

Environmental Assessment Checklist

Project Name: Elk Trail Limited Access Timber Sale
Proposed Implementation Date: December, 2025
Proponent: Anaconda Unit, Southwest Land Office, Montana DNRC
County: Silverbow

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 Elk Trail Limited Access Timber Sale. The project is located approximately 6 miles southwest of Butte (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	S 16, T02 N, R08 W, ALL SEC 16	640	384
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:

- Generate revenue for the Common Schools Trust.
- Improve forest growth and resiliency.
- Improve relations with local landowners.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	# Acres
Clearcut	
Seed Tree	
Shelterwood	
Selection	384
Old Growth Maintenance/Restoration	
Commercial Thinning	
Salvage	
Total Treatment Acres	384
Proposed Forest Improvement Treatment	# Acres
Pre-commercial Thinning	
Site preparation/scarification	
Planting	384
Proposed Road Activities	# Miles
New permanent road construction	
New temporary road construction	1.64
Road maintenance	8.69
Road reconstruction	
Road abandoned	
Road reclaimed	
Other Activities	

Duration of Activities:	12/01/2025-12/01/2028
Implementation Period:	12/01/2025-12/01/2028

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),
- and all other applicable state and federal laws.
- The Montana DNRC Forested State Trust Lands Habitat Conservation Plan (HCP) (DNRC 2010)

Project Development

SCOPING:

- DATE:
 - 2-25-25
- PUBLIC SCOPED:
 - The scoping notice was posted on the DNRC Website:
<https://dnrc.mt.gov/News/scoping-notice>
 - Notice mailed to adjacent landowners and statewide timber scoping list.
- AGENCIES SCOPED:
 - Montana Department of Fish, Wildlife and Parks (FWP)
 - United States Forest Service
- COMMENTS RECEIVED:
 - How many: Three
 - Concerns:
 - A local resident called to express support for the project and that he would like to see roads sprayed for weeds after they are done being used.
 - FWP suggested that project operations do not occur during elk calving season. FWP also encouraged the project to promote aspen regeneration encouraged and that weeds would be sprayed following operations.
 - A neighboring landowner expressed concern about new road construction and whether they would be left open to public access following the project's completion.
 - Results:
 - Roads would be spot sprayed for weeds.
 - No mechanized activities will occur during elk calving season to address FWP's concerns.
 - The public would not have access to the section being harvested via any new roads. All new roads will be temporary roads and would be reclaimed to varying degrees following harvest.

DNRC specialists were consulted, including: DNRC Hydrologist/Soil Scientist, Andrea Stanley and Jeff Schmalenberg; DNRC Wildlife Biologist, Garrett Schraier; DNRC Silviculturist, Tim Spoelma; DNRC Archaeologist, Patrick Rennie.

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.
- **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.

ALTERNATIVES CONSIDERED:

No-Action Alternative: The no action alternative would not treat any acres and existing conditions would persist. No temporary road would be constructed.

Action Alternative: The action alternative would treat 384.15 acres of stagnated Douglas fir through Individual/Select tree harvest. Uneven-aged methods are cutting procedures that regenerate and maintain a multi-aged structure. The proposed yarding would include up to 2.3 miles of temporary road, as well as improvements to 14 miles of existing permanent road on the Smith Ranch land.

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:

There is no known harvest history in the state-owned parcels where this sale is being conducted.

The existing stands that are part of this permit consist of majority mature Douglas fir with some immature lodgepole pine and a small amount of quaking aspen and Englemann spruce. Stocking charts mark these stands as overstocked, indicating stagnation, increased fire risk and reduced vigor, making these stands susceptible to insects and disease. These stands are primarily a single-age class, with present trees

being approximately 120 to 150 years old. The average number of trees per acre for the entire area is 245, the quadratic mean diameter is 10.6" and the average number of logs per MBF is 29.

Vegetation Existing Conditions:

Harvest Unit	Habitat Group	Fire Regime	Current Cover Type	Age Class (years)	DFC	RX	Acres
1	Moderately warm and dry (westside)	Mixed-to-Stand Replacing	Douglas Fir	100-149	Douglas Fir	Individual/Select Tree Harvest	194.
2	Moderately warm and dry (westside)	Mixed-to-Stand Replacing	Douglas Fir	100-149	Douglas Fir	Individual/Select Tree Harvest	190.

Fire Hazard/Fuels: This area has experienced both spruce budworm and mountain pine beetle mortality over the last 15-20 years. Most of the lodgepole pine has fallen over in pockets, creating large amounts of ground fuel loading where present. Much of the Douglas fir has budworm damage as well. Likewise, there is heavy fine ground fuel loading from pinegrass. These factors could contribute to a fire of greater intensity should one occur.

Insects and Diseases: Mountain pine beetle mortality over the past 15-20 years has been significant in the area but has run its course. The only remaining sign of mountain pine beetle are residual snags. It is estimated that within the project area- the vast majority of which are in adjacent stands- over 80% of lodgepole pine trees have experienced MPB induced mortality.

Spruce budworm damage over the past 5 years has increased significantly. Nearly all Douglas-fir trees of all sizes and age classes display budworm damage through branch/needle flagging, dead tops and silk casing.

Sensitive/Rare Plants: MNHP does not list any sensitive or rare plants within the project area.

Noxious Weeds: Spotted knapweed, Canadian thistle, yellow toadflax and leafy spurge are all present within the project area in small to moderate amounts.

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					1

Vegetation	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Age Class	X				X				X					1
Old Growth	X				X				X					1
Fire/Fuels	X				X				X					1
Insects/Disease	X				X				X					1
Rare Plants	X				X				X					1
Noxious Weeds	X				X				X					1
Action														
Current Cover/DFCs	X				X				X				N	2
Age Class			X			X				X			N	3
Old Growth	X					X				X			N/A	4
Fire/Fuels			X				X				X		N	5
Insects/Disease			X				X				X		N	6
Rare Plants	X				X				X				N/A	7
Noxious Weeds		X				X				X			Y	8

Comments:

1. Implementation of the no-action alternative would result in no new vegetation resource impacts on the project area. Vegetation resource conditions would remain like those described in the existing conditions.
2. Under the action alternative, the current cover of the proposed harvest units would not change, and Douglas fir would remain the cover type.
3. The age structure of the proposed harvest units will become much younger when the present Douglas fir is removed. The Douglas fir and lodgepole pine regeneration will provide a multistoried age structure.
4. There is no old growth present in the proposed harvest units.
5. The fuel reduction that would occur because of the proposed harvest would reduce existing wildfire risk. A portion of existing ground fuels and most of the slash generated by the project would be piled and burned. At least 10 tons/acre of coarse woody debris would be retained and is not considered a significant fuel source.
6. There is a significant presence of spruce budworm in the proposed harvest units. The release of resources by harvest activities will provide additional nutrients to the residual trees to help bolster their defenses against insects and disease, should any persist. Additionally, the increase in spacing between trees will help reduce budworm infestations, helping to discourage further budworm infestations.
7. MNHP did not indicate any rare and protected plants in the project area. Should any rare or protected plants be found, they will be protected.
8. Several noxious weeds have been found in the project area and nearby areas, including spotted knapweed, Canadian thistle, yellow toadflax and leafy spurge. Equipment cleaning, inspection, and post-harvest spraying would occur as needed. Sale administration would include weed monitoring. Winter harvest would reduce the risk of weed seed spread and introductions.

Vegetation Mitigations:

- Create space between leave trees to mitigate further spruce budworm damage.
- Harvest prescriptions would emulate natural disturbances historically present in the landscape.
- Logging equipment would be washed before entering the sale area to limit noxious weed introduction.
- Grass seed would be planted on newly disturbed road surfaces to expedite grass establishment, thereby limiting the resources available for weeds to become established.
- Herbicide would be applied to spot infestations of weeds along roadways and landings, but spraying would be avoided in any locations where sensitive plant species are detected.
- Slash produced during harvest would be piled and burned post-harvest to reduce fuel loading. In addition, any slash that remains in the woods would be scattered, limbed and slashed to a depth of no more than 18 inches.
- Snags, snag recruits and coarse woody debris would be managed according to ARM 36.11.411 through 36.11.414. Clumps of existing snags could be maintained where they exist to offset areas without sufficient snag presence. Coarse woody debris retention would emphasize retention of downed logs 15-inches diameter and larger.

Environmental Effects:

No-Action Alternative- Direct, Indirect and Cumulative Effects:

The No-Action alternative would not change the current existing conditions within the proposed project area. The proposed management activities—including commercial harvest, pre-commercial harvest, site preparation, planting, weed management, road maintenance, and road abandonment—would not occur. These stands would remain at overstocked levels and at greater susceptibility to insects, disease, or catastrophic fire.

Concerns of potential hazardous forest fuel loading would not be treated. Stands would continue to grow with decreased vigor and would show increased mortality. As a result, there would be a low to moderate risk of direct impacts, and low to no impacts in the secondary and cumulative impacts to the vegetative community.

Rare plants and noxious weeds would be unaffected. Treatment of noxious weeds would likely occur under another project if necessary.

Action Alternative: Direct, Indirect, and Cumulative Effects:

This proposal is one commercial timber harvest under one sale of approximately 384.15 acres, to remove an estimated 1.6 million board feet. No additional sales or permits are planned to occur within section 16, township 2 north, range 8 west. The silvicultural prescription will consist of a Individual/ Tree Select leaving 12-20 trees per acre, with clumps of trees being preferred to mitigate future windfall. Douglas fir will be the preferred leave tree species.

Individual/Select Tree Harvest

Individual Tree Selection: would leave individual trees of all size classes are removed more or less uniformly throughout the stand, to promote growth of the remaining trees and to provide space for regeneration. Under an Individual Tree Selection, leave trees would primarily be co-dominant and dominant Douglas fir trees in the stand with good form and vigor. Smaller DBH Douglas fir leave trees with good form and vigor would also be lightly scattered throughout the stands. The typical application would look at leaving 40 to 80 square feet of basal area. Some stands may be reduced to 20 square feet of basal area because of the removal of trees with poor crown or defect. Additionally, leaving trees with good wildlife characteristics, greater than 21" DBH at 2 TPA and retain 2 dead TPA greater than 21" DBH with good wildlife characteristics.

Fuel treatment after the harvest would include piling any residual slash left on the ground, then returning to burn said slash piles when appropriate. State CWD (coarse woody debris) standards would still be adhered to. A minimum of two snags and/or two snag recruits will be left per acre for wildlife and regeneration purposes.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions:

The project is located in the northern foothills of the Highland Mountains and about 4 miles south of Butte, MT. The underlying geology are plutons of the Boulder Batholith which is composed of coarse- to fine-grained granitic rock (McDonald and others, 2012). Bouldery outcrops and scattered round boulders at the ground surface occur throughout the project area. These features are anticipated to limit skid trail locations in some areas.



45.9312, -112.6035	45.9305, -112.5996
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Example of boundary outcrops occurring within proposed harvest areas.

The parcel has been in Trust Lands ownership likely since the Enablement Act and is classified grazing with an active grazing lease for 99 AUM. No evidence or record of commercial timber harvest or management has occurred within this section except for firewood collection. Other historic disturbances include limited prospecting with three small pits located within the parcel. Concentrations of existing coarse woody debris (CWD) are appropriate to the site due to no historic harvest and limited site disturbances.

Soils are deep, well drained, with rapid permeability, low cohesion and low erosive resistance when compared to other soils in Montana. Soil textures are loamy sand or sandy loam over coarse sand or grus (coarse fragments of disintegrated granitic rock). Slopes within the project area are generally less than 45% (see map). Indicators of slope instability (e.g., scarps, debris fans, tilted or pistol-butted trees) have not been observed in the project area.

Conifer stands and proposed harvest are generally located on the north-facing slopes within the project parcel. South-facing slopes have less tree and vegetative cover, with thin organic horizons and shallow-rooted ground cover vegetation. Soils disturb and displace easily underfoot on the north facing slopes due to loose soil and parent material and limited vegetated cover and root strength.

Existing roads within and accessing the project area that have any grade greater than 6-8% erode readily due to the reduced infiltration and increased runoff. Severe gullyng is evident in several areas along the proposed haul route.

An abandoned road in the southwest corner of the parcel has sections of steep (>10%) and eroding material attributable to illegal motorized use.

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
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				2, 3, 4, 7
Erosion		X				X				X				2, 3, 4, 5,
Nutrient Cycling		X				X				X				4, 5

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		
Slope Stability	X				X				X					6
Soil Productivity		X				X				X				4, 5

Comments:

1. Implementation of the no-action alternative would result in no new soil resource impacts in the project area. Soil resource conditions would remain similar to those currently at the site.
2. The proposed harvest system would be ground-based during dry, frozen or snow covered operating conditions. Risk of soil erosion on granitic parent materials in forested environments is well documented and observed on similar ground (DNRC, 2011). A proactive erosion mitigation approach will be particularly necessary on this landscape. See additional mitigations to reduce the risk of increased risk of erosion below.
3. Direct impacts by physical detrimental disturbance would likely occur if proposed ground-based yarding occurs on bare ground. Soil impacts within harvest units treated with ground-based yarding system(s) on similar soils have exceeded 20% (the threshold for detrimental by the Montana State Forest Land Management Plan) when they've occurred outside of frozen, dry or snow covered conditions (DNRC, 2011).
4. 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.
5. According to Graham et al. (1994), a minimum of 10 tons/acre of coarse woody debris (CWD) would be a desired post-harvest condition to maintain forest productivity for this forest habitat type. The action alternative would include increasing or maintaining CWD concentrations per mitigation described below.
6. Unstable slopes were not observed on site and in recent bare-earth Lidar data. The project is anticipated to have no risk to slope stability.
7. Avoid disturbances to rock outcrops and boulders.

Soil Mitigations:

- BMP's would be implemented on all roads and within the units. A portion of lopped and scattered slash would be left in the units to mitigate erosion risks and retain nutrients on-site.
- Ground-based logging equipment (tractors, skidders, and mechanical harvesters) would be limited dry, frozen or snow covered conditions and slopes less than 45% unless not causing excessive disturbance.

- The Contractor and Sale Administrator should agree to a general skidding or dispersed skidding plan prior to equipment operations. Skid trails would be mitigated as needed and concurrent with harvesting and yarding operations with water bars and/or slash. During winter operations, avoid concentration of snowmelt by breaching berms at drainage locations.
- The properties of the soils in the proposed harvest units make limiting harvest operations to dry or frozen conditions critical for preserving soil productivity. 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.
- For nutrient retention and erosion risk mitigation, a minimum of 10 tons/acre of coarse and fine woody debris would be left on site (or return-skidded from landings). Existing CWD on site would remain undisturbed as much as possible.
- Mitigate erosion risk on primary skid trails, reclaimed roads, and obliterated temporary roads by adding higher levels of coarse and fine woody material. Require 80% ground cover with trampled slash on steeper (>10%) portions of skid trails where equipment operation occurs on non-snow-covered ground. Use waterbars and or earthen barriers to discourage recruitment into motorized use after the project.
- Site preparation by mechanical scarification is not recommended for this project area due to the erosive nature of the soils and parent material (decomposed granite).

Soil References:

DNRC, 2011. DNRC compiled soils monitoring report on timber harvest projects, 2006-2010, 1st Edition. Department of Natural Resources and Conservation, Forest Management Bureau, Missoula, MT.

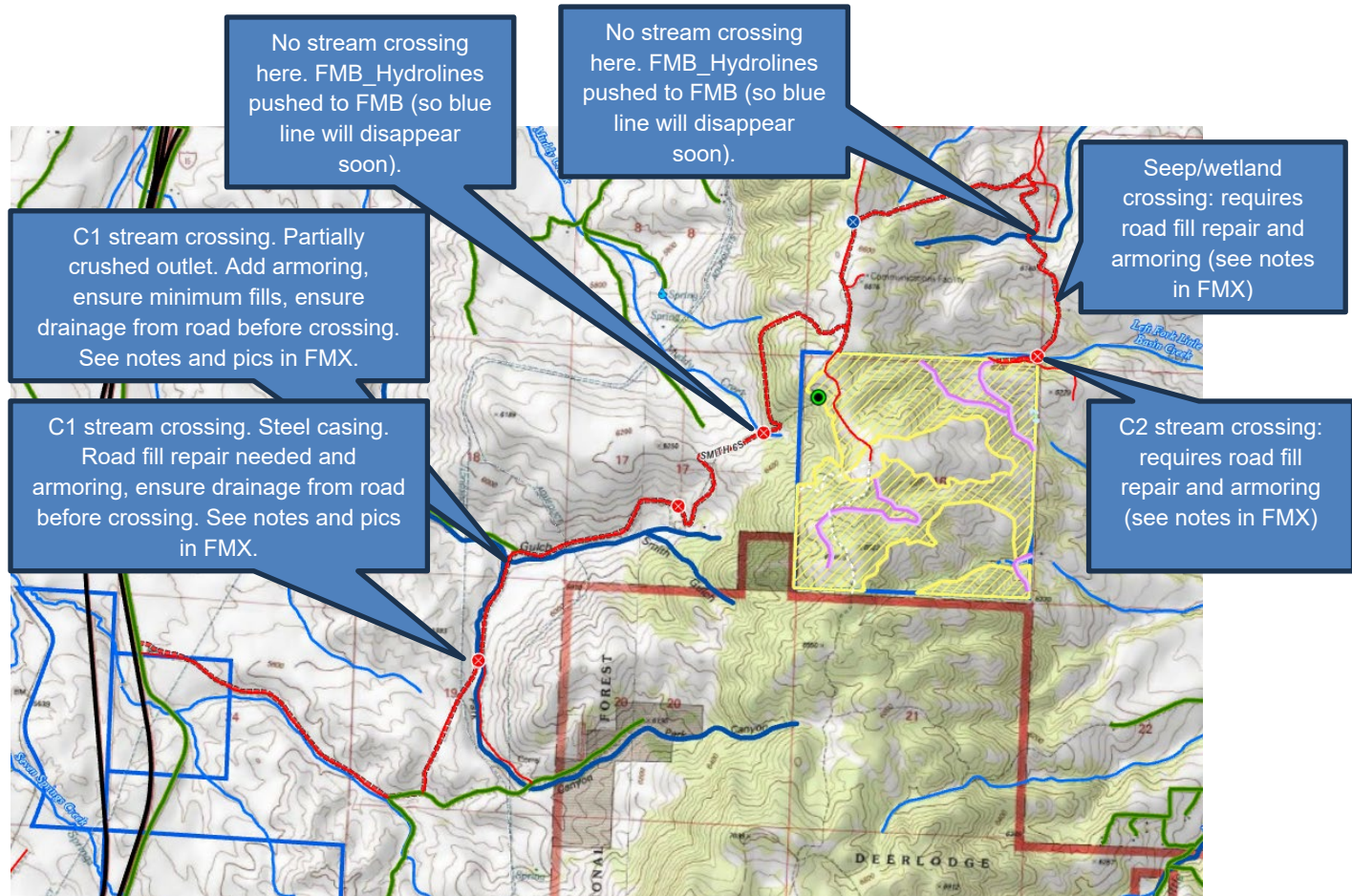
Graham, R.T., Harvey, A.E., Jorgensen, M.F., Jain, T.B., and Page-Dumrose, D.S., 1994, Managing Course Woody Debris in Forests of the Rocky Mountains. U.S., Forest Service Research Paper INT-RP-477. Intermountain Research Station. 16p.

WATER QUALITY AND QUANTITY:

Water Quality and Quantity Existing Conditions:

The proposed project is located along the top ridge of the northern foothills of the Highland Mountains south of Rucker, Montana. The majority of the proposed harvest areas are on the eastern side of the mountains and in the Little Basin Creek watershed. The remaining harvest area and haul route are located on the western side of the range and in the Muddy Creek and Smith Gulch watersheds. None of the above-mentioned streams are listed as impaired by the 303d-list and Montana DEQ. The majority of the proposed harvest area is within the Butte municipal watershed.

The harvest areas occur in the headwaters of these streams and mostly above channel initiation except for some streams occurring at the eastern and northern edges of the project area. The proposed haul route crosses several streams (see map below).



The streams occurring in the southeastern portion of the state parcel and harvest area are spring-fed and likely perennial with now downstream surface connection. These streams would require SMZ setbacks. The stream north of the state parcel and proposed harvest area and state parcel is the Left Fork Little Basin Creek and the associated SMZ/RMZ boundary would be near the parcel and proposed harvest boundary. Streams and isolated wetlands within the project area have sign of moderate to heavy cattle use including hoof shear and punging.

Existing roads within the state parcel are meeting BMPs. However, an abandoned road in the southwestern corner of the parcel is very steep in sections and is unstable.

Private ranch roads will be used for parcel access and hauling to the paved I-15 frontage road. These roads have sections of severe erosion and gulying and stream crossings that are in need of repair, armoring, and sediment filtering to meet Montana Forestry BMPs.

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					N/A	1
Water Quantity	X					X			X					N/A	1
Action															
Water Quality		X				X				X				Y	2, 5, 6
Water Quantity		X				X				X				Y	3, 4

Comments:

1. With no action, no timber harvesting or related activities would occur. Water quality conditions would likely persist similar to its current condition. Similarly, no risk of change to current fluctuations in annual water yield or stream flow would result.
2. 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.
3. Changes to stream flow hydrology (water quantity or water flow) are expected to not be detectable with the Action Alternative within the existing creeks. 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).
4. The proposed removal of vegetation some draw bottoms that currently do not meet the definition of a stream, may produce surface flow and scour sufficient to change their condition and meet the definition of a stream. This change would not necessarily be adverse or outside a natural spectrum of natural hydrologic condition. Scour at draw bottoms could also be anticipated due to the natural low cohesion of the sand-like decomposed granite parent material.
5. Ensure road surface drainage is maintained on all roads and skid trails.
6. Proposed harvest activities exclude the SMZs and wetlands occurring within the project area.

Water Quality & Quantity Mitigations:

- Maintain or improve road drainage as needed to meet Montana Forestry BMP standards.
- Ensure skid trails and new roads are not located in draws.

- Armoring all drainage feature outfalls with energy dissipation including rock and slash.

Water 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:

The nearest fisheries populations to the project area are in Little Basin Creek east (>2.5 miles) of the project area and Divide Creek southwest (>3 miles) of the project area and haul route. Fish habitat does not occur in the project area, proposed harvest would not be adjacent to any fish-bearing streams, and the proposed haul route would not cross any fish streams.

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														
Populations	X				X				X				N/A	
Connectivity	X				X				X				N/A	
Sediment	X				X				X				N/A	
Flow Regimes	X				X				X				N/A	
Woody Debris	X				X				X				N/A	
Stream Shading	X				X				X				N/A	
Stream Temperature	X				X				X				N/A	
Action														
Populations	X				X				X				N/A	
Connectivity	X				X				X				N/A	
Sediment	X				X				X				N/A	
Flow Regimes	X				X				X				N/A	
Woody Debris	X				X				X				N/A	
Stream Shading	X				X				X				N/A	
Stream Temperature	X				X				X				N/A	

Fisheries Comments:

1. No proposed introduction, removal, or suppression of native or non-native fish species would occur.
2. No known fish habitat occurs within the project area.
3. No riparian or SMZ timber harvest is proposed as part of the Action Alternative.
4. Proposed timber harvest areas are greater than 2 miles from any known fish-bearing waterbody.

Fisheries Mitigations:

No additional project-specific mitigations necessary beyond the project design and the mitigations listed in the Water Resources analysis.

WILDLIFE:

Wildlife Existing Conditions: The project area is a mix of forested Douglas-fir stands with trace amounts of lodgepole pine stands in sawtimber and pole timber size classes that are intermixed with naturally open grass/shrub habitats. The project area contains habitat for a diverse array of wildlife that rely on the upland coniferous forests and non-forested areas of western Montana. Some use of the vicinity by grizzly bears is possible during the non-denning period. There are limited Canada lynx habitats in the project area. Little or no use of the project area by wolverine would be anticipated. Potential habitat exists for fisher, flammulated owls, and pileated woodpeckers in the project area. Potential fringed myotis and Townsend's big-eared bat foraging habitats may exist in the project area; some potential hoary bat roosting habitats could exist in the project area. Big game summer range and elk winter range exist in the project area. Hiding cover for big game species exist in the project area and the project area likely receives recreational hunting pressure; potential big game security habitats exist in the project area that may contribute to security habitats in the cumulative effects analysis area.

No-Action: No potential for disturbance to wildlife would be anticipated. No timber management or associated activities would be conducted, thus no appreciable changes to existing habitats would occur. Continued maturation could improve grizzly bear, Canada lynx, fisher, and pileated woodpecker habitats, as well as big game summer range and winter range attributes, but could reduce flammulated owl habitat quality and big game forage attributes over the long term. No changes to large diameter trees or snags would occur in the project area. No appreciable changes to riparian habitats would be anticipated. Generally, negligible direct, indirect, or cumulative effects to wildlife would occur.

Action Alternative (see Wildlife table below):

Roughly 401 acres of forested habitats, including 339 acres (77%) of existing mature Douglas-fir and lodgepole pine stands with reasonably closed canopies would be commercially harvested. In general, habitats for those species adapted to open stands of Douglas-fir stands similar to areas that historically experienced low frequency, high intensity, stand replacement burns and/or mixed severity, somewhat infrequent burns with moderate tree mortality would increase in the project area. Conversely habitats for wildlife species that prefer somewhat dense, mature Douglas-fir stands would be reduced. Across proposed units, reductions in canopy cover would be anticipated, but proposed prescriptions would retain some large trees, which could continue to provide habitats for a variety of wildlife species that rely on larger Douglas-fir. Reductions in visual screening would occur. Prescriptions would retain at least 2 large snags and 2 large recruitment trees per acre (both >21 inches dbh where they exist, otherwise next largest size class available) and where sufficient snags are not available additional large leave trees would

be retained to meet this requirement. Losses of snags and large trees would be additive to reductions in snags and large trees with any ongoing timber management activities in the vicinity. Short-term increases in disturbance potential associated with proposed road construction and use, timber management, and any planting would be anticipated, but overall, a negligible increase in potential human disturbance would be anticipated following proposed treatments. 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.

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	1
Canada lynx (Felix lynx) Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone		X				X			Y	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					3
Wolverine (Gulo gulo) Habitat: Alpine tundra and high-elevation boreal forests that maintain deep persistent snow into late spring		X				X				4
Sensitive Species										
Bald eagle	X				X					3

Wildlife	Effects								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
<i>(Haliaeetus leucocephalus)</i> Habitat: Late-successional forest less than 1 mile from open water										
Black-backed woodpecker <i>(Picoides arcticus)</i> Habitat: Mature to old burned or beetle-infested forest	X				X					3
Fisher <i>(Martes pennanti)</i> Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian		X				X			Y	5
Flammulated owl <i>(Otus flammeolus)</i> Habitat: Late-successional ponderosa pine and Douglas-fir forest		X				X			Y	6
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	7
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	8
Peregrine falcon <i>(Falco peregrinus)</i> Habitat: Cliff features near open	X				X					3

Wildlife	Effects								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
foraging areas and/or wetlands										
Pileated woodpecker <i>(Dryocopus pileatus)</i> Habitat: Late-successional ponderosa pine and larch-fir forest		X				X			Y	9
Townsend's big-eared bat <i>(Plecotus townsendii)</i> Habitat: Caves, caverns, old mines		X				X			Y	10
Big Game Species										
Elk		X				X			Y	11,12
Whitetail deer		X				X			Y	11,12
Mule Deer		X				X			Y	11,12
Moose		X				X			Y	11,12
Bighorn Sheep	X				X					3

Comments:

W-1 The project area is 72 miles south of the Northern Continental Divide Ecosystem grizzly bear recovery area and 62 miles northwest of the Yellowstone Ecosystem grizzly bear recovery area; the project area is 50 miles south of '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). Individual animals could use the project area throughout the non-denning period. Approximately 417 acres (65%) of the project area appear to have sufficient cover to potentially serve as hiding cover for grizzly bears. No open roads exist in the project area but proximity to open roads in the vicinity affects grizzly bear security habitats in the project area. No grizzly bear security habitats (≥ 0.3 miles from roads receiving motorized use and $\geq 2,500$ acres in size) exist solely within the project area, but habitats in the project area could contribute to potential security habitats that extend beyond the project area. Within the cumulative effects analysis area, there are up to 98 miles of open or privately controlled roads (1.7 mi./sq. mi., simple linear calculation) that could facilitate human-bear interactions and reduce the effectiveness of those areas for grizzly bears. Many of these roads are ranch roads or other private roads that may not introduce potential for human-bear conflicts, but due to the uncertain nature of those roads, they will be considered open for this analysis. Approximately 10,167 acres (29%) are distant enough from open roads and in blocks large enough to be useful for grizzly bears to be considered grizzly bear security habitats. Ongoing timber management in the cumulative effects analysis area could be adding disturbance to grizzly bears and/or altering existing habitats.

Grizzly bears could be affected directly through increased road traffic, noise, and human activity, and indirectly by altering the amount of hiding cover and forage resources in the project area. Proposed activities could occur during the denning period or the non-denning period. Proposed activities conducted in the denning period would not be expected to disturb grizzly bears; some disturbance to grizzly bears would be possible with proposed activities that may occur during the non-denning period. Overall, the proposed activities would occur in areas where somewhat limited grizzly bear use would be anticipated, thus potential for disturbance and displacement of grizzly bears would be expected to have minor effects on grizzly bears.

No new permanent road construction would occur, but 1.7 miles of temporary roads would be constructed with the proposed activities. Overall, no changes in open road density or motorized public access would be anticipated. Negligible changes to non-motorized public access could occur, thus no appreciable changes in contact between humans and grizzly bears would be expected. Hiding cover would be reduced on most of the 321 acres (77%) of hiding cover proposed to receive treatments. Some hiding cover in the form of brush, shrubs, and sub-merchantable trees would persist in some of the units, albeit at a reduced level from the existing condition. Despite reductions in the near term, hiding cover would increase through time across all proposed units as young trees and shrubs regenerate over the next 5 to 10 years; proposed planting could expedite the development of hiding cover for grizzly bears in proposed units. Roughly 321 acres within 1 potential block of grizzly bear security habitats would be commercially harvested, which would reduce hiding cover attributes in a small portion of the area contributing to the larger block of potential security habitats in the vicinity. Overall, a minor reduction in security habitat would occur given the small area that would be altered, the location of those changes, and the lack of changes in open roads in the project area. Any unnatural bear foods or attractants (such as garbage) would be kept in a bear resistant manner. Any added risk to grizzly bears associated with unnatural bear foods or attractants would be minimal. Continued use of the project area and cumulative effects analysis area by grizzly bears would be anticipated at levels similar to present.

W-2 The project area ranges from approximately 6,120 to 6,880 feet in elevation and is dominated by Douglas-fir with smaller amounts of lodgepole pine. Approximately 7 acres (1%) of winter foraging habitats occur in the project area. Thus, roughly 99% of the project area is unsuitable for Canada lynx. Existing lynx habitats are poorly connected and exist in a matrix of unsuitable types. Generally, due to the large amounts of unsuitable habitats and the limited amounts of suitable habitats, overall limited or no use by Canada lynx of the project area would be anticipated. Like the project area, the habitats in the cumulative effects analysis area are largely unsuitable for Canada lynx. The majority of the cumulative effects analysis area is in open habitats, shrubs, herbaceous, urban, or water (67%) that would not be used by Canada lynx; while forested habitats (20%) are the next most common type in the cumulative effects analysis area, many of the stands are in variations of Douglas-fir forests that are likely marginal quality for Canada lynx. Connectivity of lynx habitats within the cumulative effects analysis area is limited due to ownership, past timber management, human developments, the existing mixture of suitable habitats, and the natural openness of certain habitats in the cumulative effects analysis area. Ongoing timber management in the cumulative effects analysis area could be disturbing Canada lynx and/or altering existing habitats. Thus, given the nature of the cumulative effects analysis area, little or no use by Canada lynx would be anticipated. Roughly 81.5% of habitats on DNRC-managed lands administered by the Southwestern Land Office under the HCP and outside of the Lynx Management Areas are in suitable lynx habitat categories and 18.5% are in the temporary non-suitable habitat category.

Proposed harvesting would occur outside of mapped lynx habitats, thus no appreciable changes to limited lynx habitats in the project area would occur. Generally, some reductions in forested

connectivity in the vicinity would occur, which could affect how Canada lynx move through the landscape should they be in the area. Coarse woody debris would be retained (emphasizing retention of some logs 15 inches dbh and larger) to provide some horizontal cover and security structure for lynx. Within the cumulative-effects analysis area, anticipated reductions in forested connectivity could further reduce overall suitability for Canada lynx, but overall the suitability of the cumulative effects analysis area is likely low. Following proposed treatments, approximately 81.5% of habitats on all DNRC-managed lands administered by the Southwestern Land Office outside of the Lynx Management Areas are in suitable lynx habitat categories.

W-3 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-4 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). While the project area is likely in the elevations where wolverines tend to be located in Montana, no areas of potentially deep persistent spring snow occur in the vicinity. Individual animals could occasionally use lands in 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-5 Roughly 6 acres (<1%) of potential upland fisher habitats and 1 acre (<1%) of potential riparian fisher habitats exist in low quality Douglas-fir stands in the project area. Another 27 acres (4%) of preferred cover types in the uplands exists in the project area that currently lack structural attributes necessary to be suitable for fisher. Conversely, roughly 605 acres (95%) in the uplands and 1 acres (<1%) in the riparian areas are in unsuitable types for fisher, thus the limited habitats in the project area are in a matrix of largely unsuitable habitats. Generally, habitats in the project area and cumulative effects analysis area are somewhat disconnected and interspersed with considerable unsuitable habitats for fisher, thus extensive use by fisher would not be anticipated. Observations of fishers in the vicinity within the last 30 years are lacking and recent research suggests that fishers are largely absent east of the wet forests along the Montana-Idaho border (Montana Natural Heritage Program 2025, Krohner et al. 2022). Proposed activities would avoid upland and riparian fisher habitats. No changes in open roads would occur; little or no change in trapping pressure and the potential for fisher mortality would be anticipated. No appreciable changes to the suitability or fisher use of the project area or cumulative effects analysis area would be anticipated.

W-6 Roughly 407 acres (64%) of potential flammulated owl habitats exist in the project area in Douglas-fir and lodgepole pine stands. As such, the project area is likely on the edge of flammulated owl range. Some suitable habitats likely exist on a portion of the 2,040 acres (39% of non-DNRC-managed lands) of open and closed forested habitats on other ownerships in the cumulative effects analysis area; however, portions of these forested areas are not likely preferred flammulated owl habitat types. Elsewhere in the cumulative effects analysis area, some of the forested habitats have been harvested in the recent past, potentially improving flammulated owl habitat by creating foraging areas and reversing a portion of the Douglas-fir encroachment and opening up stands of ponderosa pine; however, retention of large ponderosa pine and/or Douglas-fir was not necessarily a consideration in some of these harvest units, thereby minimizing the benefits to flammulated owls. The 3,140 acres (61%) of open,

herbaceous, shrub, urban, and water in the cumulative effects analysis area likely offer little to no habitats for flammulated owls. Ongoing timber management in the cumulative effects analysis area could be adding disturbance to flammulated owls and/or altering existing habitats.

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 periods, which has the potential to disturb nesting flammulated owls. Since some snags and large trees (both >21 inches dbh where they exist, otherwise next largest size class available) would be retained, loss of nest trees would be expected to be minimal. Proposed activities on 291 acres of potential flammulated owl habitats (71%) would open the canopy while favoring Douglas-fir. The proposed treatments would reduce canopy closure and improve foraging habitats. While the more open stand conditions would be representative of historic conditions, the project area would continue to exist near the upper elevational range for flammulated owls and changes to existing habitats would have negligible effects on flammulated owls given the habitats present. Proposed planting would expedite the development of foraging habitats in the project area. Disturbance in flammulated owl habitats would occur on a small portion of the cumulative effects analysis area and could be additive to ongoing activities in the area. Proposed activities would increase the amount of the cumulative effects analysis area that has been recently harvested, which would add to the amounts of potential foraging habitats available, but possibly at the expense of losing snags and large trees important for nesting. Overall, no change in the amount of potential flammulated owl habitats would occur on DNRC-managed lands or any other ownerships; a negligible change in habitat quality at the cumulative-effects analysis level could be realized with this alternative and the more historic conditions likely after proposed activities.

W-7 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. No known caves, mines, crevices, or other structures used for roosting occur in the project area, however there are some rock outcrops that may provide some suitable roosting habitats. Fringed myotis have not been documented in the vicinity, but since suitable habitat exists, some use by fringed myotis is possible. Ongoing timber management in the cumulative effects analysis area could be disturbing fringed myotis and/or altering existing habitats. Proposed activities could disturb fringed myotis should they be in the area during proposed activities. Changes in vegetation structural attributes could change overall prey availability, but considerable foraging habitats would persist in the project and cumulative effects analysis areas. Overall, negligible changes to fringed myotis use of the project area or cumulative effects analysis areas would be anticipated.

W-8 Hoary bats are summer residents (June-September) across a variety of forested habitats in Montana. Hoary bats frequently forage over water sources near forested habitats. 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 Hoary bats would be possible given the varied habitats present and the proximity to a few smaller streams and riparian areas. Individual trees and snags in the existing forested habitats could be used for roosting. No known caves or other structures used for roosting occur in the project area, however there are some rock outcrops that may provide some suitable roosting habitats. Hoary bats have not been documented in the vicinity, but since suitable habitat exists, some use by hoary bats is possible. Ongoing timber management in the cumulative effects analysis area could be disturbing hoary bats and/or altering existing habitats. Proposed activities could disturb hoary bats should they

be in the area during proposed activities. Loss of potential roosting habitats could occur, but considerable amounts of trees would persist in the project and cumulative effects analysis areas. No changes in foraging habitats would be anticipated. Overall, negligible changes to hoary bat use of the project area or cumulative effects analysis areas would be anticipated.

W-9 Roughly 226 acres (35%) of pileated woodpecker nesting habitat exist in the project area and roughly 156 acres (24%) of potential foraging habitats exist in the project area. Some suitable habitats likely exist on a portion of the 6,920 acres (29%) of forested habitats on other ownerships in the cumulative effects analysis area, but these stands are largely dominated by Douglas-fir and lodgepole pine, which are less suitable for pileated woodpeckers. Much of the 27,841 acres (80%) of shrubs, herbaceous areas, poorly stocked forested stands, and recently harvested stands on other ownerships in the cumulative effects analysis area is likely too open to be useful to pileated woodpeckers. Ongoing timber management in the cumulative effects analysis area could be adding disturbance to pileated woodpeckers and/or altering existing habitats.

Pileated woodpeckers can be tolerant of human activities (Bull and Jackson 1995), but might be temporarily displaced by any proposed activities that could occur during the nesting period. Roughly 183 acres (81%) of the potential nesting habitat along with 156 acres (100%) of potential foraging habitats would be altered. Most of these stands proposed for treatment would be temporarily unsuitable for pileated woodpeckers due to the openness of the stands following proposed treatments. Overall quality of these potential pileated woodpecker habitats would be reduced for 40-70 years. Elements of the forest structure important for nesting pileated woodpeckers, including snags, coarse woody debris, numerous leave trees, and snag recruits would be retained in the proposed harvest areas. No appreciable changes to pileated woodpecker habitats would be anticipated with the proposed planting. 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 reduced on all 401 acres proposed for treatment. In the cumulative effects analysis area, the reduction in quality on 183 acres of potential nesting habitats and 156 acres of foraging habitats would further reduce available habitats and reduce the overall quality of the cumulative effects analysis area for pileated woodpeckers. Overall, a reduction in the quality of pileated woodpecker habitats in the cumulative effects analysis area would be anticipated, but continued use would be expected.

W-10 Townsend's big eared bats are year-round residents in Montana that are closely associated with caves, caverns, and old mines. Townsend's big-eared bats feed on various nocturnal flying insects near the foliage of trees and shrubs. Townsend's big-eared bats have not been documented in the vicinity, but some use of the project area by Townsend's big-eared bats would be possible given the varied habitats. Trees and shrubs in the project area could be used for foraging. No known caves, caverns, or other structures potentially used for roosting are known to occur in the project area, however there are some rock outcrops that may provide some suitable roosting habitats. Ongoing timber management in the cumulative effects analysis area could be disturbing Townsend's big eared bats and/or altering existing habitats. Townsend's big-eared bats could be disturbed should they be in the area during proposed activities. Loss of potential foraging habitats could occur, but considerable numbers of trees would persist in the project and cumulative effects analysis areas. No changes in roosting habitats would be anticipated. Overall, negligible changes to Townsend's big-eared bats use of the project area or cumulative effects analysis areas would be anticipated.

W-11 The project area is in mapped elk winter range (100%); winter ranges for white-tailed deer, mule deer, and moose are not found in the project area. Approximately 415 acres of the

project area (65%) appear to have sufficient canopy closure to be providing snow intercept and thermal cover attributes for big game. Evidence of non-winter use by deer and elk was noted during field visits. Within the cumulative-effects analysis area, big game species are fairly common and winter ranges for elk is fairly widespread in the lower elevation areas.

Approximately 6,920 acres (20%) of forested habitats on other ownerships in the cumulative effects analysis area appear to have sufficient canopy closure to provide thermal cover and snow intercept for big game, however portions of these habitats may be too high in elevation to be suitable for winter thermal cover. Human disturbance within the winter range is associated with residential development, agricultural activities, recreational snowmobile use, commercial timber management, and several roads.

Proposed activities could occur during the winter or non-winter periods. Some potential for disturbance to wintering big game could occur with any activities that may occur during the winter period. Proposed activities conducted during the non-winter period would not disturb wintering big game but could disturb big game species using the project area during the non-winter period, however given the time of the year and the availability of other habitats in the vicinity, the potential effect to big game would be minor. All proposed activities would occur on elk winter range; proposed activities would reduce canopy closure and potential winter use by big game on roughly 339 acres (82%) that likely have attributes facilitating considerable winter use by big game. Following proposed activities, canopy densities in these stands providing snow intercept and thermal cover would be reduced, reducing habitat quality for wintering big game. Proposed planting could negligibly reduce the time it takes for the proposed units to again provide thermal cover and snow intercept for big game. Within the proposed units, increases in forage production could benefit big game in the short-term. In general, it could take 30-50 years for the stands in the proposed units to regenerate and attain a size capable of providing thermal cover for big game. Potential disturbance to wintering big game would be additive in the cumulative effects analysis area to other forms of disturbance, including timber management, numerous open roads, and a variety of human developments. Further reductions in thermal cover and snow intercept would be additive to losses from recent timber management, residential land clearing, and other disturbances in the cumulative effects analysis area. Continued use of the larger winter ranges would be anticipated at levels similar to present levels following proposed treatments.

W-12 The project area is close to Butte and has USFS-managed lands on one side and the other sides are bounded by private lands enrolled in the Block Management Program run by Montana Fish, Wildlife, and Parks, which facilitates non-motorized public access for the purpose of recreational hunting. There are a couple of access points to the BMA, which could facilitate some recreational use of the project area. Hiding cover is somewhat limited in portions of the project area due to past timber management, grazing activity, wildlife foraging, as well as the natural openness of some of the habitats in the project area; similarly hiding cover is moderate in the cumulative effects analysis area, with many of these same limiting factors influencing big game hiding cover. The project area does not contain open roads. Non-motorized access to the project area exists given the 2.0 miles of restricted roads (2.0 mi./sq. mi., simple linear calculation) in the project area, and the proximity to lands enrolled in the Block Management Program. A portion of the project area does not contain big game security habitats due to the relative openness in those areas, but roughly 417 acres (65%) are distant enough and contain sufficient cover to be able to contribute to a larger block of potential security habitats that extends beyond the project area. In the cumulative effects analysis area, access for recreational hunting is fairly high, with up to 98 miles of open roads (1.7 miles/sq. mile) that facilitate access and numerous restricted roads that could be used for non-motorized use. Within the cumulative effects analysis area, 2 patches (total of at least 6,924 acres; 20%) of potential security habitat

exist. The larger of these patches extends beyond the cumulative effects analysis area and contributes to a larger block of potential security habitats that extend beyond the cumulative effects analysis area. Ongoing timber management in the cumulative effects analysis area could be disturbing big game security habitats and/or altering existing habitats.

Tree density within proposed units would be reduced on approximately 401 acres, including roughly 321 acres (77%) of forested stands in the project area that likely have adequate hiding cover for big game. Hiding cover would improve as trees and shrubs become reestablished in the openings over the next 10-20 years. The retention of structure within proposed units and unharvested areas between the various units, including some riparian habitats would reduce the potential effects of the hiding cover reductions. Some increases in sight distance in the project area would be anticipated; these increases in sight distances could increase big game vulnerability to hunting mortality as hunters would be able to detect big game at longer distances in proposed units. Proposed planting would expedite the development of hiding cover in the project area. Increases in forage production in proposed units could benefit big game in the short-term, but the benefit would be largely limited as there are considerable amounts of these conditions in the project area and cumulative effects analysis area currently. No changes in open roads or motorized access for the general public would occur. During all phases of the project, any roads opened with project activities would be restricted to the public and closed after the completion of project activities. No appreciable changes in non-motorized access would occur with the proposed activities. Numerous contract stipulations would minimize the effect on the existing big game security habitat by prohibiting contractors from carrying firearms while conducting contract operations and prohibiting contractors from accessing restricted areas for other purposes, such as hunting. Collectively, hiding cover on up to 321 acres of big game security habitats (77%) in the project area would be removed, which would temporarily reduce the quality of the existing security habitats in the cumulative effects analysis area. Negligible effects to big game vulnerability would be anticipated in the cumulative effects analysis area because minor changes to hiding cover would occur, no changes to motorized human access and negligible changes to non-motorized access would occur, and some reductions in hiding cover in a small portion of 1 of the larger blocks of 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 western larch and 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

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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				N/A	1
Dust	x				x				x				N/A	1
Action														
Smoke	x				x				x				Y	2
Dust	x				x				x				Y	3

Comments:

1. With no action, no timber harvesting would occur. Existing air quality conditions would likely continue.
2. Slash consisting of tree limbs and tops and other vegetative debris would be piled throughout the project area during harvesting. Slash would ultimately be burned after harvesting operations have been completed. Burning would introduce particulate matter into the local airshed, temporarily affecting local air. The project area is located within Montana Airshed 5.
3. Dust may be produced by truck hauling if it occurs during dry periods. Mitigation is possible but would likely not be used as hauling would occur on ranch roads that are not used for residential purposes.

Air Quality Mitigations:

Burning within the project area would be short in duration and would be conducted when conditions favor good to excellent ventilation and smoke dispersion as determined by the Montana Department of Environmental Quality and the Montana/Idaho Airshed Group. The DNRC would burn only on approved days.

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					1
Aesthetics	x				x				x					
Demands on Environmental Resources of Land, Water, or Energy	x								x					
Action														

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		
Historical or Archaeological Sites	x				x				x					1
Aesthetics		x				x				x				2
Demands on Environmental Resources of Land, Water, or Energy	x				x				x				N/A	

Comments:

1. The DNRC archaeologist conducted a Class III cultural and paleontological resources inventory of the area of potential effect (APE). Two prospect pits were located and formally recorded. They do not meet the criteria of "Heritage Property" under the State Antiquities Act. As such, proposed timber harvest activities will have *No Effect* to *Antiquities* as defined under the Montana State Antiquities Act. A formal report of findings has been prepared and is on file with the DNRC and the Montana State Historic Preservation Officer.
2. Change to the scenery in the area from the proposed project due to slash and the initial color contrasts of the slash and limited road building, there is an expected short-term impact. Given the treatments proposed and the open nature of surrounding areas, a moderate risk of an increase in cumulative visual effects to the landscape would be expected.

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.*

None

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	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		
Agricultural Activities and Production														
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					
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				
Quantity and Distribution of Employment		x				x				x				1
Local Tax Base and Tax Revenues	x				x									
Demand for Government Services	x				x									
Access To and Quality of Recreational and Wilderness Activities	x				x									
Density and Distribution of population and housing	x				x									
Social Structures and Mores	x				x									
Cultural Uniqueness and Diversity	x				x									

Comments:

1. This harvest is viewed as a continuation of a sustained yield and as such would not create any new jobs but rather assists in sustaining employment in the forest products industry.

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 Schools Trust. The estimated return to the trust for the proposed harvest is \$80,528 based on an estimated harvest of 1,451 MBF (11,504 tons) and an overall stumpage value of \$7 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

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

No

Environmental Assessment Checklist Prepared By:

Name: Jacob Lee and Craig Hansen
Title: Forester and Unit Manager
Date: September 2025

Finding

Alternative Selected

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

1. No Action
2. Action

I have decided to approve the 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) generating revenue for the Common Schools Trust b) improving forest growth and resiliency.
- 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: Jon M. Hayes

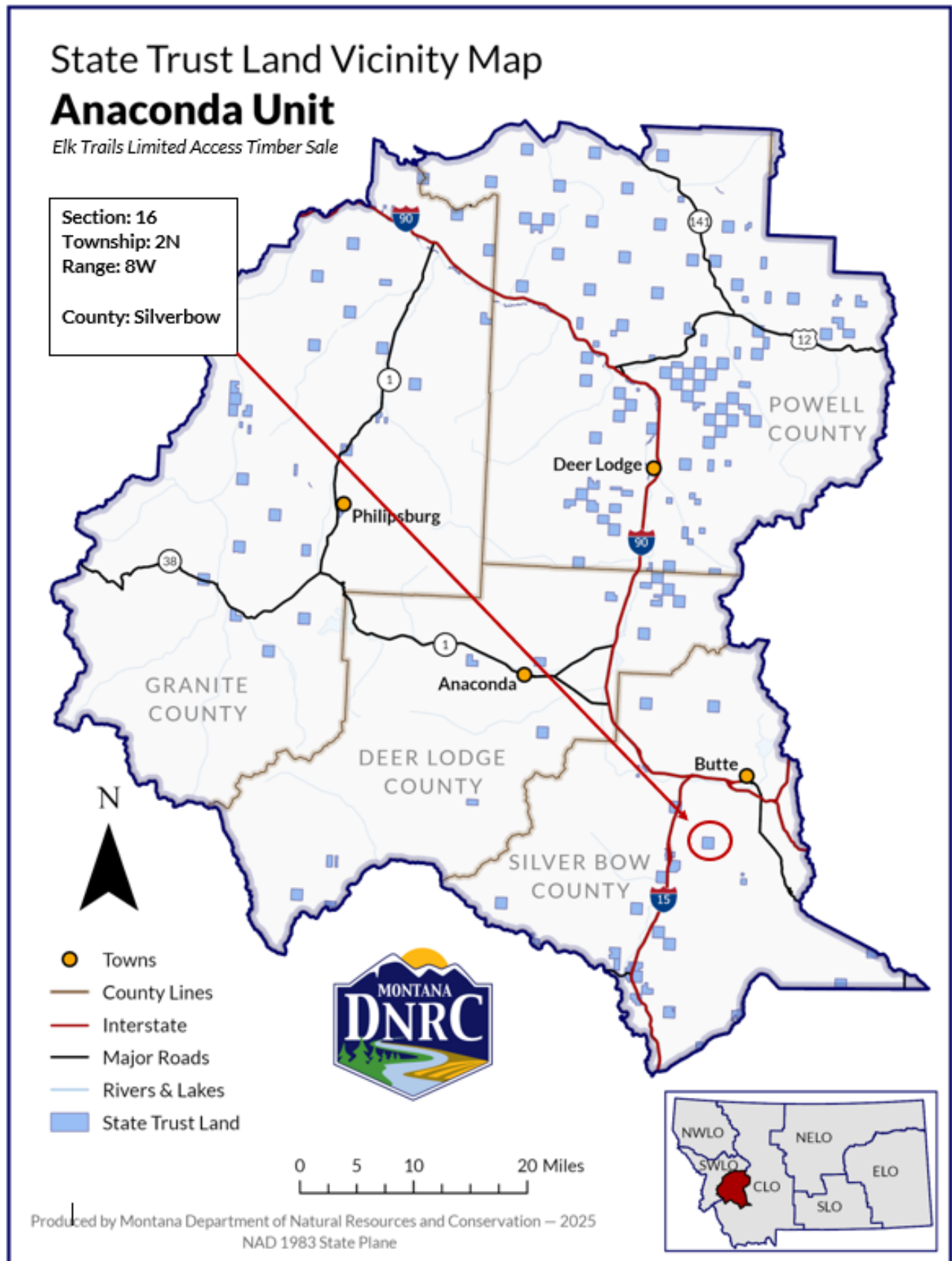
Title: Forest Management Program Supervisor, SWLO

Date: September 24, 2025

Signature: /Jon M. Hayes/

Attachment A - Maps

A-1: Timber Sale Vicinity Map



A-2: Timber Sale Harvest Units

