

Environmental Assessment Checklist

Project Name: Luke Mountain 2 Salvage

Proposed Implementation Date: September 2026

Proponent: Anaconda Unit, Southwest Land Office, Montana DNRC

County: Powell

Type and Purpose of Action

Description of Proposed Action:

The Anaconda Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the Luke Mountain 2 Salvage. The project is located seven miles west of Avon, MT (refer to Attachments vicinity map A-1 and project map A-2) and includes the following sections:

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools	T10N, R9W, SEC. 16	640	482
Public Buildings			
MSU 2 nd Grant			
MSU Morrill			
Eastern College-MSU/Western College-U of M			
Montana Tech			
University of Montana			
School for the Deaf and Blind			
Pine Hills School			
Veterans Home			
Public Land Trust			
Acquired Land			

Objectives of the project include:

- Recover value of wind thrown trees and harvest Douglas-fir being impacted by Douglas-fir Beetle, consistent with MCA 77-5-207.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	# Acres
Clearcut	
Seed Tree	
Shelterwood	
Selection	
Old Growth Maintenance/Restoration	
Commercial Thinning	
Salvage	482
Total Treatment Acres	
Proposed Forest Improvement Treatment	# Acres
Pre-commercial Thinning	
Site preparation/scarification	
Planting	
Proposed Road Activities	# Miles
New permanent road construction	
New temporary road construction	
Road maintenance	
Road reconstruction	
Road abandoned	
Road reclaimed	
Other Activities	

Duration of Activities:	6/1 – 3/1
Implementation Period:	September 2026 – August 2028

The lands involved in this proposed project are held in trust by the State of Montana. (Enabling Act of February 22, 1889; 1972 Montana Constitution, Article X, Section 11). The Board of Land Commissioners and the DNRC are required by law to administer these trust lands to produce the largest measure of reasonable and legitimate return over the long run for the beneficiary institutions (Section 77-1-202, MCA).

The DNRC would manage lands involved in this project in accordance with:

- The State Forest Land Management Plan (DNRC 1996),
- Administrative Rules for Forest Management (ARM 36.11.401 through 471),
- The Montana DNRC Forested State Trust Lands Habitat Conservation Plan (HCP) (DNRC 2010)
- and all other applicable state and federal laws.

Project Development

SCOPING:

- DATE:
 - June 17, 2026
- PUBLIC SCOPED:
 - The scoping notice was posted on the DNRC Website:
<https://dnrc.mt.gov/News/scoping-notice>
 - Lessees and adjacent landowners were contacted in person and mailed scoping notices.
 - Scoping notices were also emailed to subscribers of the Statewide and Anaconda timber scoping lists.
- AGENCIES SCOPED:
 - Montana Department of Fish, Wildlife and Parks (FWP), U.S. Forest Service (USFS),
 - Montana Tribal Agencies
 - DNRC Specialists
- COMMENTS RECEIVED:
 - How many: 0
 - Concerns: 0
 - Results N/A
- DNRC specialists were consulted, including:
 - Garrett Schairer – SWLO Wildlife Bio.
 - Patrick Rennie – SWLO Archaeologist
 - Matt Lesiecki – SWLO Hydrologist

Internal and external issues and concerns were incorporated into project planning and design and will be implemented in associated contracts.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED: *(Conservation Easements, Army Corps of Engineers, road use permits, etc.)*

- **United States Fish & Wildlife Service-** DNRC is managing the habitats of threatened and endangered species on this project by implementing the Montana DNRC Forested Trust Lands HCP and the associated Incidental Take Permit that was issued by the United States Fish & Wildlife Service (USFWS) in February of 2012 under Section 10 of the Endangered Species Act. The HCP identifies specific conservation strategies for managing the habitats of grizzly bear, Canada lynx, and three fish species: bull trout, westslope cutthroat trout, and Columbia redband trout. This project complies with the HCP. The HCP can be found at <https://dnrc.mt.gov/TrustLand/about/planning-and-reports>.
- **Montana Department of Environmental Quality (DEQ)-** DNRC is classified as a major open burner by DEQ and is issued a permit from DEQ to conduct burning activities on state lands managed by DNRC. As a major open-burning permit holder, DNRC agrees to comply with the limitations and conditions of the permit.

A Short-term Exemption from Montana's Surface Water Quality Standards (318 Authorization) may also be required from DEQ if activities such as replacing a bridge on a stream would introduce sediment above natural levels into streams.

- **Montana/Idaho Airshed Group-** The DNRC is a member of the Montana/Idaho Airshed Group which was formed to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction (Montana/Idaho Airshed Group 2010). As a member, DNRC must submit a list of planned burns to the Airshed Group's Smoke Monitoring Unit describing the type of burn to be conducted, the size of the burn in acres, the estimated fuel loading in tons/acre, and the location and elevation of each burn site. The Smoke Monitoring Unit provides timely restriction messages by airshed. DNRC is required to abide by those restrictions and burn only when granted approval by the Smoke Monitoring Unit when forecasted conditions are conducive to good smoke dispersion.
- **Montana Department of Fish, Wildlife and Parks (DFWP)-** A Stream Protection Act Permit (124 Permit) is required from DFWP for activities that may affect the natural shape and form of a stream's channel, banks, or tributaries. Such activities include:
 - N/A

ALTERNATIVES CONSIDERED:

No-Action Alternative: No salvage acres would be treated. Existing uses would remain the same but would require clearing access of downed trees. The parcel would continue to be grazed by lessees. Douglas-fir beetle populations would likely increase significantly through propagation in down trees resulting in significant risk for remaining trees.

Action Alternative: The action alternative would salvage downed timber on approximately 482 acres designed to meet the objectives of the proposed project.

Impacts on the Physical Environment

Evaluation of the impacts on the No-Action and Action Alternatives including **direct, secondary, and cumulative** impacts on the Physical Environment.

VEGETATION:

Vegetation Existing Conditions: The project area is located within the Luke Mountain 2 Timber Sale, which was harvested and completed in 2023. Vegetation consists primarily of Douglas-fir forest types with a mosaic of harvested units, residual overstory trees, and naturally regenerating shrubs, grasses, forbs, and conifer seedlings.

2020 field surveys confirmed 55 acres in two stands met the Department's old growth requirements while 18 acres within one stand did not meet the requirements due to insufficient trees greater than 21" DBH.

Following harvest completion, several high-wind events caused significant blowdown of residual Douglas-fir trees within portions of the project area. Windthrow is significant throughout openings created by harvest activities. As a result, large amounts of downed woody material are present across affected areas.

Much of the downed Douglas-fir has been infested by Douglas-fir beetle. Existing infestations are evident throughout the blowdown area, and a substantial increase in beetle populations is expected during the spring of 2027 if infested material remains on site. The combination of windthrow and beetle activity has increased the risk of additional tree mortality in adjacent residual stands and has contributed to elevated surface fuel loading within the project area.

Harvest Unit	Habitat Group	Fire Regime	Current Cover Type	Age Class (years)	DFC	RX	Acres
1	Cold and moderately dry (westside)	Mixed	Douglas Fir	100-149	Douglas Fir	Other Salvage	482

Fire Hazard/Fuels: The Luke Mountain 2 Salvage project area contains moderate to heavy fuel loading resulting from extensive Douglas-fir blowdown following high-wind events that occurred after completion of the Luke Mountain 2 Timber Sale in 2023. Fuels consist primarily of downed Douglas-fir trees and slash, creating continuous surface fuel beds throughout affected portions of the project area. Fuel continuity is high within windthrow concentrations and provides a pathway for rapid fire spread and increased fire intensity.

The project area is located within a landscape with a history of frequent wildfire occurrence and is adjacent to private lands. Existing fuel conditions increase the potential for high-intensity wildfire, particularly as Douglas-fir beetle activity contributes to additional tree mortality and fuel accumulation. Salvage of windthrown material would reduce fuel loading, disrupt fuel continuity, and help mitigate wildfire risk to adjacent forest resources and nearby WUI areas.

Insects and Diseases: Douglas-fir beetle infestations are present throughout much of the windthrown Douglas-fir within the project area. The blowdown created favorable breeding habitat for the beetle, and population levels are expected to increase significantly during the spring of 2027. Without treatment, beetles may spread from infested blowdown into adjacent residual Douglas-fir stands, resulting in additional tree mortality, reduced stand vigor, and decreased forest health across the area.

Sensitive/Rare Plants: A query of the Montana Natural Heritage Program reports no plant species of concern within the project area and none were found during field surveys.

Noxious Weeds: The project area has infestations of knapweed, thistle and houndstongue that mainly occur along existing roads, old landings and disturbed areas. The infestations have been treated on occasion in the past and would require additional monitoring and treatment.

Vegetation	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Current Cover/DFCs	X				X				X					
Age Class	X				X				X					
Old Growth	X				X				X					
Fire/Fuels				X				X				X	N	1
Insects/Disease				X				X				X	N	2
Rare Plants	X				X				X					
Noxious Weeds		X				X				X			N	
Action														
Current Cover/DFCs	X				X				X					
Age Class	X				X				X					
Old Growth		X				X				X			Y	7
Fire/Fuels			X				X				X		Y	4
Insects/Disease			X				X				X		Y	3
Rare Plants	X				X				X				Y	6
Noxious Weeds		X				X				X			Y	5

Comments: See Vegetation Mitigations

Vegetation Mitigations No Action:

1. Fuels will continue to build on a trajectory toward Fuel Model 13 (Heavy Slash / Blowdown). Occurrence of fires could build intensity quickly as larger fuels ignite, sustaining active flaming for long periods and generating heavy firebrands.
2. Larger windthrown Douglas-fir, like those associated with the Luke Mountain 2 Salvage, provide suitable breeding grounds for Douglas-fir beetle (*Dendroctonus pseudotsugae*). Beetles would likely mass-attack down trees, creating drastic increases in populations and spilling over into adjacent trees and stands.

Vegetation Mitigations Action:

3. Downed Douglas-fir and standing Douglas-fir showing outward appearance of beetle infestation or root pull would be harvested, reducing potential for future mortality and reduction in stand vigor as a result of Douglas-fir beetle activity.
4. Removal of dead, down and dying Douglas-fir would reduce fuel loading and create a more defensible landscape.
5. To minimize the potential for the spread of noxious weeds, off-road equipment would be cleaned and inspected as required in the timber sale contract to avoid seed migration. Grazing lessee would continue to be responsible for noxious weed management.
6. If any sensitive plant species are observed within the project area, an equipment restriction zone would be created around the occurrence(s) and a plant survey would be completed.

7. No change to the existing condition as a result of windthrow salvage and therefore no impact to old growth.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions:

The Luke Mountain 2 Salvage project area is located in the Garnet Range. Rocks within the project area are Pennsylvanian and Mississippian sedimentary rocks including silicified quartzite, dolomitic sandstone and siltstone, shale, limestone, and chert (Sears et al., 2000). These sedimentary layers are generally horizontal in the project area with the beds at the top of an anticline within the project area (Sears et al., 2000). The majority of the project area has gentle topography (35% or less), with some areas include short-pitched slopes up to 45%. No unique geologic features or signs of slope instability have been observed in the project area.

Mapped soil unit distributions within the project area (Powell County NRCS Soils data) include the following:

- Winspect gravelly loam, 8 to 15 percent slopes & 15 to 35 percent slopes
- Whitecow gravelly loam, dry & wet, 15 to 35 percent slopes
- Whitore gravelly loam, 15 to 35 percent slopes
- Danaher-Loberg complex, 15 to 35 percent slopes
- Loberg gravelly loam, 4 to 15 percent slopes

The surface soils are mostly gravelly loams with enough clay content to retain moisture and make soils vulnerable to rutting but still suitable for ground-based operations as long as operations are limited to periods of dry or frozen soil conditions (see mitigation section).

Known existing or past disturbances in this project area include:

- Active grazing license allowing for 76 AUM over the full section. (Rocking W Cattle Ranch)
- Lukewarm Timber Sale (~2000) and
- Luke Mountain 2 Timber Sale (2021).

The area experienced a high wind event in December 2025, resulting in windthrow of the remaining trees following the 2021 timber sale. The result is significant localized soil disturbance where trees were uprooted and tipped over. This disturbance is not expected to exacerbate erosion or productivity issues, though care should be taken to minimize further disturbance or displacement through the moving or skidding of windthrown rootwads.

Soil Disturbance and Productivity	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Physical Disturbance (Compaction and Displacement)	X				X				X				N/A	1
Erosion	X				X				X				N/A	1

Soil Disturbance and Productivity	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Nutrient Cycling	X				X				X				N/A	1
Slope Stability	X				X				X				N/A	1
Soil Productivity	X				X				X				N/A	1
Action														
Physical Disturbance (Compaction and Displacement)		X				X				X			Y	2, 3, 4, 5
Erosion		X				X				X			Y	2, 3, 5
Nutrient Cycling		X				X				X			Y	4, 5, 6
Slope Stability	X				X				X					7
Soil Productivity		X				X				X			Y	4, 5, 6

Comments:

1. Implementation of the no-action alternative would result in no new soil resource impacts in the project area.
2. Soil and vegetation disturbance from harvest activities may result in temporary increased risk of erosion. Removing salvageable logs from the windthrown rootwad before skidding will minimize further unnecessary soil disturbance/displacement.
3. Soil disturbance and erosion risk increases with slope and slopes in project area exceed 45% in some places.
4. Direct impacts by physical disturbance would likely occur by ground-based yarding. All expected impacts are expected to be less than 10% and would be minimized by use of existing roads and skid trails.
5. Applicable state plans, rules, and practices have guided project planning and would be implemented during project activities, including the Montana Code Annotated (specifically Title 77, Chapter 5), the Administrative Rules of Montana (specifically Rule Chapter 36.11), the Montana Forest Best Management Practices, the DNRC Trust Lands Habitat Conservation Plan, and the State Forest Land Management Plan.
6. According to Graham et al. (1994), a minimum of 4.5 tons/acre of CWD would be a desired post-harvest condition to maintain forest productivity for this forest habitat type. However, the retention of more CWD would be desirable for protecting existing soil from erosion and to supplement soil nutrient cycling.
7. Unstable slopes were not observed on site. The project is anticipated to have no risk to slope stability.

Soil Mitigations:

- BMP's would be implemented on all roads and within the units. Slash produced during salvage would be left in the units to mitigate erosion risks.
- Ground-based logging equipment (tractors, skidders) would be limited to slopes less than 45% unless for short distances and not causing excessive disturbance.
- The Contractor and Sale Administrator should agree to a general skidding plan prior to equipment operations. Skid trails would be mitigated following harvesting and yarding operations with water bars and/or slash.

- To prevent soil compaction ground-based mechanical felling and yarding would be restricted to one or more of the following conditions:
 - Soil moisture content at 4-inch depth less than 20% oven-dry weight.
 - Minimum frost depth of 4 inches.
 - Minimum snow depth of 18 inches of loose snow or 12 inches packed snow.
 - Watch for moisture retention on flatter slopes, north and east aspects within the project areas. Limiting operations during conditions that risk soil damage will also protect road surfaces along access routes. Much of the haul routes accessing these project areas have high clay content and are vulnerable to damage during wet conditions.
- A **minimum** of 4.5 tons/acre and up to 9 tons/acre, of coarse and fine woody debris would be maintained on site to meet the concentration for the DF/PHMA habitat type recommended by Graham et al (1994).
- Remove and leave rootwads in place when salvaging windthrown timber to minimize further soil disturbance.

Soil References:

- Graham, R.T., Harvey, A.E., Jorgensen, M.F., Jain, T.B., and Page-Dumrose, D.S., 1994, Managing Course Woody Debris in Forests of the Rocky Mountains. U.S., Forest Service Research Paper INT-RP-477. Intermountain Research Station. 16p.
- Lonn, J.D., and Vuke, S.M., 2015, Geologic map of the Ophir Creek 7.5' quadrangle, Lewis and Clark, and Powell counties, Montana: Montana Bureau of Mines and Geology Open-File Report 666, 1 sheet, scale 1:24,000.
- NRCS, 1995, Soil Survey of the Powell County Area, Montana.
- Mosolf, J., and Vuke, S., 2017, Geologic map of the Gravely Mountain 7.5' quadrangle, Powell County, Montana: Montana Bureau of Mines and Geology Open-File Report 693, 1 sheet, scale 1:24,000.
- Sears, J.W., Webb, B., and Taylor, M., 2000, Bedrock geology of Garrison and Luke Mountain 7.5 minute quadrangle: Montana Bureau of Mines and Geology Open-File Report 403, 17 p., 3 sheets, scale 1:24,000.

WATER QUALITY AND QUANTITY:

Water Quality and Quantity Existing Conditions:

The Luke Mountain 2 Salvage project area is located in the Warms Springs Creek watershed. No surface water features are located within this project section. Warm Springs Creek is 0.8 miles west of the proposed harvest area and Gimlet Creek is located 0.6 miles north of the project area. The haul route follows Gimlet Creek on private roads for approximately 4 miles until County Road connects the haul route to Highway 141.

Warms Springs Creek is a B-1 stream (water quality category 4A) and is listed as impaired for aquatic life due to sedimentation-siltation and alteration in stream-side vegetative covers. Sources include non-construction related road runoff and silviculture activities.

Gimlet Creek is not listed as impaired waterbody. However, the creek is heavily modified with several on-channel earthen dams and water storage reservoirs and road infrastructure

immediately adjacent. Road drainage and stream crossings along the private haul route are no longer functioning or near the point of failure.

Existing roads under sole DNRC ownership are indicated in Figure A-2. These roads were reviewed for best management practices implementation and effectiveness during project planning. One existing ditch and ditch relief culvert do not meet BMP requirements and will require repairs including ditch maintenance and cleaning out of the culvert inlet and outlet. The discharge from this relief culvert is intercepted by an existing road downhill of the culvert outlet. The flow runs on the road surface for ~150 ft. before flowing off the road onto the hillslope. New or improved road drainage features could be implemented to mitigate this issue. Throughout the rest of the project area, existing road drainage (i.e., rolling dips) need improvement in some areas; however, signs of significant erosion or sediment delivery to streams were not observed.

Water Quality & Quantity	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Water Quality	X				X				X					1
Water Quantity	X				X				X					1
Action														
Water Quality		X				X				X			Y	2, 3
Water Quantity		X				X				X			Y	2, 3

Comments:

1. With no action, no timber harvesting or related activities would occur. Water quality conditions would likely continue under its current condition. Similarly, no risk of change of current fluctuations in annual water yield or stream flow would result.
2. Applicable state plans, rules, practices, and commitments have guided project planning and would be implemented during project activities, including the Montana Code Annotated (specifically Title 77, Chapter 5), the Administrative Rules of Montana (specifically Rule Chapter 36.11), the Montana Forest Best Management Practices, the DNRC Habitat Conservation Plan (2010), and the State Forest Land Management Plan.
3. Changes to stream flow hydrology (water quantity or water flow) are not expected to be detectable or significant with the action alternative. This conclusion is based on the studies correlating vegetation harvest and treatment with streamflow yield have suggested approximately 15-20% of the watershed vegetation must be harvested to have a measurable increase in water yield in similar mountain environments (Stednick, 1996; and Bosch and Hewlett, 1982). The proposed harvest areas occupy less than 5% of each watershed, well below the expected threshold for impacts to water yield.

Water Quality & Quantity Mitigations:

No additional project-specific mitigations necessary beyond the project design and commitments listed earlier in this analysis.

Water Resources References:

Bosch, J.M. and J.D. Hewlett. 1982. A review of catchment experiments to determine the effect of vegetation changes on water yield and evapotranspiration. J. Hydrology, 55: 3-23.

Stednick, J.D. 1996. Monitoring the effects of timber harvest on annual water yield. J. Hydrology 176:79-95.

FISHERIES:

Fisheries Existing Conditions: No fisheries exist within the project area.

No-Action: No direct or indirect impacts would occur to affected fish species or affected fisheries resources beyond those described in Fisheries Existing Conditions. Cumulative effects (other related past and present factors; other future, related actions; and any impacts described in Fisheries Existing Conditions) would continue to occur.

Action Alternative (see Fisheries table below):

Fisheries	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Sediment	X				X				X					
Flow Regimes	X				X				X					
Woody Debris	X				X				X					
Stream Shading	X				X				X					
Stream Temperature	X				X				X					
Connectivity	X				X				X					
Populations	X				X				X					
Action														
Sediment	X				X				X					
Flow Regimes	X				X				X					
Woody Debris	X				X				X					
Stream Shading	X				X				X					
Stream Temperature	X				X				X					
Connectivity	X				X				X					
Populations	X				X				X					

Comments: There are no fish bearing streams in the project area.

Fisheries Mitigations: The Montana Administrative Rules for Forest Management; Watershed Management and watershed RMS would be implemented. BMPs would be implemented on all roads and within the project area.

WILDLIFE:

Evaluation of the impacts of the No-Action and Action Alternatives including direct, indirect, and cumulative effects on Wildlife.

Wildlife Existing Conditions:

The project area contains a mixture of moderately to poorly stocked forested Douglas-fir and to a lesser degree lodgepole pine stands intermixed with some younger sapling stands and non-forested habitats. Generally, many of the habitats are at the interface between forested habitats and open grassland/shrublands, thus connectivity attributes in the project area are somewhat limited. Habitats on private ownerships surrounding the project area have experienced extensive timber management in the recent past as well as intensive agricultural practices, both of which have seemingly influenced wildlife patterns in the area. Individual grizzly bears could occasionally use the project area while dispersing or possibly foraging. Potential habitat exists for flammulated owls, fringed myotis, northern hoary bats, and pileated woodpeckers in the project area. Big game summer habitat exists in the project area but no big game winter range exists in the project area. Red-tailed hawks were documented in the project area during field visits and use of the project area could occur.

No-Action:

No potential for disturbance to wildlife would be anticipated. No salvage activities would occur, thus no appreciable changes to existing habitats would occur. Existing trees would exist at a higher risk of mortality from insects, thus potential snags and coarse woody debris could continue to increase at the expense of living substrates for a variety of wildlife that rely on mature trees in a moderately to poorly stocked stand of Douglas-fir. Elevated coarse woody debris levels would continue to provide habitats for those species that rely on coarse woody debris. The wind event reduced standing trees and snags that could have served as flammulated owl nesting and foraging habitats, pileated woodpecker foraging substrates, as well as fringed myotis and northern hoary bat roosting and foraging habitats. Species that rely on coarse woody debris would continue to see abundant habitats. Generally, negligible direct, indirect, or cumulative effects to threatened, endangered, or sensitive terrestrial and avian wildlife species and big game species would be anticipated.

Action Alternative:

Proposed salvage activities would occur on roughly 482 acres of moderately- to poorly stocked stands of Douglas-fir. In general, habitats for those species that rely on coarse woody debris and horizontal cover would be further reduced, but proposed salvage would facilitate general wildlife movements through the project area. No changes in legal motorized public access would occur in the project area. Contract stipulations would minimize the presence of human-related attractants for the duration of the proposed activities. Disturbance associated with proposed activities could occur but would be of short duration and disturbance levels would be expected to revert to levels similar to the existing conditions following proposed activities.

Wildlife	Effects								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
Threatened and Endangered Species										
Grizzly bear (Ursus arctos) Habitat: Recovery areas, security from human activity		X				X			Y	W-1
Canada lynx (Felix lynx) Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone	X				X					W-2
Yellow-Billed Cuckoo (Coccyzus americanus) Habitat: Deciduous forest stands of 25 acres or more with dense understories and in Montana these areas are generally found in large river bottoms	X				X					W-2
Wolverine (Gulo gulo) Habitat: Alpine tundra and high-elevation boreal forests that maintain deep persistent snow into late spring		X				X			Y	W-3
Sensitive Species										
Bald eagle (Haliaeetus leucocephalus) Habitat: Late-successional forest less than 1 mile from open water	X				X					W-2
Black-backed woodpecker (Picoides arcticus) Habitat: Mature to old burned or	X				X					W-2

Wildlife	Effects								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
beetle-infested forest										
Fisher <i>(Martes pennanti)</i> Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian	X				X					W-2
Flammulated owl <i>(Otus flammeolus)</i> Habitat: Late-successional ponderosa pine and Douglas-fir forest		X				X			Y	W-4
Fringed myotis <i>(Myotis thysanodes)</i> Habitat: low elevation ponderosa pine, Douglas-fir and riparian forest with diverse roost sites including outcrops, caves, mines		X				X			Y	W-5
Northern Hoary bat <i>(Lasiurus cinereus)</i> Habitat: coniferous and deciduous forests and roost on foliage in trees, under bark, in snags, bridges		X				X			Y	W-6
Peregrine falcon <i>(Falco peregrinus)</i> Habitat: Cliff features near open foraging areas and/or wetlands	X				X					W-2
Pileated woodpecker <i>(Dryocopus pileatus)</i> Habitat: Late-successional ponderosa pine and larch-fir forest			X			X			Y	W-7

Wildlife	Effects								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
Townsend's big-eared bat (Plecotus townsendii) Habitat: Caves, caverns, old mines	X				X					W-2
Forest Raptors										
Red-tailed Hawk		X				X			Y	W-8
Big Game Species										
Elk		X				X			Y	W-9
Whitetail deer		X				X			Y	W-9
Mule Deer		X				X			Y	W-9
Moose		X				X			Y	W-9
Bighorn Sheep	X				X				Y	W-2

Comments:

W-1 The project area is 18 miles south of the Northern Continental Divide Ecosystem grizzly bear recovery area and is adjacent to the 'occupied' grizzly bear habitat as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones (Wittinger et al. 2002). Use by grizzly bears is possible, and individual bears could use the project area while dispersing or possibly foraging. Presently there are about 5.6 miles of roads in the project area that are controlled by adjacent landowners. Grizzly bear hiding cover is somewhat limited in the project area due to past timber management and recent wind events. Extensive private ownership exists in the vicinity with considerable uncontrolled roads that limit grizzly bear security habitats.

Should a grizzly bear be in the vicinity during proposed activities, potential for disturbance could occur, but this would only occur during proposed activities, which would be a relatively short period (1-3 years) of time. Activities would likely avoid the spring period, minimizing potential disturbance and displacement from important habitats during the sensitive spring period. No new roads would be constructed; overall open and total road densities would not change. Negligible additional reductions in hiding cover would occur with proposed salvage activities. Overall negligible changes in human-bear interactions would be anticipated. Mitigations to minimize potential for introducing attractants to bears would be applied, which would further reduce the potential for human/bear interactions.

W-2 The project area is either out of the range of the normal distribution for this species or suitable habitat is not present. Thus, no direct, indirect, or cumulative effects would be anticipated.

W-3 Generally wolverines are found in sparsely inhabited remote areas near treeline characterized by cool to cold temperatures year-round and rather deep and persistent snow well into the spring (Copeland et al. 2010). The availability and distribution of food is likely the primary factor in the large home range sizes of wolverines (Banci 1994). The project area is generally below the elevations where wolverines tend to be located. No

areas of potentially deep persistent spring snow occur in the vicinity. Individual animals could occasionally use the project area while dispersing or possibly foraging, and they could be displaced by project-related disturbance if they are in the area during proposed activities. However, given their large home range sizes (~150 sq. mi. -- Hornocker and Hash 1981) and the manner in which they use a broad range of forested and non-forested habitats, the proposed activities and alterations of forest vegetation on the project area would have negligible influence on wolverines.

- W-4 There are approximately 544 acres of potential flammulated owl habitats in dry Douglas-fir and ponderosa pine stands in the project area. Recent timber management on portions of these stands resulted in more open stand conditions while maintaining snags which improved flammulated owl habitats in the project area. Flammulated owls can be tolerant of human disturbance (McCallum 1994), however the elevated disturbance levels associated with proposed activities could negatively affect flammulated owls should activities occur when flammulated owls are present. Proposed activities could overlap the nestling and fledgling period. Little or no effect on nesting substrates would be anticipated with the proposed salvage activities.
- W-5 Fringed myotis are year-round residents of Montana that use a variety of habitats, including deserts, shrublands, sagebrush-grasslands, and forested habitats. They overwinter in caves, mines, crevices, or human structures. Fringed myotis forage near the ground or near vegetation. Fringed myotis have not been documented in the vicinity of the project area (Montana Natural Heritage Program 2026), but since some suitable habitat exists, some use by fringed myotis is possible. While no known caves or other structures used for roosting occur in the project area or immediate vicinity, there are some historic caves and mines in the Avon Valley. Potential roosting habitats may exist on the 553 acres (91%) of moderately to poorly stocked sawtimber stands in the project area that are dominated by Douglas-fir. No surface water was identified in the project area, which limits potential riparian foraging habitats.
- Proposed activities could disturb fringed myotis should they be in the area when activities would be occurring. Proposed salvage activities would occur on roughly 482 acres of potential roosting habitats in moderately to poorly stocked sawtimber stands dominated by Douglas-fir. Since fringed myotis bats typically roost in trees and snags, the recent wind event reduced overall quality of these areas for roosting. Potential roosting substrates would not further change and would be somewhat limited following the recent wind event and past timber management. Minor further reductions in potential foraging substrates would be possible with the proposed salvage activities.
- W-6 Northern hoary bats are summer residents (June-September) across a variety of forested habitats in Montana. Northern hoary bats frequently forage over water sources near forested habitats. Northern hoary bats are generally thought to roost alone, primarily in trees, but will also use caves, other nests, and human structures. Some use of the project area by northern hoary bats would be possible; northern hoary bats have been documented to the east of the project area along Sixmile Creek (Montana Natural Heritage Program 2026). Individual trees and snags in the project area could be used for roosting, but overall use may be somewhat limited given the lack of surface water in the project area. No known caves or other structures used for roosting are known to occur in the project area. Some potential roosting habitats may exist on the 553 acres (91%) of moderately to poorly-stocked sawtimber stands dominated by Douglas-fir in the project area. The lack of surface water likely limits potential use of the project area for foraging, but some use of upland areas for foraging is possible.

Proposed activities could disturb northern hoary bats should they be in the area when activities would be occurring. Thus, any activities conducted outside of the summer period (June to September) would not be expected to disturb northern hoary bats, but activities that would occur during the summer could disturb northern hoary bats for up to 3 years. Proposed salvage activities would occur on approximately 482 acres of potential roosting habitats in moderately to poorly stocked sawtimber stands dominated by Douglas-fir. Since northern hoary bats typically roost in trees and snags, no appreciable changes to existing roosting habitats would be anticipated with the proposed salvage activities. Continued use of the project area for foraging would be possible despite the slight reductions in structure for potential prey species.

- W-7 Limited potential pileated woodpecker habitats exist in the project area following past timber management and recent wind events. Disturbance to pileated woodpeckers in the vicinity could occur if proposed activities occur during the nesting period. Proposed activities would not appreciably alter forested habitats, but could reduce potential foraging substrates, however given the openness of the site and the potential for predation, little or no use of the coarse woody debris as foraging sites would be anticipated. Since pileated woodpecker density is positively correlated with the amount of dead and/or dying wood in a stand (McClelland 1979), pileated woodpecker densities in the project area would be expected to be further reduced in the project area.
- W-8 During site visits, a red-tailed hawk was noted in the project area and during the previous entry, a pair of red-tailed hawks were detected in the project area. While no nest was identified in the project area, a nest could exist in the vicinity as both the project area and surrounding area are potentially suitable red-tailed hawk habitats. Some disturbance to red-tailed hawks could occur if activities were conducted during the nesting season; red-tailed hawks are sensitive to human disturbance during the breeding season and are known to change their home ranges to accommodate the disturbance (Andersen et al. 1990). Proposed timber management could alter coarse woody debris levels, which could negligibly alter habitats for red-tailed hawk prey. Should a nest be identified in the project area, additional mitigations would be incorporated that could include a combination of timing and retention mitigations.
- W-8 A northern goshawk nest was documented in the project area during preparation for a timber sale in the project area 25+ years ago; during field reviews for the most recent sale and subsequently during this last sale, no nests were identified. For the most part, habitats in the project area would not be expected to be suitable northern goshawk nesting areas, but may be suitable foraging habitats. Should a nest be identified in the project area, additional mitigations, including timing restrictions, would be incorporated. Since green trees would not be harvested, no effects to potential nest trees would occur.
- W-9 The project area contains suitable summer habitat for white-tailed deer, mule deer, and elk. No winter range exists in the project area. Proposed activities would likely occur during the non-winter period. Disturbance from mechanized logging equipment and trucks could temporarily displace big game animals during operations; during the summer considerable other suitable habitats exist in the vicinity, which would minimize the effects to big game species. No long-term effects to winter or summer ranges would be anticipated. Negligible changes to big game hiding cover would occur with proposed activities. No changes in open roads would occur, no appreciable changes to big game security habitats would occur.

Wildlife Mitigations:

- A DNRC biologist will be consulted if a threatened or endangered species is encountered to determine if additional mitigations that are consistent with the administrative rules for managing threatened and endangered species (ARM 36.11.428 through 36.11.435) are needed.
- Motorized public access will be restricted at all times on restricted roads that are opened for harvesting activities; signs will be used during active periods and a physical closure (gate, barriers, equipment, etc.) will be used during inactive periods (nights, weekends, etc.). These roads and skid trails would be reclosed to reduce the potential for unauthorized motor vehicle use.
- Snags, snag recruits, and coarse woody debris will be managed according to *ARM 36.11.411* through *36.11.414*, particularly favoring ponderosa pine. Clumps of existing snags could be maintained where they exist to offset areas without sufficient snags. Coarse woody debris retention would emphasize retention of downed logs of 15-inch diameter or larger.
- Contractors and purchasers conducting contract operations will be prohibited from carrying firearms while on duty.
- Food, garbage, and other attractants will be stored in a bear-resistant manner.
- Should a raptor nest be identified in or near project activities, activities will cease and a DNRC biologist will be contacted. Site-specific measures will be developed and implemented to protect the nest and birds prior to re-starting activities.

Wildlife References:

- Andersen, D. E., O. J. Rongstad, and W. R. Mytton. 1990. Home-range changes in raptors exposed to increased human activity levels in southeastern Colorado. *Wildlife Society Bulletin* 18:134-142.
- McCallum, D. A. 1994. Review of technical knowledge: flammulated owls. Pages 14-46 in G. D. Hayward and J. Verner, tech eds. *Flammulated, boreal, and great gray owls in the United States: a technical conservation assessment*. USDA Forest Service Gen. Tech. Rep. RM-253. Fort Collins, Colorado.
- McClelland, B.R. 1979. The pileated woodpecker in forests of the Northern Rocky Mountains. Pages 283-299 in *Role of insectivorous birds in forest ecosystems*. Academic Press.
- Montana Natural Heritage Program. Environmental Summary Report for Latitude 46.57204 to 46.66839 and Longitude -112.65651 to -112.80017. Retrieved on 6/30/2026.
- Wittinger, W.T. 2002. Grizzly bear distribution outside of recovery zones. Unpublished memorandum on file at USDA Forest Service, Region 1. Missoula, Montana. 2pp.

AIR QUALITY:

Air Quality	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Smoke	X				X				X					
Dust	X				X				X					
Action														
Smoke		X				X				X			N	1
Dust		X				X				X			N	

Air Quality Mitigations:

- Any burning associated with the Luke Mountain 2 Salvage would be completed in accordance to the rules of the Montana Idaho Smoke Management Coordination Group.
- Dust may be produced by truck hauling during dry periods.

ARCHAEOLOGICAL SITES / AESTHETICS / DEMANDS ON ENVIRONMENTAL RESOURCES:

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Historical or Archaeological Sites	X				X				X					
Aesthetics	X				X				X					
Demands on Environmental Resources of Land, Water, or Energy	X				X				X					
Action														
Historical or Archaeological Sites		X				X				X			Y	1
Aesthetics	X				X				X					
Demands on Environmental Resources of Land, Water, or Energy	X				X				X					

1. A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. Site 24PW1182 is in the APE but should not be impacted with timber harvest

activities. No additional archaeological investigative work will be conducted in response to this proposed development.

Mitigations:

Area of potential archaeological significance would be delineated, and equipment would not be permitted inside during operations.

OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA: *List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.*

- North Avon Timber Sales Environmental Assessment (DNRC, 2021)

Impacts on the Human Population

Evaluation of the impacts on the proposed action including **direct, secondary, and cumulative** impacts on the Human Population.

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Health and Human Safety	X				X				X					
Industrial, Commercial and Agricultural Activities and Production	X				X				X					
Quantity and Distribution of Employment	X				X				X					
Local Tax Base and Tax Revenues	X				X				X					
Demand for Government Services	X				X				X					
Access To and Quality of Recreational and Wilderness Activities	X				X				X					
Density and Distribution of population and housing	X				X				X					
Social Structures and Mores	X				X				X					

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Cultural Uniqueness and Diversity	X				X				X					
Action														
Health and Human Safety	X				X				X					
Industrial, Commercial and Agricultural Activities and Production	X				X				X					1
Quantity and Distribution of Employment		X				X				X				2
Local Tax Base and Tax Revenues	X				X				X					
Demand for Government Services	X				X				X					
Access To and Quality of Recreational and Wilderness Activities	X				X				X					
Density and Distribution of population and housing	X				X				X					
Social Structures and Mores	X				X				X					
Cultural Uniqueness and Diversity	X				X				X					

Comments:

1. The parcels are currently leased for grazing. That use would remain unchanged with either alternative.
2. The action alternative would provide employment for one logging company throughout the duration of the project.

Locally Adopted Environmental Plans and Goals: List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

- None

Other Appropriate Social and Economic Circumstances:

Costs, revenues and estimates of return are estimates intended for relative comparison of alternatives. They are not intended to be used as absolute estimates of return. The estimated stumpage is based on comparable sales analysis. This method compares recent sales to find a market value for stumpage. These sales have similar species, quality, average diameter,

product mix, terrain, date of sale, distance from mills, road building and logging systems, terms of sale, or anything that could affect a buyer's willingness to pay.

No Action: The No Action alternative would not generate any return to the trust at this time.

Action: The timber harvest would generate additional revenue for the Common School Trust. The estimated return to the trust for the proposed harvest is \$40,000 based on an estimated harvest of 700,000 board feet (4725 tons) and an overall stumpage value of \$8.46 per ton. Costs, revenues, and estimates of return are estimates intended for relative comparison of alternatives, they are not intended to be used as absolute estimates of return.

References

DNRC 1996. State forest land management plan: final environmental impact statement (and appendixes). Montana Department of Natural Resources and Conservation, Forest Management Bureau, Missoula, Montana.

DNRC. 2010. Montana Department of Natural Resources and Conservation Forested State Trust Lands Habitat Conservation Plan: Final EIS, Volume II, Forest Management Bureau, Missoula, Montana.

Does the proposed action involve potential risks or adverse effects that are uncertain but extremely harmful if they were to occur?

No known risks or adverse effects have been identified.

Does the proposed action have impacts that are individually minor, but cumulatively significant or potentially significant?

No known risks or adverse effects have been identified.

Environmental Assessment Checklist Prepared By:

Name: Sean Steinebach
Title: Service Forester
Date: July 17, 2026

Finding

Alternative Selected

The EA Checklist has analyzed and disclosed the potential environmental impacts of two alternatives:

1. Proposed Action (Alternative Selected)
2. No Action

I have decided to approve the Proposed Action with all mitigations and controls recommended in the EA Checklist and is hereby adopted. My decision is based on a thorough review of the environmental assessment and the following conclusions arrived at through that review:

- 1) I conclude that the proposed action will achieve the project objectives of a) recovering value associated with wind-thrown Douglas-fir b) preventing further infestation of Douglas-fir beetles in remaining stands.
- 2) I further conclude that, by virtue of design, mitigations and controls adopted and integrated into the proposed action, the project objectives will be achieved in a manner that avoids significant adverse impacts to the human and physical environment.

I am also satisfied that the proposed action has been developed through an appropriate process involving public participation, interdisciplinary methods and inter-entity consultations; that it reflects understandings, conclusions and agreements arrived at through such collaborative work; and that it is true and faithful to the trust land mission provided by the Montana Constitution and forestry laws of the State of Montana, as well as principles laid out in the State Forest Land Management Plan and Rule under which policy the trust land forestry mission is pursued.

Significance of Potential Impacts

I am satisfied that all pertinent resources and environmental values have been properly identified and studied through the project development process. Based on my review of the environmental analysis, I have concluded that the proposed action will not cause any significant adverse impacts - direct, secondary or cumulative - on the human and physical environment. With respect to the significance of potential impacts, I find there are none that should be regarded as severe, enduring, geographically widespread or frequent.

Further, I find that the quantity and quality of the various resources, including any that may be considered unique or fragile, will not be adversely affected to a significant degree and that the seven criteria for determining significance of impacts contained in ARM 26.2.644 have been addressed completely. I find in the proposed action no precedent for future actions that would cause significant impacts and I find no conflict with local, state or federal laws, requirements or formal plans. In summary, I find that some adverse impacts are avoided altogether by means of project design and that others are controlled and mitigated to the extent that they do not become significant.

Need for Further Environmental Analysis

☐

EIS

☐

More Detailed EA

☒

No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Craig Hansen

Title: Anaconda Unit Manager

Date: July 20, 2026

Signature

Craig Hansen

Attachment A - Maps

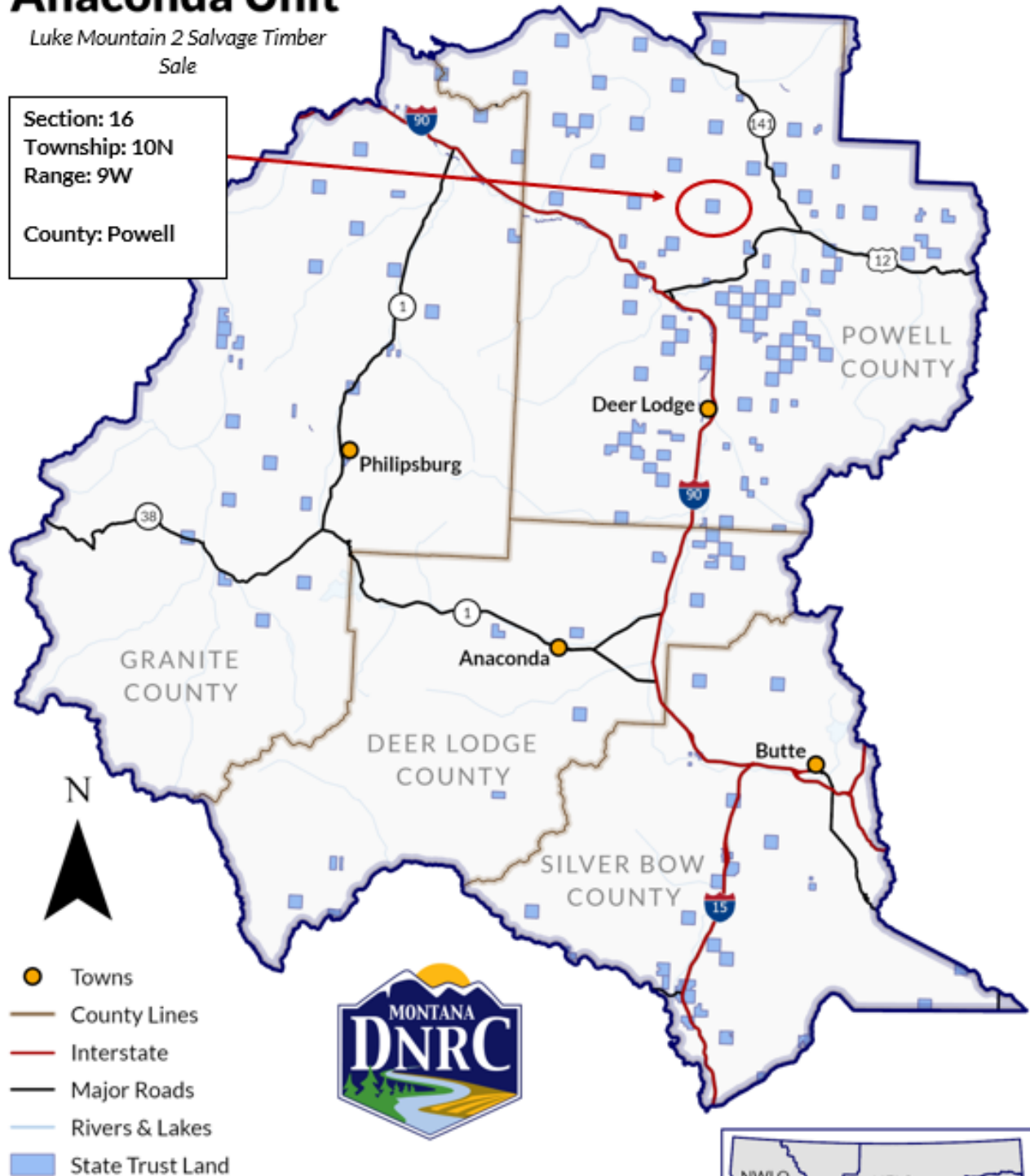
State Trust Land Vicinity Map

Anaconda Unit

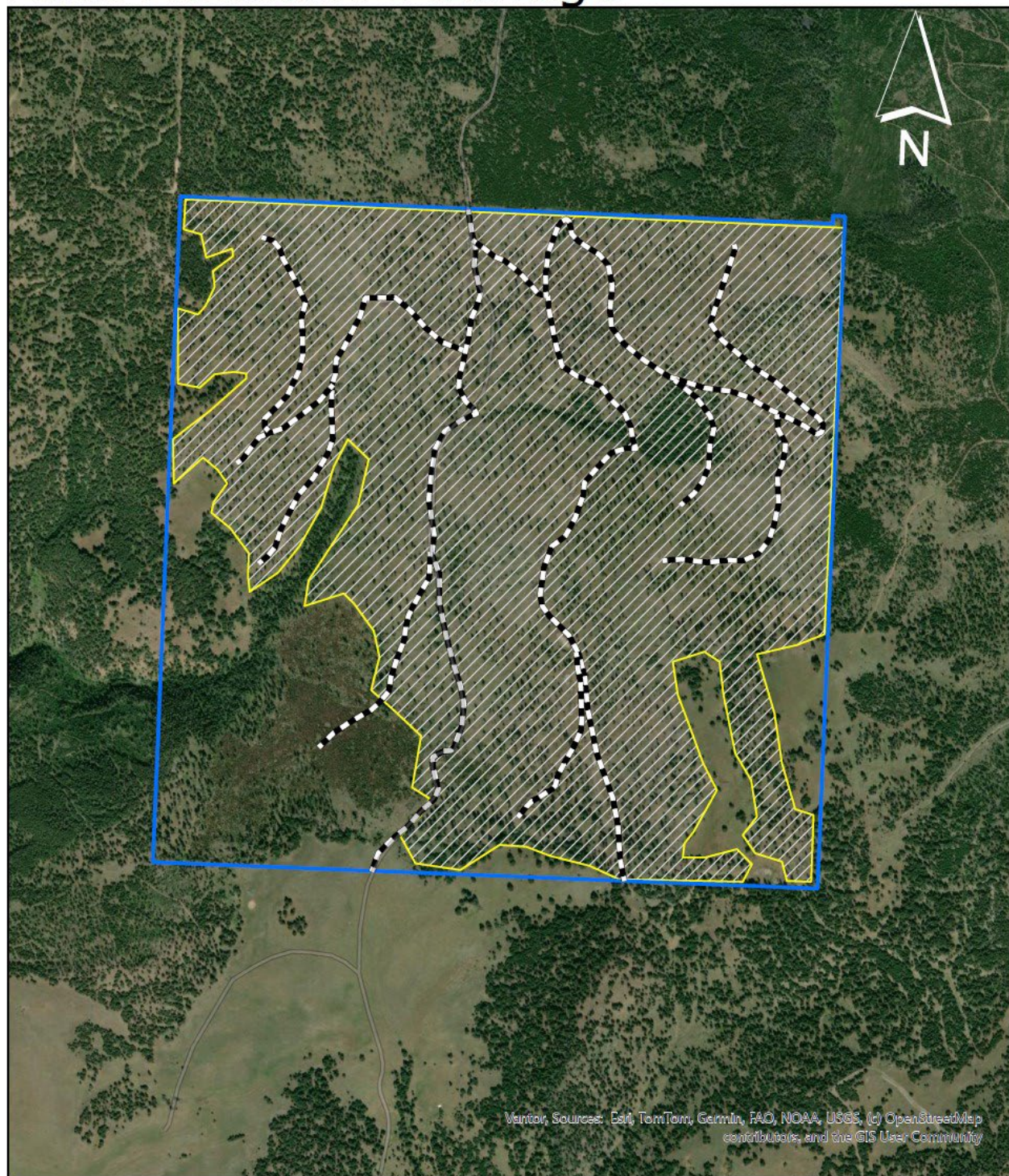
Luke Mountain 2 Salvage Timber Sale

Section: 16
Township: 10N
Range: 9W

County: Powell



Luke Mountain 2 Salvage



-  LukeMtnRoads
-  T10NR9WS16
-  SalvageUnit

Attachment A-2

0 0.13 0.25 0.5 Miles