

Environmental Assessment Checklist

Project Name: V Chill Timber Permit
Proposed Implementation Date: September 2024
Proponent: Bozeman Unit, Central Land Office, Montana DNRC
County: Madison

Type and Purpose of Action

Description of Proposed Action:

The Bozeman Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the V Chill Timber Permit. The project is located approximately 4 air miles northeast of Virginia City, MT (refer to Attachments Temporary Road Use map A-1, Vicinity map A-2 and Project map A-3) and includes the following section:

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools	W2W2 Section 16, T06S, R02W	640	36
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:

- Utilize an opportunity to access and perform forest management on a State section with no legal access.
- Generate revenue for the Common School trust beneficiary and capture value from timber while improving the health, vigor and productivity of the forest stands.
- Help reduce susceptibility to insects, pathogens and fire in the project area.
- Maintain the desired future condition of the forest stands in a Douglas-fir cover type and encourage natural regeneration.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	
	# Acres
Clearcut	
Seed Tree	36
Shelterwood	
Selection	
Old Growth Maintenance/Restoration	
Commercial Thinning	
Salvage	
Total Treatment Acres	
Proposed Forest Improvement Treatment	
	# Acres
Pre-commercial Thinning	
Site preparation/scarification	
Planting	
Proposed Road Activities	
	# Miles
New permanent road construction	
New temporary road construction	0.3
Road maintenance	3.2
Road reconstruction	
Road abandoned	
Road reclaimed	
Other Activities	

Duration of Activities:	4-6 months
Implementation Period:	September 2024 – September 2025

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.

Project Development

SCOPING:

- DATE:
 - December 2, 2020
- PUBLIC SCOPED:
 - The scoping notice was posted on the DNRC Website: <http://dnrc.mt.gov/public-interest/public-notice>
 - Adjacent landowners and State lessee.
- AGENCIES SCOPED:
 - DNRC, FWP, BLM and Madison County Commissioners.
- COMMENTS RECEIVED:
 - How many: One.
 - Concerns: Silvicultural Process/Prescription, Slash Disposal, Water Quality/Quantity, Soils/Erosion, Draw Crossing, Economics, New Roads/Access Roads, Effects to Other Commercial Uses/Property Rights, Public Access, Cultural Resources, Hazardous Spills, Dust.
 - Results: Where specific resource concerns were identified by the Project leader or DNRC specialists, those resources affected were analyzed and the effects are disclosed in the resources analysis within this document.

DNRC specialists were consulted, including: Patrick Rennie, Archaeologist; Jeff Schmalenberg, Resource Management and Planning Section; Ross Baty, Wildlife Biologist, Sierra Farmer Forest Management Planner.

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 <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 2010). As a member, DNRC must submit a list of planned burns to the Airshed Group's Smoke Monitoring Unit describing the type of burn to be conducted, the size of the burn in acres, the estimated fuel loading in tons/acre, and the location and elevation of each burn site. The Smoke Monitoring Unit provides timely restriction messages by airshed. DNRC is required to abide by those restrictions and burn only when granted approval by the Smoke Monitoring Unit when forecasted conditions are conducive to good smoke dispersion.

- **Montana Department of Fish, Wildlife and Parks (DFWP)-** A Stream Protection Act Permit (124 Permit) is required from DFWP for activities that may affect the natural shape and form of a stream's channel, banks, or tributaries. Such activities include:
 - N/A

ALTERNATIVES CONSIDERED:

No-Action Alternative: Under the no-action alternative, no harvest would occur, no new road would be constructed and timber management for the proposed project area would be deferred indefinitely. An opportunity to access landlocked State land and generate revenue for the trust would be lost.

Action Alternative: Under the action alternative, a commercial harvest of an estimated 255 MBF of Douglas-fir sawtimber from 36 acres would occur. The proposed project would utilize ~3.2 miles of existing road and construct ~0.3 miles of temporary, new road to access the harvest areas. A seed tree harvest, using ground-based systems, would be utilized for timber stand treatment. Where present, aspen stands would have all conifer sawtimber removed out to 100 feet from the aspen clones. Treatments would generate revenue to the Common Schools Trust while improving the health, vigor and productivity of the forest stands. At project closure, major skid trails and new road on the State land would be reclaimed.

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:

Harvest Unit	Habitat Group	Fire Regime	Current Cover Type	Age Class (years)	DFC	RX	Acres
1	Warm and very dry (eastside)	Low-to-mixed	Douglas Fir	100-149	Douglas Fir	Seed Tree	36

Fire Hazard/Fuels: The fire hazard and fuels in the project area are low. Light ground fuels with minimal ladders fuels and no WUI.

Insects and Diseases: There are a couple of pockets of Douglas fir beetle and light infestation of Spruce budworm in the project area.

Sensitive/Rare Plants: Low Beardtongue, Deer Indian Paintbrush and Spiny Skeletonweed are plant species of concern identified by the MNHP that could be in the project area.

Noxious Weeds: Canada thistle, Houndstongue and Cheatgrass.

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

Comments:

1. Light infestations of Western Spruce Budworm are present and Douglas fir beetle is sparsely scattered along the landscape. Stand overstocking combined with long-term

drought would continue to reduce vigor and growth and leave stands at a greater risk to insect and disease attack and heavier fuel loadings and fire.

2. Mechanical treatment would increase ground disturbance and increase the potential spread of noxious weeds. In time, native species would be expected to out compete the invasive species and return the area to a more pre-harvest condition.
3. Seed tree treatments would remove 75% to 90% of the sawtimber basal area, improving the health, vigor, and productivity of the stands. Douglas-fir leave trees and adjacent trees outside of the harvest area would provide a seed source for regeneration and new timber stands in the long-term. Aspen stand treatments would remove all merchantable conifers within 100' of aspen colonies to reduce conifer encroachment and promote restoration of the aspen stands.

Vegetation Mitigations:

- All road and logging equipment would be power washed and inspected prior to being brought on site.
- Project area would be monitored for noxious weeds during and following harvest and weed treatments would be developed and implemented for two years after the completion of harvest and hauling.
- All roads, major skid trails, landings and burned slash piles would be reseeded with native grass to reduce the threat of noxious weed spread.
- Two large snags and two snag recruits (≥ 21 " dbh or next dbh class) per acre would be left where available. Cull live trees and cull snags would be retained where applicable. Sub-merchantable/non-merchantable trees and shrubs would be protected and retained where available. Retain visual screening cover in harvest unit and in stream/riparian management zones. Emphasize the retention of downed logs of 15-inch diameter or larger where available. Retain live, healthy older trees and stand attributes suitable for old growth development where available and applicable.
- All activities would be conducted on dry or frozen and/or snow-covered ground conditions.
- Implementation of Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws and DNRC Forest Management Administrative Rules.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions: Soils within the project area are a stony, cobbly loam colluvium derived from igneous and metamorphic rock or alluvium derived from argillite and metaquartzite and well drained. Soil resistance to erosion, rutting and compaction is moderate. Overall, soils are indicated as moderately suited for roads and for timber harvest. No areas of slope instability were observed within the project area during field review.

Existing access roads on private and State lands are on gentle slopes and exhibit low to moderate erosion depending on volume of usage and have no erosion control features. A segment of existing private road is within the upper 100-foot SMZ and a segment of existing

State road is within the 50-100 foot SMZ accessing a developed stream site for watering livestock and a crossing and does contribute sediment.

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													
Erosion		X				X				X			Yes	1
Nutrient Cycling	X													
Slope Stability	X													
Soil Productivity	X													
Action														
Physical Disturbance (Compaction and Displacement)		x				x				x			Yes	2,3
Erosion		x				x				x			Yes	2,3
Nutrient Cycling		x				x				x			Yes	2,3
Slope Stability	x				x				x					
Soil Productivity		x				x				x			Yes	2,3

Comments:

- Existing access roads on private lands are not BMP compliant, have minor erosion problems but do not contribute to any water resources. The roads are reinforced with moderate cobbly rock and would have erosion measures installed where practical and permissible.
- 2&3. Detrimental soil impacts resulting from compaction, displacement and erosion would be expected on approximately 20% or less of the harvest unit and would be localized to roads, primary skid trails and log landing sites. Limiting equipment operations to periods when soils are dry or frozen and/or snow-covered ground conditions is expected to reduce effects to soil disturbance and productivity. Project area nutrient pools are not expected to be affected if 5-10 tons of fine and coarse woody material is retained onsite for long-term soil organic matter supply and nutrient cycling. Woody material retention and managing operating periods in conjunction with limiting disturbance is expected to maintain long-term productivity.

There has been no harvesting within the State parcel. For an impact to soil resources to be cumulative they must overlap at least twice in both time and space. Considering this constraint, the proposed action presents a low-level risk of cumulative effects to soil resources in the project area.

Soil Mitigations:

- Limit equipment operations to periods when soils are dry or frozen and/or snow-covered ground conditions to minimize soil compaction, rutting, vegetative disturbance and maintain drainage features. Control erosion by installing adequate drainage on roads and skid trails.
- Retain all fine litter as feasible and 5-10 tons/acre of large woody debris >3" diameter including 1 large log (>15 inches dbh) per acre greater than 20 feet long as practicable.
- Minimize soil disturbance by general skid trail planning and limit sustained tractor skidding to slopes ≤50% throughout entire project. Limit scarification to 30-40% of the harvest area. Slash would be left in the harvest units where feasible, and distributed on skid trails upon completion of use, for nutrient cycling, to control erosion and to provide shade and moisture retention. Provide adequate skid trail locations for crossing ephemeral draws.
- The locations and spacing of skid trails and landings shall be designated and approved prior to operations and skid trails would not be spaced less than 50 feet apart.
- Install adequate road drainage on State lands to control erosion concurrent with harvest activities, road opening and new construction. Access roads on private lands would have erosion controls installed where practical and permissible. The segment of existing State road within the 50-100 foot SMZ would not be used for harvest and hauling activities outside of the limits of the SMZ law and would have erosion controls installed and grass seeded to reduce sedimentation.
- Provide effective sediment filtration along drainage features near crossing sites. New construction on private and State lands and major skid trails on State lands would be closed with slash and debris and have adequate drainage provided. At sale closure, grass seed roads, skid trails (where needed) and landings after burning with an appropriate seed mixture.
- Implementation of, Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws and applicable DNRC Forest Management Administrative Rules.

WATER QUALITY AND QUANTITY:

Water Quality and Quantity Existing Conditions: Frieler Creek is a Class 1 stream bordering the project area to the north with a segment of existing private road within the upper 100-foot SMZ. A segment of existing State road is within the 50-100 foot SMZ accessing a developed stream site for watering livestock and a stream crossing and does contribute sediment. None of the access roads have erosion controls. An unnamed tributary to Frieler Creek borders the harvest unit to the east and between harvest areas in the south of the project area and contains intermittent segments of Class 1, 2 and 3 stream.

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			Y	5
Water Quantity	X				X				X					
Action														

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		
Water Quality		X				X				X			Y	1,3,4
Water Quantity		X				X			X					2

Comments:

1. The primary concerns regarding water quality are the potential for increased levels of erosion and subsequent sediment delivery to streams from roads. A high level of BMP effectiveness can be expected during and after implementation of the proposed actions on roads. Installation of erosion measures on existing road on State lands, abandoning the new road and limiting equipment operations to periods when soils are dry or frozen and/or snow-covered ground conditions is expected to reduce effects to water quality. Any potential change in water quality is likely to be unmeasurable or unable to deliver to surface waters.

Due to the silvicultural prescription, location of new road construction and skid trails, implementing erosion measures on all roads on State lands, and implementation of Forest Management BMP's within the project area there is a low risk of direct, secondary or cumulative water quality impacts.

2. Forest stands within the project area have an influence on the hydrology and flow regimes of the streams draining the proposed timber permit area. The proposed harvest is expected to decrease the levels of canopy interception or evapotranspiration potential over that likely to occur in these watersheds under no action. The levels of harvest proposed are below those cumulative levels associated with detrimental increases in water yield. Direct and secondary impacts to water quantity are expected to be minor and temporary. No cumulative impacts to water quantity are anticipated under the proposed action.
3. Harvest activities near streams would implement standard SMZ and extended RMZ requirements. A designated skid trail would be used as a skidder crossing site on an intermittent Class 3 segment where there is no visible stream channel to access harvest areas on the opposing side of the drainage and would be grass seeded and closed with slash at project completion. Limiting equipment operations to periods when soils are dry or frozen and/or snow-covered ground conditions is expected to reduce effects to water quality. These, along with topographic shading, would provide adequate shade, woody debris recruitment and sediment filtration to protect adjacent and downstream beneficial uses.
4. Except for the present existing conditions and the proposed harvest related activities no other reasonably foreseeable effects are anticipated within the project area or the State parcel. Cumulative impacts to water quality are anticipated to be minor and temporary under the proposed action.

5. Cattle activity has degraded the water quality in all streams in the project area. The existing road on the State parcel has no erosion controls and the segment within the SMZ contributes sediment to Frieler Creek.

Water Quality & Quantity Mitigations:

- Limit equipment operations to periods when soils are dry or frozen and/or snow-covered ground conditions to minimize soil compaction, rutting, vegetative disturbance and maintain drainage features. Existing State access road would have erosion controls installed where practical and specifically within the SMZ segment. Existing private access roads would have erosion controls installed where applicable, practical and permissible. New road construction would be abandoned.
- All SMZ's would be visibly identified. The segment of existing State road within the SMZ would not be used for harvest and hauling activities outside the limits of the SMZ law and would have erosion controls installed and grass seeded to reduce sedimentation. The designated skid trail crossing site would be grass seeded and closed with slash.
- For the Designated skid trail crossing of a Class 3 stream, equipment operation would be restricted to the designated skidding lane and crossing site. Slash from skidding process would be deposited for additional sediment filter.
- Implementation of Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws and applicable DNRC Forest Management Administrative Rules.

FISHERIES:

Fisheries Existing Conditions: No fisheries are present in the associated drainages within the project area, but Frieler Creek does contribute to Moore Creek which does have an Artic Grayling fishery ~7.2 miles downstream from the project area.

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

Action Alternative (see Fisheries table below):

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

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

Comments:

- No direct, secondary or cumulative effects to fisheries resources are expected to occur due to the implementation of this project.

Fisheries Mitigations:

- Implementation of Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws and applicable DNRC Forest Management Administrative Rules.

WILDLIFE:

No-Action: No potential for disturbance to wildlife would be anticipated. No timber management activities would be conducted, thus no appreciable changes to existing habitats would occur. No changes in snag or large live tree availability would be anticipated. Continued maturation within existing stands could improve hiding cover and thermal cover for elk and mule deer, and other wildlife species that use forest cover to meet their life requisites. No direct effects would occur and negligible indirect, or cumulative effects would occur.

Action Alternative (see Wildlife table below):

Wildlife	Impact												Can Impact be Mitigated?	Comment Number	
	Direct				Secondary				Cumulative						
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High			
Threatened and Endangered Species															
Grizzly bear <i>(Ursus arctos)</i> Habitat: Recovery areas, security from human activity		X			X				X					Y	1
Lynx (<i>Felis lynx</i>) Habitat: mosaics--dense sapling and old forest >5,000 ft. elev.		X			X				X					Y	2
Sensitive Species															
Bald eagle	X				X				X						4

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
<i>Haliaeetus leucocephalus</i> Habitat: Late-successional forest within 1 mile of open water														
Wolverine (<i>Gulo gulo</i>) Habitat: high elevation areas that retain high snow levels in late spring		X			X				X				Y	3
Black-backed woodpecker (<i>Picoides arcticus</i>) Habitat: Mature to old burned or beetle-infested forest	X				X				X					4
Black-tailed prairie dog (<i>Cynomys ludovicianus</i>) Habitat: grasslands, short-grass prairie, sagebrush semi-desert	X				X				X					4
Flammulated owl (<i>Otus flammeolus</i>) Habitat: Late-successional ponderosa pine and Douglas-fir forest	X				X				X					4
Greater sage grouse (<i>Centrocercus urophasianus</i>) Habitat: sagebrush semi-desert	X				X				X					6
Peregrine falcon (<i>Falco peregrinus</i>) Habitat: Cliff features near open foraging areas and/or wetlands	X				X				X					5
Pileated woodpecker	X				X				X					4

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
<i>(Dryocopus pileatus)</i> Habitat: Late-successional ponderosa pine and larch-fir forest														
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				X					4
Hoary bat <i>(Lasiurus cinereus)</i> Habitat: coniferous and deciduous forests and roost on foliage in trees, under bark, in snags, bridges	X				X				X					4
Townsend's big-eared bat <i>(Plecotus townsendii)</i> Habitat: Caves, caverns, old mines	X				X				X					4
Big Game Species														
Elk		X				X				X			Y	7
Mule Deer		X				X				X			Y	7
Black Bear		X				X				X			Y	7
Other Species or Issues														
Snags		X				X				X			Y	8
Large Live Trees		X				X				X			Y	8

Comments:

1. The project area lies approximately 13 miles west of the GYE grizzly bear recovery zone and 9 miles north of the occupied habitat boundary. Potential habitat for grizzly bears is present within the project area and it is likely that a few grizzly bears may periodically use the general area as part of their home ranges. ~0.3 miles of new road would be constructed to minimum standard to access the proposed harvest units. The new road would be physically closed at the completion of all proposed activities. Stand density in

harvest unit would be reduced by 75-80% with patchy cover retained and topography for visual screening. The potential for any measurable increases in bear-human conflicts following the project activities are expected to be low. Adverse direct, secondary and cumulative impacts to grizzly bears as a result of this project are expected to be minor.

2. The current forest cover types within the project area do not contain the high horizontal cover comprised of subalpine and spruce bows that provide habitat for snowshoe hares or coarse woody debris that is preferred for denning. The project area and surrounding landscape is likely best suited as travel habitat or matrix habitat that would facilitate movement, linkage, and provide habitat for secondary prey species such as red squirrels. Considering preferred lynx habitat is marginal within the proposed project area due to the lack of highly desirable habitat conditions for lynx and their primary prey, snowshoe hares, adverse direct, indirect or cumulative impacts to lynx as a result of this project are expected to be minor.
3. The proposed project area falls within the range of wolverines and periodic or transient use of the proposed project area could occur. High elevation areas greater than 7200 feet that maintain persistent snow late into the spring do not occur in the project area. Due to the size, nature, duration and location of the proposed project, activities associated with this proposal are expected to have minimal effect on wolverines.
4. The project area is either out of the range of the normal distribution for this species or suitable habitat and/or key habitat structures are not present (e.g., documented nest sites or roosting structures etc.). No direct, indirect, or cumulative effects would be anticipated.
5. Suitable cliff features for nesting are not known to occur within 1 mile of the project area and no known nest sites occur within or near the project area. No direct, indirect, or cumulative effects would be anticipated.
6. The project area is located within "general habitat" identified by the Montana Sage Grouse Habitat Conservation Program. The main areas of impact are in higher elevation forest and woodland that have little to no value for sage grouse. Project activities would not occur from March 1 through June 1 avoiding the breeding, nesting and hatching season for sage grouse. Given the type, timing and location of the project, no direct, indirect or cumulative effects to sage grouse would be anticipated.
7. The project area falls within the distribution of elk, mule deer and black bear. ~0.6 miles of minimum standard new road would be constructed, and the duration of logging and road activities would be <6 months. Hiding and thermal cover would be affected on approximately 36 acres, and logging disturbance could disturb and displace elk, deer and black bear, however, displacement would likely be short term. Low to moderate quality thermal cover/snow intercept is present in most of the project area due to the density of small to medium size, mature trees. As the State does not have legal access to the parcel, access to the public is limited to adjacent landowners and to those they may grant access to. No appreciable changes in long-term use of the project area by any of the species would be expected. Due to the scale and short duration of the

proposed activities and implementation of mitigations measures, minor adverse direct, indirect, and cumulative effects to elk, deer and black bear would be anticipated.

8. Very few large live trees and snags exist in the project area. While the action alternative would represent a reduction in the availability of large trees and snags on about 36 treatable acres in the project area, the proposed activities would retain approximately 4-6 trees per acre within the harvest unit greater than 12" in diameter where present; the continued presence of these resources in the project area could facilitate continued use by those wildlife species that use large trees and snags. The surrounding untreated landscape would still continue to provide equivalent habitat.

Wildlife Mitigations:

- A DNRC biologist would 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.
- If a wolf den is found within 1 mile of active harvest units or within 0.5 miles of a rendezvous site, cease operations and consult a DNRC wildlife biologist for appropriate site-specific mitigations before resuming activities.
- Proposed project activities would not occur from March 1 – June 1.
- Prohibit contractors and purchasers conducting contract operations from carrying firearms while on duty.
- Contractors would adhere to food storage and sanitation requirements.
- Snags, snag recruits, and coarse woody debris would be managed according to ARM 36.11.411 through 36.11.414. Retain at least one large down log >15 inches dbh (or largest size available) and >20 feet long per acre where available. Sub-merchantable and non-merchantable trees and shrubs would be protected and retained for visual screening.
- Harvest units would be designed in a manner that requires any point within a unit to be within 600 feet of visual screening cover in at least one direction.
- All new roads and major skid trails would be physically closed within the project area on the State parcel at the completion of proposed activities. Existing restricted roads on State lands would remain closed to motorized public access.
- Implementation of Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws, and applicable DNRC Forest Management Administrative Rules.

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			Y	2

Comments:

1. Slash consisting of tree limbs and tops and other vegetative debris would be piled at landing areas 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 quality. Project area is located in Airshed 8B.
2. Dust may be created from logging operations and log hauling while on native surface roads. Due to minor amount of dust particulate, remoteness and short duration of project no mitigations for dust would be implemented.

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. 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					
Aesthetics	X				X				X					
Demands on Environmental Resources of Land, Water, or Energy	X				X				X					
Action														
Historical or Archaeological Sites	X				X				X					1

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		
Aesthetics	X				X				X					
Demands on Environmental Resources of Land, Water, or Energy	X				X				X					

Comments:

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 of the overall steep terrain (from an archaeological perspective), a lack of springs, and the lack of geology that would suggest caves, rock shelters, or sources of tool stone, no additional archaeological investigative work will be conducted in response to this proposed development.

Mitigations:

- 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.

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					

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			
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						
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						

Comments: N/A

Mitigations: N/A

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

- None.

Other Appropriate Social and Economic Circumstances:

Costs, revenues and estimates of return are estimates intended for relative comparison of alternatives. They are not intended to be used as absolute estimates of return. The estimated stumpage is based on comparable sales analysis. This method compares recent sales to find a market value for stumpage. These sales have similar species, quality, average diameter, product mix, terrain, date of sale, distance from mills, road building and logging systems, terms of sale, or anything that could affect a buyer's willingness to pay.

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

Action: The timber harvest would generate additional revenue for the Common School Trust. The estimated return to the trust for the proposed harvest is \$14,240.00 based on an estimated harvest of 255,000 board feet (1708 tons) and an overall stumpage value of \$8.00 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, 2022. Montana DNRC Trust Lands Forest Management Old Growth Handbook. Department of Natural Resources and Conservation, Forest Management Bureau, Missoula, MT.

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.

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.

Fischer, William C., Clayton, Bruce D. 1983. Fire Ecology of Montana Forest Habitat Types East of the Continental Divide, USDA Forest Service General Technical Report INT-141, Ogden, Utah.

MNHP, 2022. Montana Natural Heritage Program Environmental Summary Query and Species Occurrence Report. January 2022.

Pfister, Robert D., Kovalchic, Bernard L., Arno, Stephen F., Presby, Richard C. 1977. Forest Habitat Types of Montana, USDA Forest Service General Technical Report INT-34, Ogden, Utah.

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: Riley Stevenson
Title: Bozeman Unit Forester
Date: 9/13/2024

Finding

Alternative Selected

Upon review of the Checklist EA and attachments, I find the Action Alternative, as proposed, meets the intent of the project objectives as stated in the *Type and Purpose of Action*. The lands involved in this project are held by the State of Montana in trust for the support of specific beneficiary institutions and DNRC is required by law to administer these trust lands to produce the largest measure of reasonable and legitimate return over the long run (*Enabling Act of February 22, 1889; 1972 Montana Constitution, Article X Section 11; and, 77-1-212 MCA*). The Action Alternative was designed to be in full compliance of the State Forest Lands Manage Plan (SFLMP), the Administrative Rules for Forest Management (Forest Management Rules; ARM 36.11.401 through 471), as well as other applicable state and federal laws.

Significance of Potential Impacts

The identified resource management concerns have been fully addressed in the environmental analysis that was conducted. Specific project design features and various recommendations of the resource management specialists have been implemented to ensure that this project will fall within the limits of acceptable environmental change. For example, the project is designed to:

- 1) Implementation of Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws, and applicable DNRC Forest Management Administrative Rules.
- 2) When working off of established roads, limit equipment operations to periods when soils are dry (less than 20% soil moisture), frozen to a depth of 3 inches or a depth that will support machine operations (whichever is greater) or snow covered to a

depth of 8 inches or a depth that will prevent compaction, rutting, or displacement (whichever is greater) to minimize soil compaction, rutting, vegetative disturbance and maintain drainage features. Control erosion by installing adequate drainage on roads and skid trails.

- 3) For the designated skid trail crossing of a Class 3 stream, equipment operation would be restricted to the designated skidding lane and crossing site. Slash from skidding process would be deposited for additional sediment filter. No vegetation immediately adjacent to the designated skidding lane would be removed.
- 4) The Forest Officer shall approve a plan for felling, yarding and landing location in each harvest unit prior to the start of operations in the unit. The locations and spacing of skid trails and landings shall be designated and approved by the Forest Officer prior to operations and skid trails will not be spaced less than 50 feet. Retain all fine litter as feasible and 5-10 tons/acre of large woody debris >3" diameter. Minimize soil disturbance by general skid trail planning and limit sustained tractor skidding to slopes ≤50%. Limit scarification to 30-40% of the harvest area. Slash would be left in the harvest units where feasible and distributed on main skid trails upon completion of use, for nutrient cycling, to control erosion and to provide shade and protection for seedlings. Provide adequate skid trail locations for crossing ephemeral draws.
- 5) Install adequate road drainage to control erosion concurrent with harvest activities. Provide effective sediment filtration along drainage features near crossing sites. New roads and major skid trails on State lands would be closed with slash and debris and/or barriers, and have adequate drainage provided. The segment of existing State road within the 50-100 foot SMZ would not be used for harvest and hauling activities outside of the SMZ law and would have erosion controls installed and grass seeded to reduce sedimentation.
- 6) All road and logging equipment would be power washed and inspected prior to being brought on site.
- 7) At sale closure, grass seed roads, skid trails (where needed) and landings with an appropriate seed mixture.
- 8) Two snags and two snag recruits per acre, of the largest diameter class, would be retained where available and applicable. Cull live trees and cull snags would be retained where applicable.
- 9) Sub-merchantable and non-merchantable trees and shrubs would be protected and retained where applicable. Retain patches of advanced regeneration of shade-tolerant trees (grand fir, subalpine fir, and spruce) where available, as a component of commercial harvest prescriptions. Cover of the retained patches should not exceed 10 percent of the stand area.
- 10) Emphasize the retention of downed logs of 15-inch diameter and 20-feet long or larger per acre where available.
- 11) On blowdown salvage projects, 1 percent of the blowdown area would be left unsalvaged. The material would preferably be retained in a nonlinear patch or patches.
- 12) Retain live, healthy older trees and stand attributes suitable for old growth development where available and applicable.
- 13) Contact DNRC wildlife biologist should any threatened or endangered species be encountered within the proposed project area.
- 14) Human or pet food, livestock food, garbage, and other attractants would be stored in a bear resistant manner. Burnable attractants (such as food leftovers or bacon grease) would not be buried, discarded, or burned in an open campfire. Written

- brochures that describe risks and concerns regarding humans living and working in bear habitat would be provided to contractors and their employees conducting forest management activities prior to start of operations.
- 15) Clearcut and seed tree cutting units would be designed in a manner that requires any point within a unit to be within 600 feet of visual screening cover in at least one direction.
 - 16) Forest management activities would be prohibited during the spring period of March 1 through June 1 to minimize risk of disturbance to grizzly bears, calving areas and nesting birds.
 - 17) DNRC employees and contractors and their employees would be prohibited from carrying firearms while on duty unless the person is specifically authorized to carry a firearm under DNRC Policy 3-0621.
 - 18) 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.
 - 19) 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.
 - 20) Project area would be monitored for noxious weeds during and following harvest and weed treatments would be developed and implemented for two years after the completion of harvest and hauling.

Need for Further Environmental Analysis

 EIS

 More Detailed EA

 No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Kara Huyser

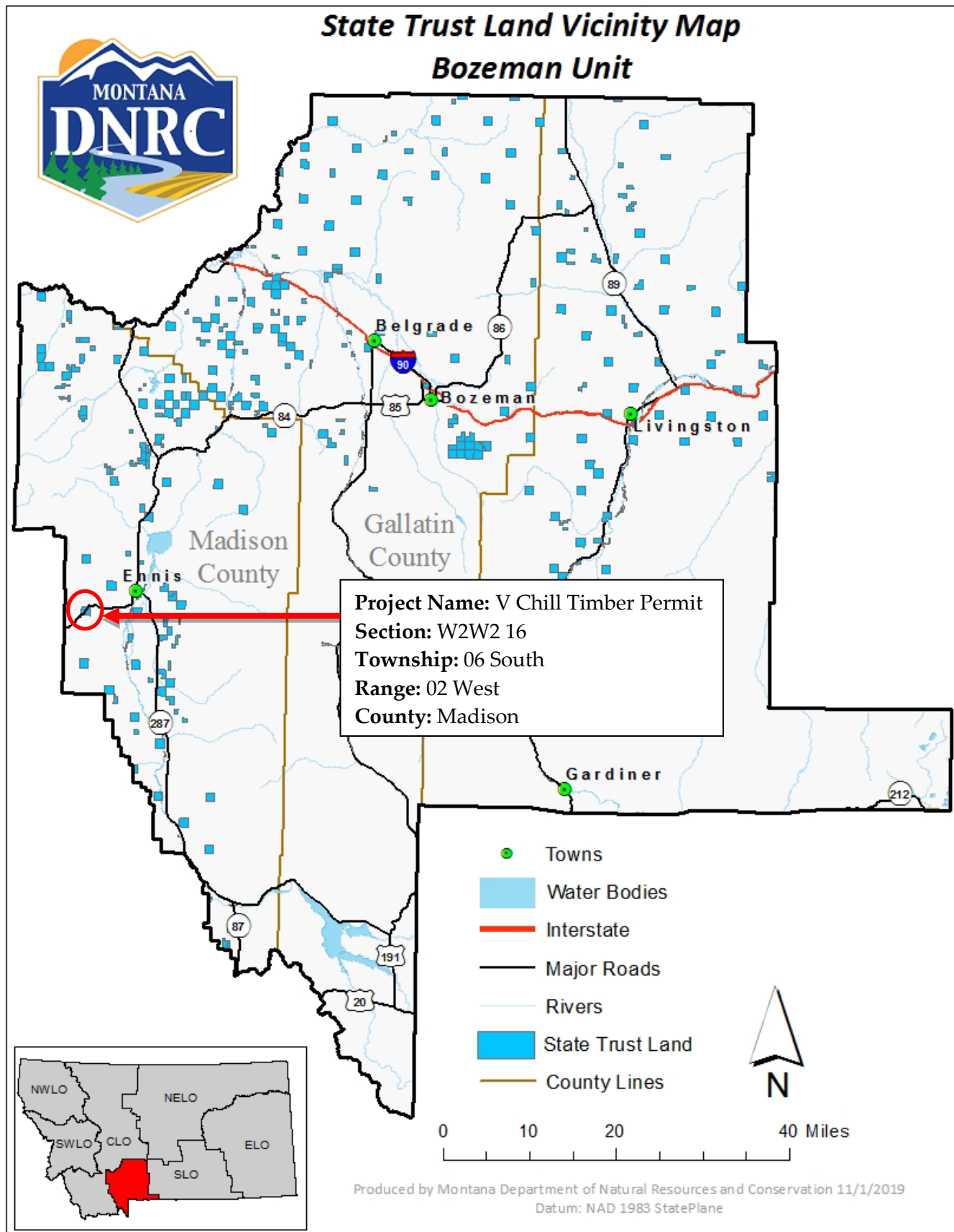
Title: CLO, Bozeman Unit Manager – Forestry and Trust Lands Division

Date: 9/16/2024

Signature: /s/ Kara Huyser

Attachment A - Maps

A-1: Timber Sale Vicinity Map



A-3: Timber Sale Harvest Units



Attachment A3 - Project Map
DNRC V Chill Timber Permit
Section 16-T6S-R2W, Madison County

