Environmental Assessment Checklist

Project Name: Snowmass Timber Permit
Proposed Implementation Date: January 2023
Proponent: Clearwater Unit, Southwest Land Office, Montana DNRC
County: Missoula

Type and Purpose of Action

Description of Proposed Action:

The Clearwater Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the Snowmass Timber Permit. The project area is located approximately 1 mile southwest of Seeley Lake, Montana (refer to Attachments Vicinity map Attachment A-1 and Project map A-2) and includes the following sections:

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools			
Public Buildings			
MSU 2nd Grant	**NW4, S2 Section 4, T16N-R15W**	**480**	**54**
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:

- Salvage of trees being infested by Douglas-fir bark beetle (*Dendroctonus pseudotsugae*).
- Salvage of windthrown, dead, or dying trees.
- Shelterwood treatment resulting in 12 to 18 trees per acre post-harvest; Engelmann spruce and Douglas-fir would be targeted for removal.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	# Acres
Clearcut	
Seed Tree	
Shelterwood	54
Selection	
Commercial Thinning	
Salvage	
Total Treatment Acres	**54**
Proposed Forest Improvement Treatment	# Acres
Pre-commercial Thinning	
Planting	30
Proposed Road Activities	# Miles
New permanent road construction	
New temporary road construction	
Road maintenance	8.1
Road reconstruction	
Road abandoned	
Road reclaimed	
Other Activities	

Duration of Activities:	4 years – not continuous
Implementation Period:	2023 - 2026

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:
  - March 2022

- PUBLIC SCOPED:
  - 14 private property and 11 residential lease neighbors adjacent to proposed project.
- AGENCIES SCOPED:
  - None.

- COMMENTS RECEIVED:
  - How many: Two.
  - Concerns: Impacts to noise, dust, wildlife, and peacefulness.
  - Results (how were concerns addressed):
    - It is acknowledged that noise and dust from traffic along Westside Bypass Road may be more prevalent on Snowmass Road due to the tree removal. These effects would be expected to lessen over time as the remaining trees continue to grow and new trees establish below Westside Bypass Road.
    - It is acknowledged that potential disturbance to both wildlife and humans would be anticipated through the overstory tree removal and logging disturbance. Increased sight distances and noise could reduce some wildlife use of this area. However, the project area would be cumulatively small in acreage and anticipated post-harvest planting and continued growth in the remaining stand would result in stand recovery over time. Finally, given the small acreage to be treated, logging disturbance wouldn't be anticipated to take a long span of time, relatively months, and therefore the effects to peacefulness would be limited in duration.

DNRC specialists were consulted, including *Patrick Rennie – Archeologist, Andrea Stanley – Hydrologist and Soil Scientist and Garrett Schairer – Wildlife Biologist.*

Internal and external issues and concerns were incorporated into project planning and design and would 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 would not take place on a parcel managed under the HCP. The HCP can be found at http://dnrc.mt.gov/divisions/trust/forest-management/hcp.

- **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 2006). The Group determines the delineation of airsheds and impact zones throughout Idaho and Montana. Airsheds describe those geographical areas that have similar atmospheric conditions, while impact zones describe any area in Montana or Idaho that the Group deems smoke sensitive and/or having an existing air quality problem (Montana/Idaho Airshed Group 2006). As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Smoke Management Unit.

ALTERNATIVES CONSIDERED:

No-Action Alternative: The proposed harvest would not take place. Douglas-fir bark beetle would continue to result in Douglas-fir mortality and Engelmann spruce would continue to be impacted by insects and wind events until some natural occurrence or future harvest would address this problem. No DNRC road maintenance would occur at this time.

Action Alternative:

Shelterwood: There are areas within the proposed 54-acre treatment area that have been infested by Douglas-fir bark beetles. The extent of the beetle presence varies throughout the units due to the mixed tree species composition and size class in the stand. The beetles typically attack Douglas-fir trees greater than 14 inches in diameter at breast height (DBH) in the spring or early summer. Some second "flights" which result from eggs being laid and hatched early in the year providing for a second breeding cycle in the summer or fall, may occur as well. Although the attacked trees retain their green needles from the previous year, if the attack has resulted in the death of the tree the following will occur: it will become chlorotic, then yellow in color, and finally result in a bright red color approximately one year after the attack.

The unit also has Douglas-fir and Engelmann spruce of varying size classes with very variable crown health, indications of root rot, snow break and windthrow, recent frost cracks, and signs of secondary insect activity which would be targeted for removal. Finally, some additional tree species may be harvested to facilitate the harvest.

The residual stand is expected to consist of healthy, vigorous young Douglas-fir and Engelmann spruce as well as other species such as western larch, lodgepole pine, quaking aspen, and ponderosa pine.

***Road Maintenance*:** Segments of Snowmass, Westside Bypass, and Deer Creek roads would be maintained if the Action Alternative is selected. This would allow better log haul conditions by maintaining a less rutted road surface as well as the installation of a culvert and placement of spot surface rock.

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 DNRC parcel within Section 4 contains a mixed conifer stand consisting of ponderosa pine, western larch, lodgepole pine, Engelmann spruce, and Douglas-fir. This is a typical forest class within this part of western Montana and the age class of the stand is 150 -199 years, non-old growth.

Portions of the Section 4 parcel adjacent to the units were treated under Clearview North (2019). The unit footprint itself was last harvested during the Seeley Lake Salvage timber sale (2001-2004).

There is one Species of Special Concern within the area, Howell's Gumweed (*Grindelia howelli*). This is a sensitive plant that has limited distribution across portions of western Montana (Powell and Missoula Counties) and Idaho (Benewah County). In some areas, the populations are well established however it has not been observed specifically in the project area. Per the Montana Natural Heritage Program, the plant presence varies due to its 'short-lived nature' and propensity to establish on disturbed ground such as road prisms. It was also noted that noxious weed treatments may have a 'direct, negative impact' to the species' presence.

Noxious weeds occurring in the project parcels are mainly a combination of knapweed (*Centaurea maculosa*), Canada thistle (*Cirsium arvense*), oxeye daisy (*Leucanthemum vulgare*), and houndstongue (*Cynoglossum officinale*).

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														
Noxious Weeds		**X**				**X**				**X**			**y**	**1**
Rare Plants	**X**				**X**				**X**					
Vegetative community			**X**			**X**				**X**				**2**
Old Growth	**X**				**X**				**X**					
Action														
Noxious Weeds		**X**				**X**				**X**			**y**	**3**
Rare Plants	**X**				**X**				**X**					
Vegetative community		**X**				**X**				**X**				**4**
Old Growth	**X**				**X**				**X**					

Comments:

No-Action:
1. Noxious Weeds: Weeds are common in the area. The No-action alternative may have herbicide treatments paid for by DNRC.
2. Vegetative Community: The Douglas-fir bark beetle would not be treated, and the population could continue to grow. Overstocking would continue and conditions and would benefit bark beetle and other insect spread. Engelmann spruce would continue to experience windthrow.

Action:
3. Noxious Weeds: Weeds are common in the area. The Action alternative would have herbicide treatments paid by DNRC.
4. Vegetative Community: The existing vegetative community would be altered through removal of Douglas-fir and Engelmann spruce. Seral species such as western larch and ponderosa pine would be favored and are expected to benefit after the treatment due to a lessening of the stand stocking.

Vegetation Mitigations: Under the Action Alternative, DNRC is expected to contract herbicide treatments for management and all equipment would be washed prior to entry.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions:

The project area is located south of the Clearwater River approximately 0.5 miles south from the outlet of Seeley Lake. Underlying geology is composed mainly of glacial deposits (till and outwash) and stream-deposited alluvium associated with the Clearwater River. This is a wetter site due to the more northern aspect and the project's location near the base of the valley where surface and subsurface flows contribute surface and groundwater to the Clearwater River (Norbeck and McDonald, 1999).

Although local soils are classified as well drained, the hyporheic zone and shallow water table combined with some clays result in moisture being at or near the surface that the lower elevations within the project area. Soils near Snowmass Drive and within the project area are classified as Udorthents-Glaciercreek complex (0-8% slopes) (Udorthents refers to the material being altered by cutting and filling). These soils can be expected to be seasonally wet for extended periods of time. These soils can be very susceptible to compaction and rutting if operated on when wet. The risk associated with these soils can be mitigated by limiting the season of use to frozen and snow-covered conditions, or strategizing skid trails to avoid low-lying and wet areas.

Soils southwest of the road are Hollandlake-Beta complex (4-30% slopes) have a more moderate to low compaction risk and are expected to have a longer season of use and are well suited to ground-based harvest operations if soils are dry, frozen, or snow-covered.

Slopes are gentle (less than 45 percent) within the project area, except in a few isolated areas. No unstable slopes or unique geologic features area present.

Existing and past disturbances

The last entry for commercial harvest was approximately 20 years ago (Seeley Lake Salvage) to salvage beetle-killed timber and harvest live high-risk timber and reduce fuels. This entry had been completed during frozen and over-snow conditions.

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**				**NA**	**1**
Erosion	**X**				**X**				**X**				**NA**	**1**
Nutrient Cycling	**X**				**X**				**X**				**NA**	**1**
Slope Stability	**X**				**X**				**X**				**NA**	**1**
Soil Productivity	**X**				**X**				**X**				**NA**	**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. Soil resource conditions would remain similar to those currently at the site.

2. Soil and vegetation disturbance from harvest activities may result in temporary increased risk of erosion.

3. The project area is well-suited for ground-based harvest as the slopes generally do not exceed 45%. Soil disturbance and erosion risk increases with slope and slopes in project area exceed 45% in some places. Soil compaction risk increases with moisture and operations will be limited to dry, frozen, or snow-covered conditions per mitigation described below.

4. Direct impacts by physical disturbance would likely occur by ground-based yarding. All expected impacts are expected to be less than 12.2% and would be minimized by use of existing roads and skid trails. This disturbance rate estimate is based off previous soil disturbance monitoring of timber sales completed by the DNRC (DNRC, 2011).

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, and the State Forest Land Management Plan.

6. According to Graham et al. (1994), a minimum of 12 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.

7. Unstable slopes were not observed on site. The project is anticipated to have no risk to slope stability.

Soil Mitigations:

- BMPs would be implemented on all roads accessing the harvest units and within the harvest units.

- Ground-based logging equipment (tractors, skidders, and mechanical harvesters) would be limited to slopes less than 45% unless 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.

- A minimum of 12 tons/acre of coarse and fine woody debris would be maintained on site to meet the concentration for the DF/CARU habitat type recommended by Graham et al (1994).

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.

Norbeck, P.M., and McDonald, C., 1999, Ground-water evaluation, Seeley Lake, Montana: Montana Bureau of Mines and Geology Open-File Report 393, 81 p.

WATER QUALITY AND QUANTITY:

Water Quality and Quantity Existing Conditions:

The project area is located south of the Clearwater River approximately 0.5 miles south from the outlet of Seeley Lake. Proposed harvest areas are located several hundred feet from the

Clearwater River. The harvest areas are located east of Snowmass Drive and do not contain any streams. Outside of the proposed harvest boundaries and west of Snowmass Drive a stream channel initiates where runoff is concentrated at a culvert outlet. This feature connects with the Clearwater River.

An isolated pond located within an abandoned borrow pit near the center of the proposed harvest area. This pond appears to be connected to the locally shallow groundwater and has bank vegetation indicating year-around inundation in areas. And due to its size and absence of fish, this feature would not qualify as a lake but would qualify as an isolated wetland and treated as such in equipment and harvest operations. See mitigation below for further details.

Wetlands adjacent to the Clearwater River occur beyond its western bank and near the boundary of the proposed harvest areas. These areas are well vegetated with shrubs and other plants such as sedges that indicate wetland occurrence. Some of these areas have been impacted by unauthorized dumping of materials including vegetation and grass clippings, some construction waste, and motorized vehicle trespass. Overall, the wetlands are in good condition and appear to provide services benefiting water quality including surface water retention. See mitigation below for details on protections anticipated with proposed project implementation.

The project is located within the Seeley Lake municipal watershed. The reach of the Clearwater River located near the project and Seeley Lake are not listed as impaired (per the Montana Department of Environmental Quality Water Quality Standards Attainment Record in the 2020 reporting cycle).

The haul route is provided by existing county-maintained roads, including Snowmass Drive until the road reaches the junction of West Side Bypass Rd and Snowmass Drive and at the southern extent of the proposed harvest area at the southern boundary of Section 4. Snowmass Drive is a low standard road that varies from good to poor condition through Section 4. The roads condition can be attributed to a weak subgrade due to poor native material, chronic moisture, and year-around use by residents. DNRC staff are currently working with adjacent residents in developing a road-users association that would organize road improvement and maintenance that would meet the existing and anticipated continued use by residents. The proposed Action Alternative would include some improvements to the road and limitations of use such that the condition of the road is improved or maintained, and not made worse, by the proposed project.

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, 4**

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, 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, and the State Forest Land Management Plan.
   Specific measures to limit risk to wetlands that are outlined in Rule Chapter 36.11 are listed below:
   - Equipment would be excluded from **isolated wetlands** unless frozen or snow-covered, and vegetation disturbances would be limited to merchantable trees (i.e., stumps, shrubs, and wetland plants remain undisturbed).
   - **Adjacent wetlands** would have mostly the same protections as a Class 1 Streamside Management Zone (SMZ), with the boundary extended to the boundary of the wetland. The exception being that equipment can operate within an adjacent wetland under all the following conditions: the ground is frozen or there is adequate snow to prevent soil compaction, soils is not rutted or moved, stumps are retained, shrubs and non-merchantable trees are protected.
3. The nearest surface water feature to the project is the Clearwater River. The wetlands located in the area will assist with water retention and will also buffer surface water from potential impacts from the project. For example, if some sediments were to be released from the harvest areas due to equipment disturbance, these wetlands would retard runoff and settle out sediment and nutrients before reaching the Clearwater River. Sediment is not expected to be eroded from the harvest areas in significant amounts because of the project measures and mitigations described in the soils analysis.
4. Changes to steam flow hydrology (water quantity or water flow) would not be detectible with the Action Alternative. 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 area drains to the Clearwater River below the Seeley Lake outlet. The total watershed area to the Clearwater River at this location is approximately 147 square miles. The proposed harvest area is less than 1 square mile.

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:

Fish habitat is not located within the project area. The Clearwater River is located east of the project area and has fish, including the following native species Bull Trout, Westslope Cutthroat Trout, and Mountain Whitefish; as well as several introduced species (FWP MFISH, 2022).

No foreseeable direct, indirect, or cumulative effects to fisheries resources are anticipated with an action or no-action alternative due to the following factors:

- The limited scale of the proposed project activities relative to Clearwater River watershed.
- Sediment yields are not expected to increase because of the project (see water resources analysis.
- The distance of the project from the river.

Fisheries Mitigations:
No additional project-specific mitigations necessary beyond the project design and commitments listed earlier in this analysis and the mitigations listed in the water resources analysis.

Fisheries References:
Montana mFish Online Database, Montana Department of Fish, Wildlife, and Parks. https://fwp.mt.gov/gis/maps/mFish/ Queried December 2022.

WILDLIFE:

Evaluation of the impacts of the No-Action and Action Alternatives including **direct, secondary, and cumulative** impacts on Wildlife (including unique, endangered, fragile, or limited environmental resources).

Wildlife Existing Conditions: The project area includes a variety of Douglas-fir/western larch and mixed conifer stands. Grizzly bears have been documented in the vicinity of the project area in the past and the project area is outside of the grizzly bear recovery zone but within the 'non-recovery occupied habitat' as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones. There are roughly 211 acres of suitable Canada lynx habitats in the project area, which is all winter foraging habitats. Portions of the project area is within the Seeley Lake North bald eagle home range. Potential habitat for pileated woodpeckers, fringed myotis, and hoary bats exist in the project area. Big game summer ranges exists, but no winter range exists in the project area. No elk security habitats exist in the project area nor does habitats in the project area contribute to security habitats that extend beyond the project area.

No-Action: Existing stands would continue to mature; ongoing mortality would persist, removing some of the existing trees while creating snags and coarse woody debris. No further potential for disturbance to any wildlife species would be anticipated. No appreciable changes to grizzly bear habitats would occur. Canada lynx habitats would persist. Existing habitat attributes for bald eagles would not appreciably change. Some increases in snags and coarse woody debris and snags could improve pileated woodpecker habitats. Continued wildlife use at levels similar to present conditions would be anticipated. Some reductions in thermal cover could be realized with ongoing mortality. No changes in security habitats would be anticipated.

Action Alternative (see Wildlife table below):
Some potential for disturbance to wildlife could occur with the proposed activities. Approximately 50 acres of Douglas-fir and western larch stands would be opened up. In general, habitats for those species adapted to more-open younger forest conditions would increase in the project area, meanwhile habitats for wildlife species that prefer dense stands of mature forest would be reduced in the project area.

Wildlife	Impact								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**
Sensitive Species										
Bald eagle *(Haliaeetus leucocephalus)* Habitat: Late-successional forest less than 1 mile from open water		**X**				**X**			**Y**	**4**
Black-backed woodpecker *(Picoides arcticus)* Habitat: Mature to old burned or	**X**				**X**					**3**

Wildlife	Impact								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
beetle-infested forest										
Common loon *(Gavia immer)* Habitat: Cold mountain lakes, nest in emergent vegetation	**X**				**X**					**3**
Fisher *(Martes pennanti)* Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian	**X**				**X**					**3**
Flammulated owl *(Otus flammeolus)* Habitat: Late-successional ponderosa pine and Douglas-fir forest	**X**				**X**					**3**
Fringed myotis (*Myotis thysanodes*) Habitat: low elevation ponderosa pine, Douglas-fir and riparian forest with diverse roost sites including outcrops, caves, mines		**X**				**X**			**Y**	**5**
Hoary bat (*Lasiurus cinereus*) Habitat: coniferous and deciduous forests and roost on foliage in trees, under bark, in snags, bridges		**X**				**X**			**Y**	**6**
Peregrine falcon *(Falco peregrinus)* Habitat: Cliff features near open foraging areas and/or wetlands	**X**				**X**					**3**
Pileated woodpecker *(Dryocopus pileatus)*		**X**				**X**			**Y**	**7**

Wildlife	Impact								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
Habitat: Late-successional ponderosa pine and larch-fir forest										
Townsend's big-eared bat *(Plecotus townsendii)* Habitat: Caves, caverns, old mines	**X**				**X**					**3**
Wolverine *(Gulo gulo)* Habitat: Alpine tundra and high-elevation boreal forests that maintain deep persistent snow into late spring	**X**				**X**					**3**
Big Game Species										
Elk		**X**				**X**			**Y**	**8**
Whitetail		**X**				**X**			**Y**	**8**
Mule Deer		**X**				**X**			**Y**	**8**
Bighorn Sheep	**X**				**X**					**3**
Other										

Comments:

1. The project area is outside of the grizzly bear recovery zone but is in the 'non-recovery occupied habitat' as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones. The project area contains several open roads and exists in close proximity to numerous human residences and other forms of human disturbance. Extensive use by grizzly bears would not be expected, but occasional use by grizzly bears could occur and grizzly bears have been documented in the vicinity in the past. Individual animals could be displaced by project-related disturbance if they are in the area during proposed activities. Proposed activities could occur during the denning period or the non-denning period, but would be restricted during the spring period (April 1-June 15) when they are more than 100 feet from an open road. Reductions in hiding cover could reduce available habitats for grizzly bears. No changes to open road densities, security habitats, or human–related food, garbage, or other unnatural grizzly bear attractants would occur. Given their large home range sizes, existing human disturbance levels in the area, and 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 grizzly bears.
2. There are roughly 211 acres of suitable Canada lynx habitats in the project area, which is all winter foraging habitats. The project area is in DNRC's Seeley Lake Lynx

Management Area (LMA), but is not covered by DNRC's Habitat Conservation Plan (HCP). Across the LMA habitats for Canada lynx are fairly common on both DNRC-managed lands and non-DNRC lands, but in places are interspersed with unsuitable habitats. In general, some use of the project area and larger cumulative effects analysis area by Canada lynx would be possible, but extensive use or the project area is less likely given the levels of human disturbance in the vicinity and the mix of suitable and unsuitable habitats in the immediate area. Proposed activities would alter 50 acres of winter foraging habitats. Following proposed treatments, all 50 acres would likely be considered temporary non-suitable habitats based on the anticipated openness of the resultant stand. Overall a slight decrease in overall percentage of suitable habitats available for lynx at the project level and cumulative effects analysis area would be anticipated.

Roughly 79% of all DNRC-lands managed in the Seeley Lake LMA are in the various suitable habitat classes. DNRC-managed lands in the LMA are dominated by winter foraging habitats (42% of the LMA), followed by other suitable (29%), with lesser amounts of summer foraging habitats (9%). Following proposed treatments, roughly 78% of all DNRC-managed lands in the LMA would be in the various suitable lynx habitats. 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. In the short-term, lynx use of the project area could slightly decline due to the increasing openness of the stands. Minor further reductions in forested connectivity would be anticipated, but some connectivity would exist.

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.

4. The project area is within the home range associated with the Seeley Lake North bald eagle territory. This territory has been relatively productive for more than 20 years. This territory experiences considerable levels of human disturbance associated with human residences, timber management, and various forms of summer and winter recreation. Proposed activities could occur during the early nesting season (February 1 – March 31), late nesting season (June 16-August 15), or the non-nesting (August 16-February 1) season. Negligible levels of disturbance to bald eagles could occur should any activities be conducted during the nesting period. Conversely, should activities be conducted during the non-nesting period, no disturbance to bald eagles would be anticipated. Negligible reductions in the availability of large snags or emergent trees that could be used as nest or perch trees could occur in the home range.

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. No known caves, mines, crevices, or other structures used for roosting occur in the project area or immediate vicinity. Fringed myotis have not been documented in the vicinity of the project area. Proposed activities could disturb fringed myotis should they be in the area. 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, no appreciable changes to fringed myotis use of the project area or cumulative effects analysis areas would be anticipated.

6. 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 in, primarily in trees, but will use also use caves, other nests, and human structures. Some use by Hoary bats would be possible given the varied habitats in the project area and the proximity to Seeley Lake and numerous other smaller wetlands. 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 or immediate vicinity. Hoary bats have not been documented in the vicinity of the project area. Proposed activities could disturb hoary bats should they be in the area. 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, no appreciable changes to hoary bat use of the project area or cumulative effects analysis areas would be anticipated.

7. Roughly 211 acres of potential pileated woodpecker nesting habitat exists in the project area. Disturbance to pileated woodpeckers could occur if proposed activities occur during the nesting period. Harvesting would reduce forested habitats for pileated woodpeckers in the project area. Roughly 50 acres of potential nesting habitats would be opened up with proposed treatments. These areas would likely be too open to be considered pileated woodpecker habitat following proposed treatments. 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. Since pileated woodpecker density is positively correlated with the amount of dead and/or dying wood in a stand (McClelland 1979), minor reductions in pileated woodpecker densities could occur.

8. No deer, elk, or moose winter range exists in the project area. Deer, elk, and moose may use the project area during the non-winter period. Reductions in thermal cover would occur with proposed activities. Reductions in hiding cover would be possible with the proposed activities. No elk security habitat exists in the project area and the project area doesn't look to contribute to any other larger blocks of elk security habitats. No changes to open roads or motorized human access 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 36.11.443) are needed.
- Motorized public access will be restricted at all times on restricted roads that are opened for proposed activities.
- Minimize potential for disturbance to grizzly bears and numerous avian species by restricting activities between April 1 and June 15, except where activities are within 100 feet of an open road.
- Snags, snag recruits, and coarse woody debris will be managed according to ARM 36.11.411 through 36.11.413, 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 would be prohibited from carrying firearms while on duty.
- Food, garbage, and other attractants would be stored in a bear-resistant manner.
- Retention of patches of advanced regeneration of shade-tolerant trees, such as sub-alpine-fir and spruce, in units containing lynx habitats would break-up sight distances, provide horizontal cover, and provide forest structural attributes preferred by snowshoe hares and lynx.

Wildlife References

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.

- implemented to protect the nest and birds prior to re-starting activities.

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**			**y**	**1**
Dust		**X**				**X**				**X**				**2**

Comments:
1. Under the Action Alternative, slash piles consisting of tree limbs and tops and other vegetative debris would be created throughout the project area during harvesting. These slash piles would ultimately be burned after harvesting operations have been completed.

2. Dust may be produced along the haul routes if wood is hauled and as public, noncommercial use occurs during dry conditions during and post-harvest. Dust amounts are expected to lessen over time as the remaining trees continued to grow and new trees establish below Westside Bypass Road.

Air Quality Mitigations:
• Burning within the project area would be short in duration and would be conducted when conditions favored good to excellent ventilation and smoke dispersion as determined by the Montana Department of Environmental Quality and the Montana/Idaho Airshed Group.

• The DNRC, as a member of the Montana/Idaho Airshed Group, 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**					**2**
Demands on Environmental Resources of Land, Water, or Energy	**X**				**X**				**X**					
Action														
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**					

Comments:
No-Action and Action:

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. The Class I search revealed that no cultural or paleontological resources have been identified in the APE. Because little ground disturbance is expected with the proposed project, and because the local geology is not likely to produce caves, rock shelters, or sources of tool stone, no additional archaeological investigative work will be conducted. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

2. The No-Action Alternative would have low direct and secondary effects given the effects of Douglas-fir bark beetle. The change in color from green to bright red a year later attracts visual attention. Eventually these trees will become snags and fall. The Action Alternative would result in an open stand and associated greater visibility. In addition, there would be more visible dust in the short-term due to unit proximity to open roads.

Mitigations: N/A

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.*

N/A

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**					
Cultural Uniqueness and Diversity	**X**				**X**				**X**					
Action														
Health and Human Safety		**X**			**X**				**X**				**y**	**1**
Industrial, Commercial and Agricultural Activities and Production	**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		
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					

Comment:
Action:
1. The proposed harvest and hauling would be expected to take 12 to 16 weeks total. During that time, there would be more log truck traffic and associated safety risk. Traffic noise from Westside Bypass Road may be more prevalent on Snowmass Road due to the tree removal. Traffic noise effects would be expected to lessen over time as the remaining trees continue to grow and new trees establish below Westside Bypass Road. Potential disturbance to humans would be anticipated through the overstory tree removal and logging disturbance. The project area would be cumulatively small in acreage and anticipated post-harvest planting and continued growth in the remaining stand would result in stand recovery over time. The small acreage to be treated, logging disturbance wouldn't be anticipated to take a long span of time, relatively months, and therefore the effects to peacefulness would be limited in duration.

2. The proposed harvest project would employee between 4 to 8 people over a short period. This project would be expected to take 12 to 16 weeks to complete proposed work.

Mitigations:
• Log truck traffic hazards would be mitigated through utilization of signage noting log truck traffic on the associated open roads.

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 MSU Second Grant Trust. The estimated return to the trust for the proposed harvest is $45,373.00 based on an estimated harvest of 480 thousand board feet (2,669 tons) and an overall stumpage value of $17.00 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: Kristen Baker-Dickinson
Title: Clearwater Unit Manager
Date: January 20, 2023

Finding

Alternative Selected

Following a review of the document as well as the corresponding Department policies and rules, the Action Alternative has been selected because it meets the intent of the project objectives outlined in

Section I – Type and Purpose of Action. This includes but is not limited to the requirement that DNRC 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).

Significance of Potential Impacts

I find that the Action Alternative will not have significant impacts for the following reasons:

- The Action Alternative is in compliance with the existing laws, rules, policies, and standards applicable to this type of proposed action.
- Appropriate mitigations have been proposed to minimize potential impacts to resources such as vegetation, soil, and wildlife.

Need for Further Environmental Analysis

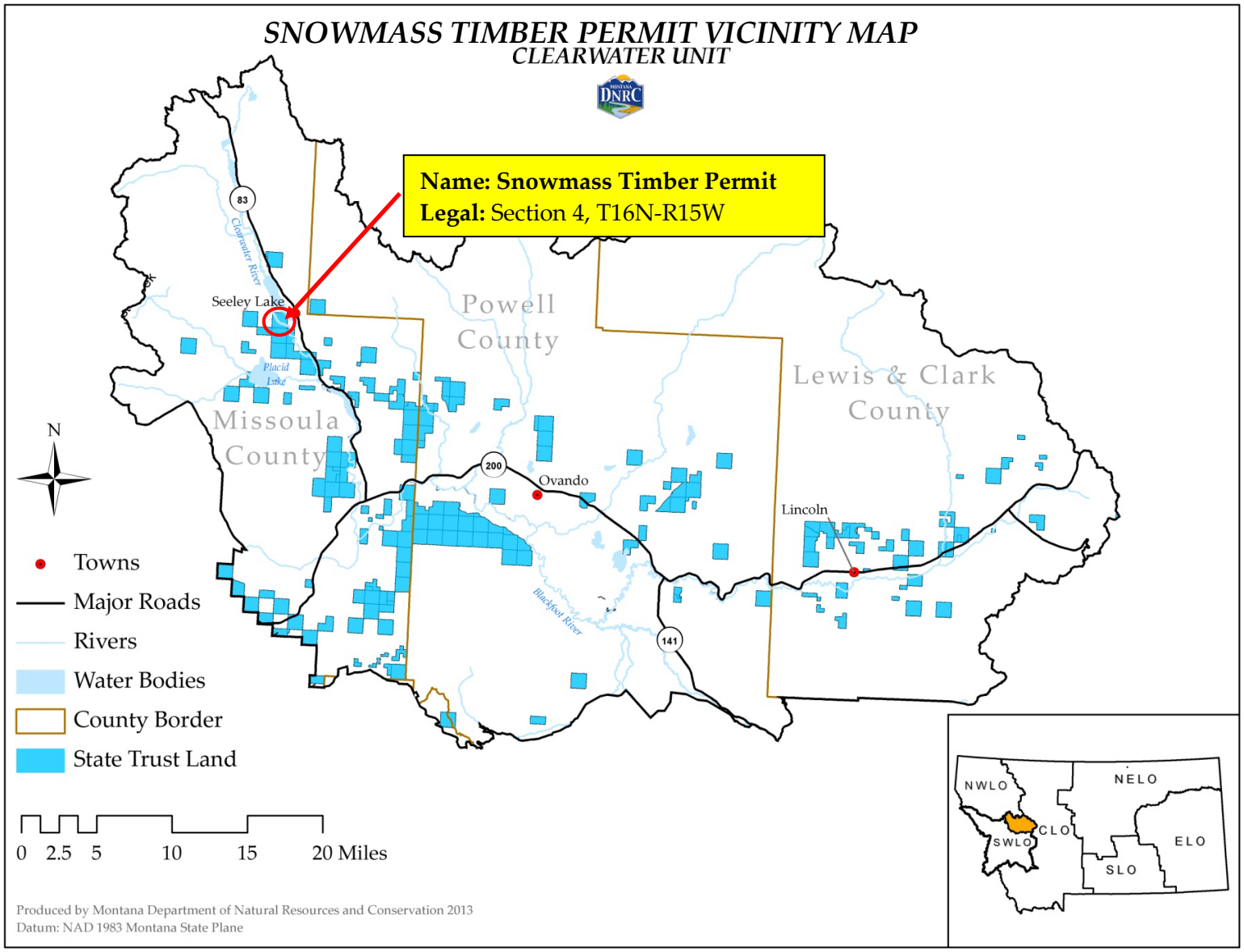
☐	EIS	☐	More Detailed EA	☒	No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Jon M. Hayes
Title: Forest Management Program Manager, SWLO
Date: January 20, 2023
Signature: /Jon M. Hayes/

Attachment A- Maps

A-1: Vicinity map



A-2: Project map