. It is possible that native and non-native grasses and forbs would be disturbed by equipment operation, but it is expected this will be minimal, and if significant areas are disturbed, they will be reseeded with native species and protected from erosion. No vegetation will be grubbed or cleared within the riparian areas or floodplain. Equipment will walk around or over shrubs and brush to access the stream. This vegetation is expected to spring back and recover quickly.

Exposed soils within skid routes will be mulched then reseeded in late winter or early spring and monitored periodically to ensure adequate survival. In addition, staff will flag skid routes and staging areas to avoid adverse impacts to ground cover vegetation.

Large woody material used for restoration work will be strategically selected from overstocked, unhealthy, and fire prone forest stands within Taneum Creek or the Teanaway Community Forest pre-commercial thinning/shaded fuel breaks project (8" and smaller dbh trees) in collaboration with DNR and WDFW.

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

Ute ladies' tresses are federally listed as threatened, but are not known to be present in the Teanaway or Swauk watershed. Wenatchee mountain checker mallow is federally and state listed as endangered, but is not known to be present in the Teanaway or Swauk watershed.

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

The addition of large wood to the creek channel will restore more normative floodplain and alluvial processes, thereby enhancing the wetland/riparian buffer around treated streams. Currently disturbed and/or un-vegetated areas are expected to be recolonized by native woody vegetation due to a higher groundwater table as a result of this project. Best Management Practices (BMPs) such as, covering/mulching loose soil, and replanting disturbed areas with native vegetation will be deployed as necessary. WDFW and the Yakama Nation Fisheries, in coordination with DNR will restore any disturbed ground with native seed/plants appropriate for the area.

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

There are many noxious weeds and invasive plant species in Kittitas County that occur in the Teanaway Community Forest, including Sulfur cinquefoil, bulbous bluegrass, diffuse knapweed, and Russian knapweed. There are many more that potentially occur in the TCF and the Noxious Weed Control Board of Kittitas County lists them in the attached document "weed-list.pdf".

5. **Animals** [help]

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. [help]

birds: hawk, heron, eagle, songbirds, other: owls
mammals: deer, bear, elk, beaver, other: cougar, small mammals
fish: bass, salmon, trout, herring, shellfish, other native minnows, sculpin, and sucker

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

Bull trout-fish-*Federally listed as Threatened, State listed as Candidate*

MCR Steelhead-fish- *Federally listed as Threatened, State listed as Candidate*

Northern leopard frog-amphibian-*State listed as Endangered*

Bald eagle-bird-*State listed as Threatened*

Northern Spotted Owl-bird-*Federally listed as Threatened, State listed as Endangered*

Western gray squirrel-mammal-*State listed as Threatened*

Fisher-mammal- State listed as *Endangered*

Gray Wolf-mammal-*Federally listed as Endangered, State listed as Endangered*

Grizzly Bear-mammal-*Federally listed as Threatened, State listed as Endangered*

Canada Lynx-mammal-*Federally listed as Threatened, State listed as Threatened*

All elements of the project have been designed to minimize impacts to any threatened or endangered species known to be on or near the site. In addition, the YN will coordinate and consult with all resource agencies prior to implementation to avoid impacts. HPA & timing windown for in-water work will minimize impacts to fish life.

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

Yes. The Teanaway supports migratory birds and mammals that utilize the watershed for seasonal habitat (stop-over habitat, breeding, foraging, migrating). The surrounding public land ownership provides adequate habitat for a variety of animals throughout the year. Steelhead and chinook migrate to and from spawning and rearing habitat within the streams undergoing restoration. Elk and deer migrate across the landscape.

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

As proposed, the project will increase the amount of instream wood and will also increase the extent and diversity of riparian habitat that is present along the streambanks, providing additional cover for many songbirds and other wildlife species. The increased pool frequency and channel complexity associated with wood placement will greatly enhance the instream habitat for threatened salmonids such as steelhead and bull trout. Beaver use and habitat is expected to improve as a result of this project. The project is designed as a habitat enhancement project and no long-term negative impacts to wildlife are anticipated.

Wood gathering techniques for restoration materials were developed to reduce disturbance to upland wildlife habitats. As mentioned previously, equipment routes will be flagged by project biologists to protect sensitive riparian vegetation and upland habitats, as necessary. The wood-gathering and installation portions of this project will occur outside of the Northern Spotted Owl and Northern Goshawk wood-gathering buffer distances (Northern Spotted Owl restrictions = 0.7 mile radius from the nest site for active forest practice cutting work and 0.25 mile buffer for equipment operations on the installation of wood; and 0.5 mile buffer around Northern Goshawk nests). An analysis of the proposed project areas compared to buffers around nest sites indicates over 90 percent of the proposed work is outside any buffer area. WDFW and USFS Biologists will be surveying Northern Spotted

Owl sites in the Teanaway for occupancy, and will coordinate with DNR regarding updated nesting locations located during surveys (no sites have been active in over 5 years around the project locations), in order to ensure no disturbance occurs.

There are regular recorded wolf occurrences within the WDFW wolf database for the Teanaway Pack – the occurrences (travel routes) overlap in places with the proposed project areas. The project areas are relatively small descreet areas within a very large home range, and the project sites are away from the recent den site(s). WDFW will check the latest radio-telemetry locations to determine if the active project sites are within a sensitive distance to the current denning location during the breeding season in each year of the project. Later in the summer, the wolves become more mobile and move away from the den, and utilize rendezvous sites, and have the ability to move away from disturbance. The project location drainages do not have either historic or current denning sites. Additionally, the proposed work sites are many miles from historic den sites. If in future years, a wolf den occurs near the project sites, WDFW will work in consultation with USFWS to ensure impacts are avoided and/or minimized.

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

Brook trout is an invasive fish species known to occur in the Teanaway Community Forest. There are many other potential invasive animal species in Kittitas County that may occur in the Teanaway Community Forest and the aquatic possibilities are listed at: http://nas.er.usgs.gov/queries/SpeciesList.aspx?group=&state=WA&Sortby=3

6. **Energy and Natural Resources** [help]

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. [help]

The completed project will require no man-made energy input. Engine oil and fuel for transport vehicles, utility vehicles, and tractors will be required to implement the project.

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

No.

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: [help]

Upon completion, there will be no consumptive uses of energy or natural resources. Some of the trees will be placed using manual winches and hand-held pulleys. Diesel utility tractors are fueled with a combination of diesel and locally-produced biodiesel.

7. **Environmental Health** [help]

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. [help]

There is potential that equipment could leak oil, gas, or other toxic fluids into the tributary stream corridors or within upland staging areas. Crews will be required to clean equipment (gas powered augers, etc.) prior to use to reduce the likelihood that pollutants from entering the corridor. Additionally, spill containment and clean up materials will be on site to address any issues.

There is a very slight risk of fire caused by use of the chainsaws to fall the trees and in operating heavy equipment in the tree gathering locations, however YN contractors will follow all Forest Practices regulations and fire-precaution regulations. We will follow the appropriate Industrial Fire Precaution Level regulations for both harvest and installation. The chainsaws also pose a potential risk of a petroleum spill during refueling or 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. DNR and WDFW will coordinate to assure compliant fire suppression methodologies are utilized and all fire safety protocols are in place prior to beginning the project. This project requires very little use of materials that would cause any environmental health hazards; there is no hazardous waste production that will occur.

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

There are no known contamination at the site from present or past uses. Due to the historical logging truck and railroad access and present recreational vehicle access, it is possible that vehicular fluids have contaminated small portions of the site.

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. [help]

There are no known existing hazardous chemicals or conditions that might affect the project.

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. [help]

Fluids required to operate vehicles and machinery may be stored on or inside vehicles during the project's development. Refueling of any/all equipment will occur at a minimum of 150 feet away from the OHWM of the tributary streams. Spill containment and clean up materials will be on site to address any issues.

4) Describe special emergency services that might be required. [help]

Due to the nature of the activity, there is a chance that emergency personnel such as EMT, fire fighters, and sheriff's deputies may need to respond to the project area during implementation.

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

Equipment will be cleaned and checked for leaks prior to use. All crews will be required to have a spill kit on site. All equipment will be kept in good working condition to reduce the risks of a chemical spill or sparks causing a fire.

b. Noise [help]

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

No sources of noise that could affect the project exist in the project area other than traffic from existing roads.

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. [help]

The short-term noise associated with this project will include use of small diesel tractors, heavy equipment, and 2-5 vehicles daily bringing work crews or materials to the project sites during implementation (no more than 3 months per tributary). Refer to the attached plan for site specific amounts of materials to be hauled to each site with a log and or dump truck. Noise from placing wood into the channel will be minor, consisting of breaking branches, combustion engines, and crewmembers communicating over a distance up to 200 meters. There will be no long-term increase in noise due to this project. Noise levels are expected to be minimal, short-term, and within the hours of 6am-7pm.

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

Noise impacts to Northern Spotted Owl will be avoided by avoiding wood placement work within 0.25 miles of historical or known northern spotted owl circles between March 1st and August 31st. Noise impacts to Northern Goshawk will be avoided by avoiding wood-placement work within 0.5 miles of historical or known northern goshawk circles between March 1st and September 30th. The Yakama Nation, in coordination with DNR and WDFW will reduce noise impacts to other wildlife by avoiding working near important breeding areas during breeding and nesting seasons and turning off equipment when not in use.

8. **Land and Shoreline Use** [help]

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. [help]

The project site is located on DNR Teanaway Community Forest Lands and the floodplain meadows and uplands are leased for seasonal livestock grazing, while the area in general is managed for timber.

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? [help]

The floodplain meadows and uplands in the area are leased for seasonal livestock grazing.

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: [help]

The proposal will not affect timber harvest business operations as the project does not prevent access to timber plots. The proposal will not affect grazing leases; however, construction of a fence by DNR to protect key areas within Indian Creek will exclude cattle (via a separate project). There are no plans for fences in other tributaries at this time.

c. Describe any structures on the site. [help]

There are no structures on the site other than some remnant fencing

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

No.

e. What is the current zoning classification of the site? [help]

"Commercial Forest" designations include: Indian Creek, Jungle Creek, Rye Creek, Middle Creek, Dickey Creek, portions of Lick Creek, Carlson Creek, and portions of First Creek. Zoning for "Forest and Range" include portions of Lick Creek, and portions of First Creek.

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

The current comprehensive plan designation for the site(s) is *Commercial Forest.*

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

Kittitas County's Shoreline Master Program designates the Teanaway River as "Rural Conservancy", however, the project streams are not designated.

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

Streams and associated wetlands are critical areas . However, the tributary watersheds support a diversity of wildlife and plant species. With proposed floodplain and instream restoration proposed the function and values are expected to increase exponentially.

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

None.

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

None.

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

No measures are proposed as no displacement impacts are expected.

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

This project is consistent with DNR Forest Practice Rules. DNR is working collaboratively with the YN and WDFW to support the project. The project specific actions will be implemented in a manner that is consistent with the TCF Management Plan, and WDFW's Deed of Habitat Restoration and Working Lands Easement (# 58-090537); and is consistent with the provision of the YIP. The restoration project proposals are consistent with existing Kittitas County zoning.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any: [help]

The proposal is compatible with timber management in the area as the affected area will not prevent access to forest lands or adverse impact commercial forest practice activities. While the proposal may impact grazing opportunity in very small areas of each tributary (<1 acre), it is considered compatible as a way to balance the detrimental impact of grazing on riparian function.

9. **Housing** [help]

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

None.

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

None.

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

No measures required as no impacts to housing are expected.

10. **Aesthetics** [help]

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

The tallest structure will be the floodplain wood that will be applied to floodplain surfaces up to a point that is approximately 6 feet above summer base flow water surface levels (refer to attached plan, "Teanaway Community Forest Aquatic Restoration Project 60% Design Report", for specific extents).

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

No known views will be altered or obstructed.

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

This project is expected to increase aesthetics of the area, expedite the natural processes of wood recruitment, and restore groundwater storage capacity; therefore measures to reduce or control aesthetic impacts are not proposed.

11. **Light and Glare** [help]

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

There may be some glare from construction equipment during daylight hours.

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

No. Construction equipment will be removed from the site one it is completed.

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

None.

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

None. Glare from construction vehicles during daylight hours will be temporary, lasting no more than 3 months in each tributary.

12. **Recreation** [help]

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]

This project is located on DNR community forest trust lands that are heavily used throughout most of the year. Hunters, anglers, hikers, birdwatchers, mountain bikers, and campers use the Teanaway Community Forest and the Forest Service property upstream of the proposed project area throughout the year. In the long term fish production potential and resulting recreational opportunity will be increased.

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

The project will have no long-term impact on the existing recreational users because the work done in a particular tributary is not expected to last more than three months, likely less. For the time that heavy machinery and personnel are working in a particular tributary, some recreational users may be temporarily displaced due to noise, aesthetics, safety restrictions, or other project annoyances.

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

Displaced recreationists, when observed or if they inquire of project personnel, will be educated about the other recreational opportunities nearby, the project's timeline, and the environmental benefits of the project.

13. **Historic and cultural preservation** [help]

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 located on or near the site? If so, specifically describe. [help]

The general area is one of high cultural sensitivity for evidence of human activity in both the precontact and historic-eras.

There is no record of any recent cultural surveys of the entire Area of Potential Effect (APE). The following surveys within or near the proposed APE are on record: portions of the Indian, Middle, and Dickey creeks (Powell 1994), portions of Indian Creek (Shellenberger and Kiona 2014); at the upstream limits of the project at Jungle Creek (Madden 2012); and in the Rye Creek watershed near Camp Lake (Stilson 2005). These previous surveys have shown there to be a number of cultural or historical sites in the area, however these previous surveys do not cover the proposed APE for this project.

Therefore, there is insufficient evidence upon which to base a finding of project effects at this time. However, to address this lack, the APE will be surveyed by a professional archaeologist; the resulting report will be used to inform project design.

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. [help]

The general area is one of high cultural sensitivity for evidence of human activity in both the precontact and historic-eras.

There is no record of any recent cultural surveys of the entire Area of Potential Effect (APE). The following surveys within or near the proposed APE are on record: portions of the Indian, Middle, and Dickey creeks (Powell 1994), portions of Indian Creek (Shellenberger and Kiona 2014); at the upstream limits of the project at Jungle Creek (Madden 2012); and in the Rye Creek watershed near Camp Lake (Stilson 2005). These previous surveys have shown there to be a number of cultural or historical sites in the area, however these previous surveys do not cover the proposed APE for this project.

Therefore, there is insufficient evidence upon which to base a finding of project effects at this time. However, to address this lack, the APE will be surveyed by a professional archaeologist; the resulting report will be used to inform project design.

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. [help]

The BPA, as the federal lead for this project, initiated Section 106 consultation with DAHP and the affected tribe(s). As a result of consultation and research in DAHP's WISAARD database, the BPA determined that insufficient evidence was available to reach a finding about the potential for the project to affect historic properties. The BPA contracted with a professional archaeologist to conduct research designed to address this lack of information. The results of this research will be used to inform project design and the project's Inadvertent Discovery and Cultural Resources Protection plans. The

research will include a review of archival records, historic maps and records, tribal consultation, and field survey.

The Scope of Work for the Cultural Review Contract will be reviewed by YN, WDFW, DNR and BPA Cultural staff prior to it being let, to ensure it meets Department of Archaeology and Historical Preservation (DAHP), and National Historic Preservation Act (NHPA) requirements.

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. [help]

The BPA contracted with a professional archaeologist to conduct research designed to address this lack of information. The survey is currently on-going. The results of this research will be used to inform project design and the project's Inadvertent Discovery and Cultural Resources Protection plans. If research and consultation indicate it is needed, selected project efforts will be monitored by archaeologists to further reduce the potential for impacts to cultural and archaeological resources.

Areas determined to be "culturally sensitive" will be buffered and set off as "no entry zones" following the archaeological survey and before project efforts are initiated. Access to these areas will be limited; those limits will be described in the Cultural Resource Protection Plan.

During the project, implementing staff will work directly with YN, DAHP, DNR, and WDFW archaeologists and cultural staff to ensure impacts to any known cultural resources are avoided. In the event of the discovery of unanticipated archaeological or cultural materials, ground disturbing activities will be halted and the Inadvertent Discovery Plan will be enacted. The YIN will be responsible for any subsequent site survey and recordation. The YIN, DNR, DFW, BPA, and DAHP will work together to develop a site protection plan.

Following project completion, the YIN will be responsible for reporting on the archaeological ad cultural monitoring effort, if any was determined necessary, and will provide documentation of monitoring efforts to DNR, DFW, BPA, and DAHP.

14. **Transportation** [help]

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. [help]

Access is via the paved County road up the Teanaway valley and then up the NF Teanaway for 6 of the 8 sites. The WF Teanaway County road, to access the Carlson Canyon sites. The First Creek site will be accessed via Highway 97, then gated TCF forest roads.

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? [help]

No. The nearest transit stop is approximately 21 miles away and located Cle Elum, WA.

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

The proposed project will not create or eliminate any parking spaces.

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). [help]

No.

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

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? [help]

There may be several vehicular trips per year (not day) to each tributary for monitoring and educational outreach.

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. [help]

No.

h. Proposed measures to reduce or control transportation impacts, if any: [help]

No impacts are expected.

15. **Public Services** [help]

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. [help]

No.

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

No impacts to public services are expected.

16. **Utilities** [help]

a. Circle utilities currently available at the site: [help]
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

No utilities are currently available.

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. [help]

No utilities are proposed for the project.

C. Signature [help]

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 __William Meyer_____

Position and Agency/Organization __Habitat Biologist, WDFW_____

Date Submitted: _7/14/2016_____