

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

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

Instructions for applicants:

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

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

Instructions for Lead Agencies:

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

Use of checklist for nonproject proposals: [\[help\]](#)

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: [\[help\]](#)

Methow Forest Habitat Restoration Project –North Methow

2. Name of applicant: [\[help\]](#)

Washington Department of Fish and Wildlife (WDFW) Methow Wildlife Area

3. Address and phone number of applicant and contact person: [\[help\]](#)

Washington Department of Fish and Wildlife
350 Bear Creek Rd.
Winthrop, WA 98862
Contact: Jamie Bass
Phone: (509) 449-2229

4. Date checklist prepared: [\[help\]](#)

September 27, 2016

5. Agency requesting checklist: [\[help\]](#)

Washington Department of Fish and Wildlife

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

October 2016-December 2016: Harvester/ Pre-commercial Thinning contracts bid
November 2016: Road Work, Crossings Installation
November 2016- June 2017: Commercial and Non-commercial Thinning Operations Ongoing,
Temporary Roads and Crossings Removed and Closed.
June 2017-September 2017: Burn Unit Preparation
September 2017-June 2019: Prescription Burning
(timing subject to change due to seasonal conditions)

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

Following completion of this project, results will be monitored for restoration effectiveness in terms of fuel loading, understory/ overstory response, pest/pathogen issues, etc. A future project to revisit the acreage with similar treatment actions will be considered depending on those results. In addition, the fire return interval of this ecosystem has historically been 3-15 years, and if fire is not maintained naturally prescription fire will need to be utilized to maintain a thriving ecosystem.

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

1. WDFW Priority Species and Habitat Management Recommendations.
2. Department of Natural Resources (DNR) TRAX (Threatened, Rare and Endangered Species).
3. WDFW Heritage Database.
4. GIS generated WAU maps showing: Soil type, erosion potential, soil stability, and hydrologic maturity from NRCS Okanogan County Soil Survey.
5. Prescription Fire fuel measurements, assessment for completion of burn plans at time of prescribed burning.

6. WDNR Site Class Assessment.
7. SWIFD database review on presence of fish species in streams in project area.
8. LANDFIRE Database assessment to assess current forest habitat conditions.
9. Silvicultural Assessment of Methow Wildlife Area completed by Stewardship Forestry LLC.
10. WADNR FPAMT depicting slope stability, streams, site class, etc. for Forest Practices purposes.

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.

[\[help\]](#)

None known.

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

1. DNR Forest Practice Application (FPA) with possible alternate plans.
2. Road Maintenance and Abandonment Plan (RMAP) for Methow Wildlife Area.
3. USDI-USFWS/USDC-NOAA Section 7 Informal Consultations.
4. State and tribal cultural/archaeological clearance.
5. WDFW director and commission approval.
6. Burn plans and permits as necessary to carry out prescribed burning.
7. Hydraulic Project Assessments for stream crossing projects.

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.) [\[help\]](#)

The "North Methow" Phase of the Methow Forest Rehabilitation Project is located on the Methow Wildlife Area (MWLA) covering approx. 1566 assessed acres of forested habitat in the savannah and river lowlands predominantly in the transition between shrub-steppe and forest ecosystem types.

These areas are a high priority for forest and ecosystem health management on WDFW lands due to high-risk of stand replacing wildfire, insect and pathogen outbreaks, and current connected landscape of overstocked stands. Large scale stand-replacing wildfire has been present in and around the project area within the last 10+ years. Reducing and/or restructuring available fuels, tree density, and canopy cover in these stands will decrease the risk of stand-replacing wildfire, and improve forest ecosystem resilience to disturbance. Where feasible, the project will use thinning prescriptions based on the ecological site potential, historic reconstruction surveys, and priority to reduce negative ecosystem impacts from severe wildfire, disease and insect damage, and improve wildlife habitat. All areas, regardless of need for silvicultural treatment, will followed with prescribed fire that will include objectives to reduce logging slash, reduce fuels accumulated over time, and increase regeneration of fire-dependent plant species.

Sampling indicates that 15-42% of trees in most stands are dead or under severe stress from forest health issues, with remaining trees (including relic legacy trees) at risk of further beetle infestation, stand-replacing wildfire, or resource competition. Stand reconstruction sampling on several sites on the MWLA indicate that historic ponderosa pine density in the project area was

approximately 11- 30 trees per acre or 35-50 ft²/ac basal area (see Table 1). This proposal will use commercial and non-commercial thinning to reduce the density of overstocked, dry conifer stands from the current 200-1,500 trees per acre to 25-50 trees per acre, or 40-60 ft²/ac basal area. This leave-tree density assumes a 10-30% post-harvest mortality due to mechanical damage, insects, pathogens, root rot, and prescribed fire that will ultimately leave 35-50 ft²/ac basal area. Presently there are essentially two cohorts of conifer trees; pre-fire suppression (> 125 yrs., i.e. legacy trees) and post-fire suppression/ post clear-cut logging (<=70-100 yrs). Efforts will be made to try to retain 100% of legacy trees and snags, and enough of the largest of the 70+ year cohort to meet target density in a spatially heterogeneous stand structure resembling historic fire-maintained stocking patterns.

Plot	Acres	Basal Area (ft ² /ac)	Tree per Acre	Avg. Diameter at BH	Quadratic Mean Diameter	Stand Density Index
Bear Creek	7.8	48	26	17.3	18.4	74
Cougar Creek	7.8	35	16	18.2	19.9	52
Cougar Flat	7.5	37	13	21.2	23.2	53

Table 1: Sample of historic reconstruction plots established in MWA Forest Rehabilitation units in 2013

This portion of the Methow Wildlife Area is characterized by flat to rolling benches changing to steep mountain foothills to the east. The project areas lie along the forest edge transition to shrub-steppe. Elevation ranges from 2,300 to 4,200 feet. Precipitation, primarily as snow, ranges from 14 inches to 18 inches. The predominant timber species is ponderosa pine, though mixed conifer (Douglas-fir and ponderosa pine), sites occur at more moist higher elevation sites. In commercial thinning sites, the steepest slopes (approximately 5% of the units) are between 20-35% steep with average slope < 10%.

Prescribed fire will be utilized to re-introduce crucial disturbance to the fire-dependent ecosystem, reduce accumulated natural and activity fuel loading, and minimize stand replacing fire risk.

Project Objectives:

Reduce conifer density to within the historic range of variability to:

- Improve forest health
- Create resilience to disturbance (wildfire, climate change, epidemic insect and disease, etc.)
- Increase light availability to understory plant species to improve regeneration
- Reduce competition for resources (i.e. water, minerals, nutrients and sunlight) to legacy and retention trees
- Release aspen clones from conifer competition to reestablish growing conditions
- Increase winter snow retention by reducing canopy interference
- Provide sustainable and resilient forested habitat for the wildlife on the MWLA
- Prepare the rehabilitation units for prescribed fire

Reintroduce fire disturbance via prescribed fire treatments to the ecosystem to:

- Encourage understory growth of fire-responsive species to improve winter range habitat for mule deer & other wildlife
- Manage forest floor fuels accumulations from 100+ years of fire suppression, logging, and hand thinning operations

- Reduce risk for fire outside the ecosystem's historic range of variability by reducing stand density, ladder fuels and surface fuels in both the natural and activity fuel components.

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 area is on the Methow Wildlife Area, in Okanogan County, approx. 5 miles outside Winthrop, WA to the northwest.

T 35N: R 21E: S01, S02, S12, S13, S24 / R22E: S07, S18
T 36N: R 21E: S35

B. ENVIRONMENTAL ELEMENTS [\[help\]](#)

1. Earth [\[help\]](#)

a. General description of the site: [\[help\]](#)

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

Due to size of project area, the project site covers a variety of landforms in foothills of the Methow Wildlife Area. The majority of the treatments units cover flat ground to steep hills, but rocky outcrops and steep hillsides exist within the project boundary.

b. What is the steepest slope on the site (approximate percent slope)? [\[help\]](#)

Rock Cliff – 100%

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. [\[help\]](#)

According to the USDA Soil Survey of Okanogan County the following soils comprise approximately 90% of the project area:

- Merkel cobbly ashy sandy loam
- Merkel ashy sandy loam
- Leiko cobbly ashy sandy loam
- Wapal stony, ashy coarse sandy loam

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [\[help\]](#)

Wildfires in the vicinity/ watershed have led to hydrophobic, unstable soils due to fire impacts and lack of vegetation. This has led to mass wasting events in some creeks, including Ramsey Creek in the project area and Pearrygin Creek nearby within the last 10 years. Many of the steeper hillsides are highly erodible due to rocky soils.

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. [\[help\]](#)

Roads that are temporarily re-opened will be graded and have waterbars installed to improve existing road bed and drainage. Temporary crossings will require minor grading of existing soils to create suitable anchor for bridges. Grading will occur on these existing roads, with less than 1000 ft. of temporary new road bed to create log truck access. Fill will be locally sourced.

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

Erosion will overall be reduced as a result of improved drainage structures and road beds on re-opened roads, as well as proper abandonment of roads where needed. The thinning project, which has the highest chance for increasing erosion due to tracked equipment on forest soils, will be conducted as much as possible on snow and frozen ground to reduce soil impacts. Where rutting or erosion is occurring on skid trails, they will be slashed and water barred during and following completion of thinning projects. Prescription fire could contribute to erosion temporarily due to temporary reduction of live vegetation, but hydrophobic soils are extremely unlikely due to the low intensity nature of prescribed fire. Similar projects on WDFW Wildlife Areas have shown these effects to be in the extreme short term.

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

None

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

In addition to the waterbars and slashing described above, disturbed soil will be seeded with native species to bring back vegetation quickly and prevent invasion of noxious weeds. Upon completion of the proposal, signing and gates will be used to restrict unauthorized access to temporary roads.

Temporary stream crossings will be removed and soil will be pulled back to a gentle grade to reduce stream bank erosion and sediment delivery as part of the HPA. Bankside waterbars will be constructed to make fording by motorized traffic impossible, and slow mass-wasting to the stream. Native plants will be replanted in these bars to aid in regeneration of shade as well as stabilizing stream banks.

Overall, due to improvements to current drainage structures and understory response following broadcast burning, this project is expected to improve erosion control.

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. [\[help\]](#)

This proposal will involve vehicle emissions from equipment used for logging, yarding, hauling, and fire fighting equipment. There should be no significant impact to air quality from these short term project activities. The broadcast/ slash burning will adhere to the State of WA's Smoke Management Program and be covered in the Burn Permit process to not significantly impact local air quality. Following completion the project will not produce further emissions

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

None known.

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

Ensure equipment operators have safety mufflers for emission control. In addition broadcast burns will follow Department of Ecology and Department of Natural Resources guidelines and recommendations for successful broadcast burning and reducing impacts of smoke on local community for these short term project actions.

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. [\[help\]](#)

Shoreline of the State: Chewuch River
Fish-bearing stream: Boulder Creek
Fish-Class streams: Ramsey Creek, unnamed spur
Un-named Non-fish Perennial: 1
Un-named Non-fish Seasonal: 9
Type A Wetlands: 8

Prior to work, all streams and wetlands delineated by WDNR will be located, confirmed, and classed according to WDNR stream-typing protocol. Wetlands and streams will be protected from ground-disturbing activities according to Forest Practices.

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 commercial and non-commercial thinning will be conducted according to WDNR Forest Practices standards for stream and wetland protection, which will include operation with 200 ft. of these waters. In addition, underthinning efforts will target riparian areas to boost regeneration of hardwood species and thin conifer encroachment as part of restoration efforts. Conifer encroachment in streams and wetlands has led to a loss of understory, quality shade, and nutrient delivery from large woody debris. Prescription fire will also be conducted in and around waters to restore fire to the ecosystem and reduce fuel loading to prevent wildfire from creating

hydrophobic, bare riparian areas. Two stream crossings are included in this project, which will be temporary for the duration of project and removed following completion of restoration efforts. See attached map for description of road work.

- 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. [\[help\]](#)**

None

- 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. [\[help\]](#)**

Approx. 8 acres of the project's 950 acres is within a 100 year floodplain where the project approaches the Chewuch River.

- 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. [\[help\]](#)**

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

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

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

Natural runoff occurs in spring from snow melt, and rain the rest of the year that is already channeled through existing culverts and drains when runoff interacts with roadways in and in the

vicinity of this project. They allow the continued flow of water in existing overland channels and streams, or diversion to the forest floor for infiltration. The project will improve drainage structures and reduce mast wasting events on existing, abandoned roads. Temporarily re-opened roads and stream crossing will have improved drivable water bars to divert runoff to the forest floor, and post-project overall improved drainage and reduced sediment delivery due to maintenance as part of the timber sale. Any skid trails on steeper slopes that could result in water delivery will be have water bars installed and be slashed as part of the timber sale contract requirements.

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

[\[help\]](#)

Only from fuel or oil spills associated with equipment operations for the duration of logging or thinning operations, but not long term as a result of the proposed restoration project.

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

As mentioned in (1), the proposal will improve current road drainage structures/ issues, but otherwise should not affect natural drainage.

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

Activities associated with this proposal will meet or exceed Forest Practice rules and regulations at stream crossings through a Hydraulic Project Assessment (HPA) and in accordance with the WDFW Methow Wildlife Area Road Management and Abandonment Plan. In addition, the current road drainage structures will be improved and maintained during operations, and when finished will construct erosion bars, re-vegetate with native seed, and pull any temporary crossing. Where skid trails create a possible source for water channels, the skid trail will have water bars installed and be slashed following mechanical operations to disperse flows.

4. Plants [\[help\]](#)

a) Check the types of vegetation found on the site: [\[help\]](#)

- 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

Priority Habitat Type Presence	Source
Inter-Mountain Basins Big Sagebrush Steppe	PHS, WA Heritage Program, SWAP ¹

Northern Rocky Mountain Ponderosa Pine Woodland and Savanna	PHS, WA Heritage Program, SWAP
Rocky Mountain Aspen Forest and Woodland	PHS, WA Heritage Program, SWAP
Rocky Mountain Subalpine-Montane Riparian Shrubland	PHS, WA Heritage Program, SWAP
Temperate Pacific Freshwater Emergent Marsh	PHS, WA Heritage Program, SWAP

b. What kind and amount of vegetation will be removed or altered? [\[help\]](#)

Douglas fir and Ponderosa Pine will be thinned to variable density spacing prescriptions (leaving from 25 to 60 trees per acre) for forest restoration. Prescribed fire broadcast burning is expected to result in 1-10% mortality of remaining trees due to fire stress, which will contribute to snag creation. Understory vegetation will be burned over at various intensities, but overall this project is intended to result in improved understory vigor, diversity, and density, with a healthy, natural density of overstory trees.

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

WDFW contracted a rare plant survey of the project area in 2006. No species of concern were found.

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

As mentioned above, thinning and prescribed fire activities are restoration activities to enhance native vegetation/ habitat. In addition, disturbed areas as a result of project activities may be seeded with native seed to improve response and reduce weed species. Particularly native plants will be planted to stabilize disturbed streamside vegetation as a result of vehicle crossings to aid in slope stabilization.

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

- Scotch Thistle
- Diffuse Knapweed
- Russian Knapweed
- Houndstongue
- Black Henbane
- Puncture vine
- Dalmatian Toadflax
- Canadian Thistle
- St. John's Wort

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: X northern goshawk, heron, X bald and golden eagle, X songbirds, other: x Ruffed and blue grouse, x Vaux's swift, x prairie falcon (see below)

Mammals: X deer, x bear, elk, beaver, x cougar, x coyote, x bobcat (see below)

Fish: bass, x salmon, x rainbow and cutthroat trout, herring, shellfish, other: (see below)

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

- FSC = Federal Species of Concern
- FT = Federally Threatened
- FE = Federally Endangered
- SS = State Sensitive Species
- SC = State Species of Concern
- ST = State Threatened
- SE = State Endangered
- PS = State Priority Species
- SGCN = State Species of Greatest Conservation Need

Species	Occurrence	Status	Source
Bald Eagle	Regular concentration	FSC, SS, PS, SGCN ²	PHS, SGCN, USFWS
Harlequin Duck	Breeding, rearing, foraging	PS, FC	PHS, SGCN, USFWS
Mule Deer	Year round resident	PS	PHS
Northwest White-tailed Deer	Year-round resident	PS	PHS
Sharp-tailed Grouse	Unknown	FSC, ST, SGCN	USFWS, ST, PHS, SGCN
Western Gray Squirrel	Year-round resident	PS, ST, SGCN	PHS, SC, SGCN
Columbia Spotted Frog	Year-round resident	FSC, SC, SGCN	SGCN, USFWS
Western Toad	Year-round resident	FSC	USFWS
Cavity Nesting Ducks	Breeding, rearing, foraging	PS	PHS
Great Blue Heron	Breeding, rearing, foraging	PS	PHS
Golden Eagle	Year-round resident	SC, PS, SGCN	SGCN, PHS
Northern Goshawk	Year-round resident	FSC, SC, PS	USFWS, PHS

Peregrine Falcon	Breeding, rearing, foraging	FSC, SS, PS, SGCN	USFWS, PHS, SGCN
Prairie Falcon	Breeding, rearing, foraging	PS	PHS
Dusky Grouse	Year-round resident	PS	PHS
Northern Spotted Owl	Travel	FT, SE, SGCN	USFWS, PHS, SGCN
Flammulated OWL	Breeding, rearing, foraging	PS, SC, SGCN	PHS, SGCN
Vaux's Swift	Breeding, rearing, foraging	SC, PS	PHS
Lewis' Woodpecker	Breeding, rearing, foraging	SC, PS, SGCN	PHS, SGCN
Pileated Woodpecker	Year-round resident	SC, PS	PHS
White-headed woodpecker	Year-round resident	SC, PS, SGCN	PHS, SGCN
Olive-sided flycatcher	Breeding, rearing, foraging	FSC	USFWS
Western Bluebird	Breeding, rearing, foraging	SC	SGCN
Wild Turkey	Year-round resident	PS	PHS
Big Brown Bat	Breeding, rearing, roosting	PS	PHS
Myotis spp.	Breeding, rearing, roosting	PS	PHS
Pallid Townsend's Big-eared Bat	Breeding, rearing, roosting	FSC, SC, SGCN, PS	USFWS, SGCN, PHS
Gray Wolf	Year-round resident	FE, SE, SGCN, PS	USFWS, SGCN, PHS
Grizzly Bear	Future Recovery	FT, SE, PS, SGCN	USFWS, SGCN, PHS
Marten	Year-round resident	PS	PHS
Wolverine	Travel	FSC, SC, SGCN, PHS	USFWS, PHS, SGCN
Lynx	Travel	FT, ST, PS, SGCN	USFWS, PHS, SGCN
Mink	Year-round resident	PS	PHS
Chinook Salmon	Migration, Spawning,	FT, SC, SGCN, PS	PHS, SC, SGCN

	Rearing		
Steelhead	Migration, Spawning, Rearing	FT, SC, SGCN, PS	PHS, SC, SGCN
Bull Trout	Migration, Spawning, Rearing	FT, SC, PS, SGCN	FSC, SC, PHS, SGCN
¹ ESOC- Ecological Systems of Concern or Habitat of Greatest Conservation Need as identified by State Wildlife Action Plan (SWAP)			
² SGCN - Species of Greatest Conservation Need as identified by State Wildlife Action Plan			

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

As listed in (b) several species utilize this area as a seasonal migration route to move up and down the mountain range depending on snow pack and food availability. However, the area is particularly important to the Okanogan Mule Deer migratory herd, one of the largest in the Pacific Northwest, that travels through and utilizes the project area to access winter range. The vegetation manipulation indicated in this proposal will increase the availability of winter range, and improve mobility ease for all species. In general, due to improved habitat the landscape will have an increased carrying capacity and importance as a wintering range.

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

The primary objective of the project is to improve wildlife habitat, as per WDFW's management goals. This will be done by restoring the historic forest density and structure of overstory trees, which will lead to improved health, resilience, and function. Then by reintroducing fire into the fire-dependent ecosystem, fire hazard and uncharacteristic fuel buildup will be reduced to natural levels. This will also enhance understory reproduction and increase vigor of fire dependent species like canthus, serviceberry, elderberry, willow, aspen, bitterbrush and snowberry for mule deer winter forage. All snags will be left for cavity nesters, with prescribed additional snag recruitment via prescribed fire mortality. Cull logs will be left in the woods for amphibians, reptiles and small mammals. Prescriptions for thinning also provide for retaining character or wildlife trees that have platforms, cavities, or show any particular wildlife use signs. Finally, commercial activities will be timed to reduce impacts to priority species that could be sensitive during nesting seasons.

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

None Known

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. [\[help\]](#)

Fuels to operate equipment for harvesting, loading and hauling timber and any related road work. In addition, broadcast burning fire trucks, pumps, drip torches, etc. use gas or diesel fuels. However, this is solely for restoration activities and once project is completed will not have further energy needs.

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

Does not apply, no energy needs once project is completed.

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 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. There will be a controlled burn of the slash produced. 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.** [\[help\]](#)

None

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

Not applicable

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

During the project development some gasoline and diesel will be stored/used to fuel equipment and drip torches.

4) **Describe special emergency services that might be required.** [\[help\]](#)

The thinning contractors will be in compliance with the Industrial Fire Precaution Levels (IFPL) outlined by WADNR in accordance with WAC 332-24-301. This may include a fire watch as required, and if a fire does occur, firefighting services.

Washington State Department of Ecology and WDFW will be notified if any spills occur.

Burn Plans for prescribed fire include contingency plans and process for declaring a

wildfire (need for emergency firefighting services) when prescription parameters are exceeded, or the fire has spread outside the project area or is likely to do so, and holding and contingency actions cannot secure the fire by the end of the next burning period or are likely to fail.

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

Follow IFPL guidelines, and maintain contingency plans for possibly wildfire caused by equipment operations and/or prescribed burning operations. Require catch basins under equipment, particularly when fueling or doing maintenance.

b. Noise [\[help\]](#)

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

None.

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. [\[help\]](#)

In the short-term, restoration actions will require equipment to accomplish goals. During road work, thinning, fire preparation, and burning activities there will be some noise associated with chainsaws, skidder, loaders, pumps and/or trucks. Typically these would be daylight only and weather dependent. Heavy equipment noise can easily exceed 100 decibels. However in the long term, at completions of project timeline there will be no noise produced.

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

Maintain mufflers on equipment. Ear protection is recommended. Restrict public access to sites during operations.

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 is occurring on WDFW Methow Wildlife Area, its purpose is to provide wildlife habitat, hunting and recreational activities, and resilient ecosystem services. Grazing leases also cover portions of the project area. This proposal will improve the current usage, and not have an effect on adjacent properties' land use, which is primarily residential, farming, and forest/ recreation management (United States Forest Service).

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? [\[help\]](#)

Prior to WDFW ownership, parts of the project area were harvested for forest products

or utilized for hay fields and pasture lands. However, in the subsequent 50+ years of state ownership the land has not been used for working farmland or forest land. It's only similar possible commercial use has been grazing leases, which will continue following project completion according to the Methow WLA Management Plan. Long term commercial significance is therefore not impacted negatively by this project, and no acreage will be converted or lost to different usage than the current.

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: [\[help\]](#)

No affect.

c. Describe any structures on the site. [\[help\]](#)

Primitive campgrounds with concrete or fiberglass bathrooms.

d. Will any structures be demolished? If so, what? [\[help\]](#)

No

e. What is the current zoning classification of the site? [\[help\]](#)

"Upland", forest land.

f. What is the current comprehensive plan designation of the site? [\[help\]](#)

Unclassified/ Recreation

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

The Okanogan Shoreline Master Plan is still under review, and currently is deferring to Forest Practices Rules for activities relevant to this proposal. However a small portion of the project area is covered by the current draft shoreline master plan as "Conservancy". Since this project is completely intended to improve ecological function, and "Forest management" is an approved use of the site according to current draft of the Shoreline Master Program, this proposal is compatible.

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

Yes, portions of the site are defined in critical areas by the county for Mule Deer Migration, Mule Deer Spring and Winter Range, floodplain, and riparian areas.

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: [\[help\]](#)

Not applicable.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [\[help\]](#)

This project is part of the WDFW Methow Wildlife Area Management Plan, WDFW Forest Management Plan, and WDFW Mission Statement. The planned forest management activities work within guidelines for land use, zoning, critical areas, comprehensive plan designation, and shoreline master program.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any: [\[help\]](#)

None, project is intended to improve ecosystem health and fire resilience, and will have no negative impact on Wildlife Area's or neighboring land owner's commercial significance.

9. Housing [\[help\]](#)

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

Does not apply.

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

Does not apply.

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

Does not apply.

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? [\[help\]](#)

Does not apply.

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

With the reduced density of trees, the sight distances will increase resulting in more area being viewable from a single location.

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

Not needed.

11. Light and Glare [\[help\]](#)

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

Possible light from flames on the day prescription fires are burned, but none following completions of project. Timing will be dependent on weather and ground conditions.

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

No

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

Does not apply.

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

Does not apply.

12. Recreation [\[help\]](#)

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

Hunting, fishing, camping, hiking, viewing wildlife, cross country skiing, snowshoeing, mountain biking, parasailing, horseback riding, etc.

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

Depending on weather conditions and timing of harvest, some forms of recreational activities, like hunting, horse riding or viewing wildlife or use of campgrounds, could be temporarily impacted, but given the scale of available similar opportunities in the vicinity, and short (<2 years) impacts of restoration activities, impact will not be significant enough to deter recreational activities. As a result of this proposal, overall recreation opportunities will be improved.

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

The public will not be allowed access to the project site while work is in progress. However, increasing the habitat's carrying capacity through forage development, increased vegetative vigor and diversity, and snag creation will create better recreation and wildlife viewing opportunities immediately following completion.

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? If so, specifically describe. [\[help\]](#)

There are several sites which have been recorded during professional archaeological surveys within and near the project (Baldwin 2008; Kelly 2014; Neider 2011). WDFW contracted for additional cultural resources survey in the project to better define the project's potential to affect cultural resources. Surveys are ongoing and will be conducted in all areas for possible ground disturbing activities.

- 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. [\[help\]](#)**

Several recent professional studies (including studies by WDFW's contractor) resulted in the identification of several archaeological sites within and near the project boundary. A Cultural Resources Protection Plan will be developed using the results of WDFW's archaeological survey of the project and any information provided by DAHP and concerned tribes.

- 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 proposed project 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 surveys 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. [\[help\]](#)**

The results of WDFW's contractor'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; these conversations will help inform WDFW's Cultural Resources Protection Plan. Once the project is underway, it will operate under an Inadvertent Discovery Plan; upon discovery of previously unrecorded cultural resources, both plans would be implemented.

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

Existing roads in the site accessing main public roads are either in disrepair and/or are unsuitable for equipment access. Road improves and temporary roads will make it feasible to access USFS Rd 100 and Bear Creek Road for equipment and hauling. Though this work is intended for short-term project activities and will not impact or increase public access/use.

- 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, school bus stops approximately 5 miles south at the end of Upper Bear Creek Rd

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

There are no official parking spaces. Informal parking in dispersed campsites won't be affected.

- 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). [\[help\]](#)**

It will require temporary spur roads and crossings for official vehicle traffic only during project actions to access existing public roads, and any roads utilized will be improved and maintained to meet Forest Practices or USFS Road Permit standards as described in this application. This will not require a long term improvement or new roads following restoration actions.

- 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? [\[help\]](#)**

This proposal should result in no increase in vehicle trips per day upon completion of the timber sale. During the harvest and log hauling, contractors, sale administrators and log truck drivers may exceed 5 vehicles per day. This is based on load and haul times for standard logging trucks.

- 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. [\[help\]](#)**

This proposal, while it will be moving forest products, will not interfere of movement of agricultural or forest products due to remote location, width of available roads, and use of radio communication between equipment and truck operators. In addition, prescribed fire in these areas will only have short term smoke impacts.

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

Given the low timber volumes generated by this project and minimal traffic in the vicinity of the project we anticipate no impacts to transportation.

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. [\[help\]](#)

Does not apply.

16. Utilities [\[help\]](#)

a. Circle utilities currently available at the site: [\[help\]](#)
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. [\[help\]](#)

None

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: Jamie C. Bass
Position and Agency/Organization: Lands Forester, WDFW
Date Submitted: 09/27/16