

# **SEPA ENVIRONMENTAL CHECKLIST**

UPDATED 2014

## ***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:*** [\[help\]](#)

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**

1. Name of proposed project, if applicable: **Methow Wildlife Area Post-Wildfire Forest Restoration**
2. Name of applicant: **Washington Department of Fish and Wildlife (WDFW)**
3. Address and phone number of applicant and contact person:

**Contact: Sherry Furnari,  
Address: 520 Bear Creek Road. Winthrop, WA 98862  
Phone (509-996-2559)**

4. Date checklist prepared: **10/15/2014**

5. Agency requesting checklist: **Washington Department of Fish and Wildlife (WDFW)**

6. Proposed timing or schedule (including phasing, if applicable):  
**12/1/2014 - 8/1/2015 for timber harvest.**

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

- A. Fuels Management: debris from treatment (limbs, tops, etc.) will be scattered in unit. Any prescribed burning carried out in association with the project will be conducted according to WDFW management requirements.**
- B. Regeneration Method: Due to healthy remaining stock of green trees in and near the units post-fire, natural regeneration will occur. If regeneration does not occur in desired density, sites will be replanted with Ponderosa Pine seedlings.**
- C. Re-close or abandon all temporarily opened roads after project completion (including burns).**

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

- WDFW Burn Plan for Prescribed Burning**
- Section 107 Consultation with the USFWS pertaining to potential effects on threatened and endangered species.**
- WDFW Priority Species and Habitat Management Recommendations**
- GIS-generated WAU maps showing: soil type, erosion potential, soil stability, and hydrologic maturity from NRCS Okanogan County Soil Survey**

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.

**No.**

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

- A. DNR Forest Practice Application (FPA).**
- B. USDI-USFWS/USDC-NOAA Section 7 Consultation.**
- C. State and tribal cultural/ archaeological survey and protection plan approval.**
- E. FEMA approval and support for felling of hazard trees**

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.)

The Methow Post-fire Forest Management Project is located on the Methow Wildlife Area. The project has two focuses for treatment. The first area was part of the Methow Forest Habitat Rehabilitation Project, 120 acres of mechanical thinning that burned in mixed severities during the Carlton Complex Fire. Post-fire the project units have retained survivor trees in need of release from the overstocked mid-story. The second focus is for areas near roadsides, campgrounds, etc. where burned trees pose a possible hazard to hit targets, and therefore it is required by Labor and Industries standards, as well as by a concern for the safety of personnel and the public, to fell hazard trees. Approximately 450 acres need possible hazard tree assessment and felling, 80-100 acres of which overlays the rehabilitation project acreage.

- -To the greatest degree possible operations will be conducted on frozen ground with a snowpack to minimize soil compaction and surface disturbance.
- -No new roads will be constructed, but some closed/ abandoned roads requiring minimal work will be re-opened and used for the duration of the project.
- -Areas disturbed by the project will be reseeded with native grasses and shrubs.

#### *Rehabilitation Project Unit Recovery:*

In areas where using ground equipment is feasible (<35% slopes), the previously planned forest restoration project will proceed with an adjusted prescription to:

- -Favor better survivorship of remaining trees and snag retention in historic densities
- -Protect surviving trees by reducing the severity of bark beetle infestation
- -Protect surviving trees and regeneration by reducing long term fuel loading,
- -Release surviving trees from less vigorous competitors
- -Release aspen stands from live overstory pine trees

The project will use thinning prescriptions based on the predetermined ecological site potential. Our sampling indicates that from 25-42% of the trees in these stands were previously dead as a result of pine beetle, and the remainder of the trees (including relic old-growth) are at risk of further beetle infestation that follows severe fire. Stand reconstruction sampling indicates that historic Ponderosa pine density in the project area was approximately 11- 30 trees per acre. This proposal will use mechanical or hand felling to reduce the density of small diameter Ponderosa pine stands from their current 400-1,500 trees per acre to 30-50 trees per acre where moderate burning has occurred and 15-20 snags per acre where severe burning has occurred (no survivors). The green leave-tree density assumes a 30-50% post-harvest mortality due to insect damage, root rot, and fire damage, which will ultimately leave 22-26 trees per acre. At present among the survivor trees there are essentially two cohorts of Ponderosa pine trees, pre-fire suppression (> 125 yrs., i.e. old growth) and post-fire suppression (70-90 yrs). We will retain 100% of the pre-fire suppression trees and snags unless they pose a hazard, and enough of the largest of the post-fire suppression trees to meet our target density, including snags. Prescribed fire is anticipated 5-10 years after thinning has occurred to reduce fuel loading caused by logging, hazard tree felling and natural transition of the remaining snags to downed woody fuel.

#### *Hazard Tree Management:*

In areas of extended use; roadsides, campgrounds, etc., the Carlton Complex has fire-killed and injured trees that now pose a hazard to personnel and the public. Trees in this acreage therefore must be assessed and felled if they meet hazard tree qualifications. The final decision on cutting a leave tree will be left to a certified hazard tree assessor. Hazard trees will be thinned out by a ground harvesting equipment if feasible or hand felling. Only hand felling will occur within riparian buffers. On the hazard tree acreage that is located on steep or rocky slopes (mostly roadside) where removal of trees by a cable skidder is not feasible, trees will be felled and left according to prescription.

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.

**The area is approximately three miles east of Winthrop in Okanogan County on the Methow Wildlife Area (see project map on page 6). The proposal lies within portions of:**  
**Township 35 North, Range 22 East, Section 32**  
**Township 34 North, Range 22 East, Sections 4, 6, 8, 9, 15, 16, 17, 20, 21, 23, 24, 26, 35**  
**Township 33 North, Range 23 East, Sections 5, 7, 8, 9, 30**  
**Township 32 North, Range 21 East, Section 31**  
**Township 31 North, Range 22 East, Section 5**  
**; Willamette Meridian.**

## **B. ENVIRONMENTAL ELEMENTS**

### **1. Earth**

a. General description of the site.

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

b. What is the steepest slope on the site (approximate percent slope)? **Less than 10% of restoration units is over 35%, where ground logging equipment would be used. Hazard trees areas, where trees will be felled along the contour and left cover a wide range of slopes along roadsides and near campgrounds.**

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.

**Approximately 98% of the project area is:**

<b>Cashmere fine sandy loam, 15 to 25 percent slopes</b>	<b>33%</b>
<b>Kartar extremely stony sandy loam, 0 to 25 percent slopes</b>	<b>27%</b>
<b>Kartar extremely stony sandy loam, 25 to 65 percent slopes</b>	<b>17%</b>
<b>Lithic Xerochrepts-Kartar complex, 15 to 45 percent slopes</b>	<b>16%</b>
<b>Merkel extremely stony sandy loam, 3 to 25 percent slopes</b>	<b>6%</b>

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. **Yes. Due to lack of vegetative cover as a result of the Carlton Complex Fire (July-August 2014), during a severe storm event on August 21, 2014 substantial erosion occurred throughout the Methow Valley, including the project areas. Sediment washed downslope from adjacent hills was deposited on some of the flatter restoration project areas and on roads. Also, most streams in the vicinity experienced erosion related to the flash flood event. Where hazard trees are felled in riparian areas, they will be felled to limit further erosion and sediment deposition to stabilize riparian zones.**

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.

No filling anticipated.

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

**Erosion could occur on or near roads and landings during hauling operations and in areas where trees are harvested, it is not anticipated due to work being largely scheduled for the winter when deep snow and/or frozen ground is anticipated. Also any equipment use not on roads will be limited to relatively flat (<30%) areas at low risk for erosion or soil impacts. All surface disturbance will be reseeded with native plant types following project activities.**

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? **None.**

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

- **Most work will be conducted from or adjacent to existing roads.**
- **Work is scheduled for winter when deep snow and frozen ground is anticipated.**
- **Limbs and tops will be scattered and left to help stabilize yarding routes and reduce erosion.**
- **Disturbed soils will be seeded with native species to bring back vegetation quickly and increase resistance to weeds.**

## 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

**The proposal will involve vehicle emissions from logging, yarding, and hauling equipment. There should be no significant impact to air quality. The broadcast/ slash burning will adhere to the State of WA's Smoke Management Program.**

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. **None known.**

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

**Ensure equipment operators have safety mufflers for emission control.**

### 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.

#### **All streams flow into Methow River**

##### **Fish Bearing:**

**Cougar Lake  
Cougar Creek  
Bear Creek  
Beaver Creek  
South Fork Beaver Creek  
Frazer Creek  
Libby Creek  
Finley Canyon Lakes**

##### **Non-fish Perennial:**

**Davis Creek  
Bowen Creek  
Johnson Creek**

**+ 7 un-named Non-fish seasonal streams**

**+ approximately 18 possible un-named un-confirmed Non-fish seasonal streams according to WNDR. All streams will be ground-truthed prior to work to confirm seasonal or perennial status according to WDNR standards and have an appropriate RMZ applied.**

- 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.

**Fish bearing streams, lakes, and wetlands have a 200 ft Riparian Management Zone (RMZ) and non-fish perennial streams have a 50 ft RMZ that will exclude any machine entry. Entry in RMZs will only occur to hand-fell trees that are determined to be hazardous and will not be removed. If feller safety is not an issue, trees will be felled with crowns pointed upstream to slow sediment deposition as washouts occur postfire, otherwise they will be felled across the stream banks. No ground equipment is allowed within the RMZs.**

- 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. **None.**
- 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. **No.**

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.**

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 groundwater will be withdrawn and no water will be discharged to groundwater.**

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. **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.

**Spring runoff from snow melt and rainfall runoff could occur on the forest floor, roads and landings. Water will be dispersed back into undisturbed forest areas for natural filtration in vegetation and soil. Runoff intercepted by roads and ditches will be diverted through existing culverts and ditches to forest floor. If extreme events occur, runoff could reach nearby streams.**

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

**Fuel or oil associated with equipment operations, if spilled could enter ground or surface waters. The contract will require equipment to prevent, contain and clean up spills, fuel storage only in approved areas and to notify the sale administrator of any spills.**

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

**No. Roads will be maintained to Forest Practice standards for protecting drainage patterns.**

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

- **Meet or exceed Forest Practice rules.**

- **Riparian buffers**

- **200 feet no entry buffers are required for Type F (Fish bearing) streams (except for hazard tree mitigation).**

- **50 feet no entry buffers are required for Type Np (non-fish perennial) streams (except for hazard tree mitigation).**

- **Hazard trees that must be cut within in riparian buffers will be left on the ground to stabilize soils within and enhance habitat.**

- **Timber fallers will leave limbs and unmerchantable tops scattered to help stabilize vulnerable soils.**
- **Re-vegetate disturbed areas with native seed.**

#### 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?

- **Ponderosa pine and Douglas-fir will be harvested from an estimated 160 acres of ponderosa pine-dominated forest, leaving 20-35 trees per acre according to variable density spacing prescriptions within restoration units.**
- **Hazard trees will be assessed and felled along approximately 12-18 miles of road and adjacent campsites . Debris may be removed if not within established riparian management zones, otherwise it will be felled and left according to prescription to benefit stream stabilization.**

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

**None**

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

**Disturbed areas will be seeding with native grasses.**

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

**Diffuse knapweed, woolly mullien, Saint John's wort, and hound's tongue.**

#### 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. Examples include:

birds: hawk, heron, eagle, songbirds, other:  
mammals: deer, bear, elk, beaver, other:  
fish: bass, salmon, trout, herring, shellfish, other \_\_\_\_\_

**Birds: northern gosawk, bald and golden eagle, songbirds, ruffed and blue grouse, vaux's swift, prarie flacon, woodpeckers.....**

**Mammals: deer, bear, cougar, coyote, bobcat.**

**Fish: rainbow, eastern brook, and cutthroat trout, dolly varden/ bull trout, summer steelhead**

- b. List any threatened and endangered species known to be on or near the site. **Juvenile Chinook Salmon have been detected in Bear Creek. Gray wolves could potentially move through the area. Other species that are present in the general Methow Valley area and surrounding mountains include bull trout, Canada lynx, fisher, grizzly bear, northern spotted owl and steelhead.**
- c. Is the site part of a migration route? If so, explain. **Yes, the general area is used as mule deer migration route and winter range.**
- d. Proposed measures to preserve or enhance wildlife, if any:
- **In restoration units, the project is designed to return forests to their historic structure and density, release post-fire survivors from competition, reduce long term fire hazard, and reduce bark beetle infestation. 2-5 trees per acre of "wildlife trees" that have nesting platforms, cavity nests, etc. will also be left. This will benefit species adapted to open pine forests habitat post-fire.**
  - **Where fires burned severely and safety is not an issue within restoration units, a high density of large snags will be retained (15-20/ acre) to provide habitat for cavity nesters and foragers. Where burned trees present a hazard near roads and campsites, select dead hazard trees will be topped at 10-20 ft. and left to offset loss of large bole snags.**
  - **Trees within the RMZ (Riparian Management Zone) of any stream will not be removed. If feller safety is not an issue, trees will be felled with crowns pointed upstream to slow sediment deposition as washouts occur postfire, otherwise they will be felled across the stream banks. No ground equipment is allowed within the RMZs.**
  - **Tree harvesting outside of hazard tree removal areas will retain large trees (live or dead) to match or exceed the presumed historic tree density.**

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

**None of consequence.**

## **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. **Fuels to operate equipment for cutting, loading and hauling timber and any related road maintenance work.**
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. **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:

**Not applicable.**

#### 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.

**There could be fuel spills when refueling equipment or oil spills while performing equipment maintenance. There is always the risk of fire from equipment operation in the woods, however, most of the area recently burned and the risk of repeat fire is low. There will be a controlled burn of slash produced, and precautions will be taken to consider soil moisture, wind, weather forecasts, etc.**

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.  
**Fuel (gasoline and diesel) and lubricants will be used in conjunction with equipment.**

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

- **DNR fire protection resources will be notified if a wildfire occurs.**
- **Washington State Department of Ecology and WDFW will be notified if any spills occur.**

5) Proposed measures to reduce or control environmental health hazards, if any:  
**Contractors are required to have plans and equipment for.**

- **Spill prevention, containment and countermeasures**
- **The contractor must maintain fire fighting equipment on the job and be in compliance with WDNR fire equipment codes**
- **All equipment will have spark arresters on muddlers. Catch basins under equipment when fueling or doing maintenance.**

#### b. Noise

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

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.

**During harvest activities there will be some noise associated with chainsaws, skidder, loader, and trucks. Typically these would be daylight only and weather dependent. Heavy equipment noise can exceed 100 decibels. No noise will be created after completion of project.**

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

- **Maintain mufflers on equipment.**
- **Workers use ear protection.**

## 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. No, **the site is managed for wildlife habitat and recreation activities. Adjacent properties are managed as working forests and will be unaffected by the project.**

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 has not been used for agriculture, but has a history of intermittent 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: **No.**

c. Describe any structures on the site.

**Campground bathrooms, fire pits, etc.**

d. Will any structures be demolished? If so, what? **No.**

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

**Forest Land**

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

**Maintain as forest land, with emphasis on managing habitat for wildlife and providing recreational opportunities.**

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

**Not applicable.**

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

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

**None.**

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

**None.**

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

**Not applicable.**

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

**Consistent with Methow Wildlife Area Management Plan and WDFW Forest Management Plan; reducing safety hazards and restoring historic tree densities/species composition..**

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

**Not applicable.**

## 9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. **None.**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. **None.**

c. Proposed measures to reduce or control housing impacts, if any: **Not applicable.**

## 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? **Not applicable.**

b. What views in the immediate vicinity would be altered or obstructed?  
**Views will be less obstructed, especially along roads where dead trees are removed.**

c. Proposed measures to reduce or control aesthetic impacts, if any:  
**Tree planting to accelerate reforestation. Reseeding of disturbed areas with native plants.**

## 11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? **Potentially vehicle headlights early in the morning.**

b. Could light or glare from the finished project be a safety hazard or interfere with views?  
**Not applicable.**

c. What existing off-site sources of light or glare may affect your proposal?  
**Not applicable.**

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

Not applicable.

## 12. Recreation

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

**Hunting, fishing, camping, hiking, viewing wildlife, horse riding, mountain biking and cross country skiing.**

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

**Yes. Winter recreation activities would be temporarily displaced during tree felling activities for safety reasons. Prescribed burning would also temporarily displace recreational uses during and for a brief period following the burn in spring or autumn.**

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

**Signs will designate camping areas which are temporarily closed for their safety while operations are in progress. Wildlife area staff can direct recreationists to alternate locations.**

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

**There are several sites which have been recorded within the project. Reports from earlier survey effort (e.g., Baldwin 2008; Neider 2011) indicate that the sites should not be considered eligible. WDFW conducted an additional cultural resources survey in the project to better define the project's potential to affect cultural resources. The survey resulted in the clarification of the extent of previously recorded sites and the identification of several previously unrecorded sites. No precontact era sites were found and no sites potentially eligible for the National or State registers were found.**

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 nearest (recorded) professional studies resulted in the identification of several archaeological sites in the project boundary, none of these could be associated with precontact land use, human burial, or cemeteries. The reports are,**

Baldwin, Garth

2008 *Archaeological Assessment of the Bear Creek Thinning Project*, Okanogan County, Washington. Prepared by Drayton Archaeological Research for Washington State Department of Fish and Wildlife and United States Fish and Wildlife. On file at DAHP, Olympia.

Kelly, Katherine M.

2014 *WDFW Methow Post-Fire Forest Management Project*. Prepared by Washington State Department of Fish and Wildlife. [In production]

Neider, Tonya

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 determination of the probability for historic properties to be located within the APE was based largely upon review and analysis of past environmental and cultural contexts and previous cultural resource studies and sites. Consulted sources included review of project files; local geologic data to better understand the depositional environment; archaeological, historic, and ethnographic records made available on the WISAARD database; and selected published local historic records.**

**The risk analysis provided by the statewide predictive model and regional patterns, indicates there is high risk for encountering cultural resources. A second predictive model was created, using site to topography correlations outlined in Fulkerson (1988). This model, similar to the models utilized in Powell (1987, 2008), among others, served to fine tune the WDFW survey protocol.**

**Consultation with affected tribe(s) has been initiated, the results will be used to inform project design.**

**The results of the survey will be provided to DAHP and the affected tribe(s) for review prior to project initiation.**

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.

**The results of WDFW's cultural resources survey for the project will be used to inform final project design. Any necessary mitigation and/or avoidance measures will be designed in consultation with the affected tribe(s) and DAHP. WDFW policy would be to exclude all known sites from the project. When project goes to construction, WDFW will operate under an Inadvertent Discovery Plan; when cultural resources are identified within or near the project, the WDFW Cultural Resources Management Plan would be implemented**

#### 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. **Existing on-site roads will be used to directly access the project areas. Hauling of timber will be on WDFW Cougar Flats Road, USFS Road 100, Upper Bear Creek Rd. and Lester Rd. Other roads will be briefly used by a contractor to access and fell hazard trees.**
- 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, not applicable.**
- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? **Not applicable.**

- 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? **This is not a development project so no additional trips will be generated once the project is completed.**
- 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.**
- i. Proposed measures to reduce or control transportation impacts, if any:  
**Signs will notify the public of the operation and temporary road closures.**

**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. **No.**
- b. Proposed measures to reduce or control direct impacts on public services, if any.  
**Not applicable.**

**16. Utilities**

- a. Circle utilities currently available at the site:  
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other \_\_\_\_\_ . **None.**
- 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. **Not applicable.**

**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: Richard Tveten

Name of signee Richard Tveten

Position and Agency/Organization Forest Management Lead - WDFW

Date Submitted: 10/15/2014