

## Environmental Assessment Checklist

**Project Name: Foothills Restoration**  
**Proposed Implementation Date: Fall 2024**  
**Proponent: Kalispell Unit, Northwest Land Office, Montana DNRC**  
**County: Flathead**

### Type and Purpose of Action

**Description of Proposed Action:**

The Kalispell Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the Foothills Restoration Project. The project is located approximately 8 miles northeast of Bigfork, Montana (refer to Attachments vicinity map A-1 and project map A-2) and includes the following sections:

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools			
Public Buildings			
MSU 2 <sup>nd</sup> Grant			
MSU Morrill			
Eastern College-MSU/Western College-U of M			
Montana Tech			
University of Montana			
School for the Deaf and Blind	<b>s. 21, 27 &amp; 28, T28N, R19W</b>	<b>960</b>	<b>172</b>
Pine Hills School			
Veterans Home			
Public Land Trust			
Acquired Land			

Objectives of the project include:

- Promote a healthy, productive forest by removing decadent and diseased trees.
- Salvage dead and dying trees.
- Reduce fuel loading and increase the stand’s fire resiliency.
- Manage outbreaks of insects and disease in the stands.
- Generate and promote future revenue opportunities for the School for the Deaf and Blind Trust
- Move the treated forested stands towards a more historic stand condition

Proposed activities include:

Action	Quantity
<b>Proposed Harvest Activities</b>	<b># Acres</b>
Clearcut	
Seed Tree	
Shelterwood	130
Selection	
Old Growth Maintenance/Restoration	
Commercial Thinning	
Salvage	
<b>Total Treatment Acres</b>	
<b>Proposed Forest Improvement Treatment</b>	<b># Acres</b>
Pre-commercial Thinning	<b>42</b>
Site preparation/scarification	<b>130</b>
Planting	<b>130</b>
<b>Proposed Road Activities</b>	<b># Miles</b>
New permanent road construction	
New temporary road construction	0.35
Road maintenance	1.55
Road reconstruction	
Road abandoned	
Road reclaimed	
<b>Other Activities</b>	
Weed spraying	6.5 acres

<b>Duration of Activities:</b>	2-3 months
<b>Implementation Period:</b>	July 2024 to November 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),
- The Montana DNRC Forested State Trust Lands Habitat Conservation Plan (HCP) (DNRC 2010)
- and all other applicable state and federal laws.

## Project Development

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### SCOPING:

- DATE:
  - April 4, 2023
- PUBLIC SCOPED:
  - The scoping notice was posted on the DNRC Website:  
<https://dnrc.mt.gov/News/scoping-notice>
  - Scoping notices were sent to 91 adjacent landowners and to contacts on the statewide and Kalispell Unit scoping list.
- AGENCIES SCOPED:
  - Montana Fish, Wildlife, and Parks; Blackfoot Tribe, Chippewa Tribe, Confederated Salish and Kootenai Tribe, Fort Belknap Tribe, Northern Cheyenne Tribe, Fort Peck Assiniboine and Sioux Tribe
- COMMENTS RECEIVED:
  - How many: 55 comments were received by email or phone call.
  - Concerns:
    - Various commenters expressed concern about project activities in the western hemlock stand within the project area, located on the east side of Krause Creek in Unit 1. Commenters suggested to remove this stand from the project proposal because of its high recreational and aesthetic value for walking, biking, and horseback riding along the existing road within the stand.
    - Various commenters expressed concerns about existing noxious weeds and slash piles within the project area and about the further spread of noxious weeds into the proposed treatment areas. High standard slash cleanup would also occur as part of project activities.
    - Concerns were also raised about recreation within the overall project area, public trespass along closed/gated roads, soil erosion, wildlife and the economic viability of the project.
    - Additional concerns were raised about proposed silvicultural treatments, post-harvest plans to plant western larch and white pine in the stand, snag retention, blowdown and removal of old growth forest stands.
    - Various commenters expressed concern about climate change and diminishing the treated stands' ability to store carbon.
    - Lastly, an adjacent landowner (Bear Paw Properties LLC) requested additional information on how the proposed project would minimize impacts to aquatics and streams. The landowner has implemented erosion mitigation measures on segments of Krause Creek on their own property downstream from the project area.
  - Results:
    - Following the scoping period, DNRC sent a letter to all commenters to acknowledge the receipt of comments and clarify the status of potential funding for the proposed project.
    - Two DNRC representatives visited the project site on June 27, 2023, with a commenter who had requested an on-site visit. Following the on-site

visit and after considering the public concerns related to the hemlock stand within the project area, the DNRC made the decision to remove the portion of Unit 1 that contains the approximately 10-acre western hemlock stand.

- DNRC representatives met with the adjacent landowner from Bear Paw Properties LLC on June 5, 2023, to discuss the erosion mitigation measures the landowner had implemented on Krause Creek downstream from the project site. DNRC explained what soil and aquatic mitigations would be in place for the proposed project.
- Existing weed populations have been targeted within the project area for the past 10 years. DNRC will continue to contract the project area for weed treatments with Flathead County. All equipment would be cleaned and inspected prior to the start of project operations. The project area would be monitored for noxious weeds after harvest operations are complete.
- There are no licensed trails within the proposed harvest units. The proposed project area would continue to be available for recreation and non-motorized use when project operations are not occurring.
- State roads within the project area that are currently closed to motorized use will remain closed during and following the completed of project activities.
- All stands proposed for treatment within the project area are currently classified as mixed conifer stands as per the DNRC's Stand Level Inventory (SLI) database. DNRC uses a site-specific model described in ARM 36.11.405 to assign a desired future condition in terms of forest cover type for each stand. This model uses an iterative process that relies on DNRC's SLI to determine historical presence and percentage of certain species to determine the desired forest cover type for each stand. For example, a stand with species composition that includes at least 10% western white pine would be assigned a desired future condition of western white pine, but other species would also be present in the stand. Proposed treatments would remove some of the current mixed conifer overstory and create space for planting western white pine and western larch. This would move the treated stands towards the desired cover type of Western white pine. Mixed conifer species such as grand fir and western hemlock would still be present following project activities.
- Given the many variables and difficulty in understand the ramifications of changing climate and carbon storage, detailed assessment of potential direct, indirect or cumulative effects to climate change or carbon storage in association with project activities is beyond the scope of this project-level environmental analysis (EA). DNRC continues to manage for biodiversity using a coarse filter approach under the management philosophy of the State Forest Land Management Plan (SFLMP), as described in ARM 36.11.404, while also working to understand relevant ecosystem changes as research findings and changes in climate evolve.
- Old growth forest that meets the definition presented in Green *et al.* (1992) are not present in the project area. Thus, the issue was dismissed from further analysis.
- Detailed information on the existing condition and potential for effects on vegetation, soils, wildlife, and aquatic resources as well as project economics are covered within this EA.

DNRC specialists were consulted, including Patrick Rennie, DNRC staff archeologist; Justin Cooper, DNRC, NWLO wildlife biologist; Jeff Schmalenberg, DNRC, FMB Science Program Supervisor (water, soils, and fisheries)

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

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

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

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

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

**ALTERNATIVES CONSIDERED:**

**No-Action Alternative:** No restoration work or timber harvest activities would occur. Pre-commercial thinning would not occur. Small quantities of wood products would continue to be sold from the project area in the form of residential firewood permits. Forest succession would continue to be mainly influenced by the occurrence of natural events such as insect and disease outbreaks, windthrow, or wildland fire.

**Action Alternative:** Timber harvest and forest restoration would occur on approximately 130 acres. Restoration activities would remove low value diseased and dying trees through a shelterwood prescription. High standard slash clean-up would occur, helping to reduce fire danger in the area. The treated areas would be site prepped for planting with western white pine and western larch. 42 acres would be pre-commercially thinned to improve forest health and vigor.

**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 moist (westside)	Mixed	Mixed Conifer	100-149	Western White Pine	Shelterwood Harvest	68
2	Warm and moist (westside)	Mixed	Mixed Conifer	100-149	Western White Pine	Shelterwood Harvest	45
3	Warm and moist (westside)	Mixed	Mixed Conifer	100-149	Western White Pine	Shelterwood Harvest	17

**Fire Hazard/Fuels:** The project area was identified in the Montana Forest Action Plan as a priority area due to its location in the wildland urban interface (WUI). Flathead County has a Community Wildfire Protection Plan (CWPP) and identified the proposed project area as 'Area 5' in their plan. This includes the area from Bigfork/Ferndale to Marias Pass. Flathead County's

plan (page 69) states the Montana DNRC should evaluate lands and determine the level of wildfire risk to DNRC managed lands as well as adjacent properties. DNRC should continue to create and expand shaded fuels breaks to lessen wildfire risk. The project area is further identified as Area 5.2 (Swan Mountain Range from Bigfork to the Lake Blaine area and the base of the mountain on Foothill Road). The Flathead County CWPP states that projects should 'reduce fuel loads that would support large, fast, fire build-up that could move north and south along the mountain. There is a need for landscape fuels reduction on the mountain range to create a mosaic pattern to break of the continuance of fuels.'

Insects and Diseases: There is a high occurrence of Indian paint fungus in the grand fir and hemlock causing a high percent of defect (rot) in mature trees. Overall decadence is high which is causing a build-up of fuel on the ground as well as dead standing trees. Scattered bark beetle activity is present in overstory Douglas-fir, grand fir, and western larch. The dead and dying trees need to be removed and fuel build-up on the ground needs to be treated to lessen the chance of catastrophic wildfire.

Sensitive/Rare Plants: No sensitive or rare plants identified by the Montana Natural Heritage Program are present in the project area.

Noxious Weeds: Spotted Knapweed, thistles, hound's tongue, and Hawkweeds are present in the project area. These weeds are mostly located along roads and old landing areas in the project area.

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

*Comments:*

**V-1:** Forested stands within the project area are currently typed as mixed conifer (mostly grand fir, western hemlock). The DFC (desired future condition) of these stands is western white pine.

**V-2:** Diseased and decadent stands are causing a buildup of fuel in the project area and increasing the potential for catastrophic wildfires.

**V-3:** Without silvicultural treatment, insects and disease (especially Indian Paint fungus) would continue to impact trees in the project area by reducing their health and vigor.

**V-4:** The spread of noxious weeds may continue even in the absence of timber harvest activities due to open roads, easements, and public traffic throughout the project area.

**V-5:** The proposed silvicultural prescriptions are all designed to transition the stands from their current cover towards the desired future condition (DFC).

**V-6:** Harvest activities would decrease fuel loading and continuity in the project area, as well as improve fire resistance and resilience.

**V-7:** All proposed harvest unit prescriptions are targeted to reduce the occurrence of insects and disease in the project area, specifically Indian Paint fungus in grand fir.

**V-8:** Timber harvest activities and associated road work may lead to an increase in the occurrence of noxious weeds in the project area. Existing weed populations are prevalent throughout the project.

*Vegetation Mitigations:*

Silvicultural prescriptions are designed to move stands to DFC. All stands proposed for treatment are currently classified as mixed conifer stands. Western white pine is the desired cover type. Proposed treatments would remove some of the mixed conifer overstory and create space for planting of western white pine. This would move the treated stands towards the desired cover type. In the absence of treatment, these stands would continue to be typed as mixed conifer.

Diseased and decadent overstory trees would be removed to improve the overall health and vigor of the stand. Spacing between overstory leave trees would be approximately 35 feet. This would leave about 30 to 40 trees per acre. Western larch and Douglas-fir would be the preferred leave trees. Grand fir, western hemlock, and Engelmann spruce would comprise the vast majority of cut trees. There is currently 80 to 100 overstory trees per acre across the project area. Most of the diseased trees that would be removed are non-merchantable due to stem decays causing high degrees of rot. This treatment would provide a shaded fuel break along an estimated 1.4 miles of boundaries with private lands.

High standard slash clean-up would occur after the overstory is treated. Existing accumulations of downed wood and slash would be piled. Any additional slash created from treating the overstory would be piled as well. All piles would be burned in the fall following treatment.



DNRC has a weed spraying contract with Flathead County. Existing weed populations have been targeted for the past 8 years or so. DNRC will continue to contract the project area for weed treatments with Flathead County. All equipment would be cleaned and inspected prior to the start of work. The project area would be monitored for noxious weeds after harvest operations are complete. There is a likelihood that operations would occur in the winter which would greatly reduce ground disturbance and the potential for spreading noxious weeds.

**SOIL DISTURBANCE AND PRODUCTIVITY:**

**Soil Disturbance and Productivity Existing Conditions:** Soil types in the project area vary from nearly level glacial outwash and glacial till, including potholes and wetland types along Krause and Echo Creeks to steep mountain hillslopes (NRCS, 2004 and USDA, 1998). Soils have high productivity due to the wet and warm climatic regime, soil moisture holding capacity and well-developed organic surface soils. DNRC has conducted timber harvesting since the early 1920s within the project area using mainly ground-based harvest methods, though harvest units in the proposed action alternative have not previously had a forest management entry.

Soils in the project area have a moderate risk of soil displacement and compaction. Soil erosion risk is low to moderate based on the local slope and low to moderate rainfall intensity potential for the project area. No areas of chronic soil erosion were evident during field review. No areas of slope instability were observed in the proposed harvest units during project review. Coarse woody debris volumes were ocular estimated at approximately 5-10 tons/acre, mostly comprised in smaller size class material (<12”).

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		
<b>No-Action</b>														
Physical Disturbance (Compaction and Displacement)	X				X				X				N/A	
Erosion	X				X				X				N/A	
Nutrient Cycling	X				X				X				N/A	
Slope Stability	X				X				X				N/A	
Soil Productivity	X				X				X				N/A	
<b>Action</b>														
Physical Disturbance (Compaction and Displacement)			X			X				X			Yes	1
Erosion		X				X			X				Yes	2
Nutrient Cycling		X				X				X			Yes	3
Slope Stability	X				X				X				N/A	
Soil Productivity		X				X				X			Yes	1, 3

*Comments:*

1. Monitoring of DNRC timber harvest shows the level of total detrimental soil impacts in a harvest area averages 13.2% for traditional ground-based operations, localized to primary skid trails and log landing sites (DNRC 2011). Detrimental soil impacts are considered substantive when they exceed 20 percent of a harvest area (DNRC 1996). Soil productivity is expected to be maintained when soil function is maintained within 80% of a harvest unit.
2. Standard implementation of forest Best Management Practices (BMPs) to control erosion concurrent with harvest activities would mitigate any erosion concerns in the project area. Primary or highly impacted skid trails would be covered with slash and debris.
3. Coarse woody debris would be left on-site in volumes recommended to help maintain soil moisture and forest productivity, generally in the 10-15 tons per acre range for habitat types found in the harvest locations (Graham et. al. 1994). Because coarse woody debris would be left on site in amounts recommended by scientific literature, benefits to nutrient cycling and forest productivity would be maintained over the long term.

*Soil Mitigations:*

ARM 36.11.422 (2) and (2) (a) state that appropriate BMPs shall be determined during project design and incorporated into implementation. To ensure that the incorporated BMPs are implemented, the specific requirements would be incorporated into the DNRC Timber Sale Contract. As part of this alternative design, the following BMPs and recommendations are considered appropriate and would be implemented during harvesting operations:

- Limit equipment operations to periods when soils are relatively dry, (less than 20 percent), frozen, or snow-covered to minimize soil compaction and rutting and maintain drainage features. Check soil moisture conditions prior to equipment start-up.
- The logger and sale administrator would agree to a skidding plan prior to equipment operations. Skid-trail planning would identify which main trails to use and how many additional trails are needed. Trails that do not comply with BMPs (i.e., trails in draw bottoms) would not be used unless impacts can be adequately mitigated. Regardless of use, these trails may be closed with additional drainage installed, where needed, or grass-seeded to stabilize the site and control erosion.
- Tractor skidding should be limited to slopes of less than 45 percent unless the operation can be completed without causing excessive displacement or erosion.
- Keep skid trails to 20 percent or less of the harvest unit acreage. Provide for drainage on skid trails and roads concurrently with operations.

- Slash disposal: Limit the combination of disturbance and scarification to 30 to 40 percent of the harvest units. No dozer piling on slopes over 35 percent; no excavator piling on slopes over 45 percent unless the operation can be completed without causing excessive erosion. Consider lopping and scattering or jackpot burning on the steeper slopes. Consider disturbance incurred during skidding.
- Compliance with Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws, Montana DNRC Forested Trust Lands HCP and applicable DNRC Forest Management Administrative Rules.

**WATER QUALITY AND QUANTITY:** Krause and Echo Creeks are hydrologically connected to the downstream receiving waters of Echo Lake. Flow regime, sediment transport dynamics, channel stability and water quality in these streams are within the natural range of variability that would be expected for the geomorphic position of these streams in the project area. As a result of this and the magnitude and intensity of proposed actions, there is no potential for measurable cumulative effects resulting from the proposed action.

**Water Quality and Quantity Existing Conditions:** According to ARM 17.30.608 (1), the Flathead River drainage and its tributaries, including the Swan River and Echo Lake, are all classified as B-1.

Previous DNRC analysis from prior actions (Foothills EIS, 2005) found very low levels of existing sources sediment delivery in both Krause and Echo Creek watershed. Recent field reviews for the current proposed actions found no existing sediment sources in both Echo and Krause Creek watersheds on state owned lands. No existing road-stream crossings exist on these water bodies on state lands. Water quantity was documented well below thresholds of concern in previous analysis (Foothills EIS, 2005). Due to the limited acreage of proposed harvest and harvest intensity, the proposed actions have a high likelihood of non-detectable direct, secondary or cumulative effects to water quantity as a result of the current proposed actions.

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		
<b>No-Action</b>														
Water Quality	X				X				X				N/A	
Water Quantity	X				X				X				N/A	
<b>Action</b>														
Water Quality		X			X				X				Yes	1
Water Quantity	X				X				X				Yes	2

*Comments:*

1. A temporary bridge will be installed on Krause Creek using existing bridge abutments. Upon project completion, the bridge will be removed, including historic abutments to restore bankfull width at the historic crossing site. Activities associated with abutment and fill removal will have minor and short-term effects on instream turbidity and will be completed under all requirements of the Stream Protection Act permit necessary for instream actions. All other project activities have a no potential to delivery sediment to either Krause or Echo Creeks.
2. The proposed harvest is not expected to substantially decrease the levels of canopy interception or evapotranspiration potential within Echo or Krause Creek watersheds relative to the levels under the no action alternative. The levels of harvest proposed are also well below those cumulative levels associated with detrimental increases in water yield. Due to these factors, no direct, secondary, or cumulative impacts to water quantity are anticipated under the proposed action.

*Water Quality & Quantity Mitigations:*

- Best Management Practices for Forestry would be implemented and monitored for effectiveness concurrent with all forest management activities.
- Implementation of Montana Administrative Rules for Forest Management and Streamside Management Zones.
- Implementation of Montana DNRCs Habitat Conservation Plan commitments for Riparian Management Zones and Sediment Delivery.

**FISHERIES:**

**Fisheries Existing Conditions:** Krause Creek and Echo Creek lay within the Echo Lake watershed. No native fish species are known to inhabit the lake or the two tributaries, and the lake system is regularly stocked with rainbow trout, kokanee, and largemouth bass. Eastern brook trout have also been introduced to the system. Rainbow trout and eastern brook trout populations have consequently spread to Krause Creek (S. Rumsey (FWP Kalispell, personal communication, 2005)) and Echo Creek (MFISH 2023), which are connected to Echo Lake via perennial flow through Echo Creek and diversion ditches from Krause Creek. No apparent existing direct or indirect impacts to the non-native fisheries in Krause Creek and Echo Creek were observed.

**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		
<b>No-Action</b>														
Sediment	X				X				X				N/A	
Flow Regimes	X				X				X				N/A	
Woody Debris	X				X				X				N/A	
Stream Shading	X				X				X				N/A	
Stream Temperature	X				X				X				N/A	
Connectivity	X				X				X				N/A	
Populations	X				X				X				N/A	
<b>Action</b>														
Sediment		X			X				X				Yes	1
Flow Regimes	X				X				X				N/A	
Woody Debris	X				X				X				N/A	
Stream Shading	X				X				X				N/A	
Stream Temperature	X				X				X				N/A	
Connectivity	X				X				X				N/A	
Populations	X				X				X				N/A	

**Comments:**

1. Application of Montana Best Management Practices for Forestry, mitigations prescribed within Montana Stream Protection Act permit and application of Montana Streamside Management Zone Law and Administrative Rules for Forest Management will all provide adequate protection against sediment delivery and protect riparian function important to fisheries resources. Minor and short-term turbidity associated with the removal of bridge abutments is expected.

**Fisheries Mitigations:**

- Best Management Practices for Forestry would be implemented and monitored for effectiveness concurrent with all forest management activities.
- Implementation of Montana Administrative Rules for Forest Management and Streamside Management Zones.
- Implementation of Montana DNRCs Habitat Conservation Plan commitments for Riparian Management Zones and Sediment Delivery.

## **WILDLIFE:**

**Wildlife Existing Conditions:** The Project Area is comprised of habitat conditions that favor native wildlife species associated with mature forest types and stands of young, regenerating forest harvested within the last 17 years. This area consists of three DNRC-managed parcels totaling 956 acres and are included in DNRC's Habitat Conservation Plan (HCP, USFWS and DNRC 2010). All three parcels are bordered by a mix of undeveloped UDSA Forest Service (USFS) lands and private lands with low-density development and mixed forest management practices. The Project Area is situated in a transitional zone for wildlife habitat at the base of the Swan Mountain range, where gentle topography of the Flathead Valley containing mixed agriculture/grasslands and interspersed forest to the west is juxtaposed with steep montane forests and alpine habitat of the Swan Range rising to the east. The Project Area contains an estimated 626 acres of forest with relatively closed canopies ( $\geq 40\%$  canopy closure), which includes 465 acres of mature forest stands (trees  $\geq 9$ " dbh with  $\geq 40\%$  canopy closure). Of these mature forest acres, none are old-growth forest using Green et al. (1992) standards. Insects and disease are active within the Project Area, reducing live tree abundance and canopy closure in some patches. Larger natural openings in the canopy containing pockets of blowdown from insect and disease damage are scattered throughout the Project Area. Approximately 6.8 miles of roads are present within the Project Area, of which 1.0 mile is open and 5.8 miles are restricted from public motorized use. Public motorized use of the open road is high due to the proximity of occupied homes and recreational use within the Project Area and on adjacent lands. Restricted roads receive occasional motorized use for resource and fire-management purposes. Signs of unauthorized motorized access from small offroad utility vehicles are evident leading off open roads, which likely increases during the hunting season. Public non-motorized use is high in these parcels year-round. Cumulative effects analysis areas (hereafter CEAA) incorporate lands near the Project Area and include a 6,372-acre Small CEAA for animals with smaller home ranges like pileated woodpeckers and a 41,880-acre Large CEAA for animals that travel across broader areas such as Canada lynx and big game. Additional information on cumulative effects analysis areas and analysis methods are available upon request. Overall, conditions within the Project Area favor wildlife species using mature forest habitat with varied canopy gaps and a moderate volume of recreational use.

**No-Action Alternative:** None of the proposed activities would occur. In the short-term, forest insects and disease will likely continue to kill some mature trees, potentially adding to larger patches of dead and dying trees within the Project Area. Additionally, occasional disturbance from small scale firewood collection would be anticipated. In the long-term, habitat suitability for mature forest-associated species would remain similar or slightly decrease compared to current conditions. An increase in stand-replacement wildfire risk would also be anticipated. Overall, a slight decrease in habitat availability for species preferring mature connected forests would likely occur over time as other stands succumb to insect and disease damage, while habitat availability would increase for species preferring open forest habitat.

**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		
<b>Threatened and Endangered Species</b>														
<b>Grizzly bear</b> <i>(Ursus arctos)</i> Habitat: Recovery areas, security from human activity		X				X				X			Y	WI-1
<b>Lynx</b> ( <i>Felis lynx</i> ) Habitat: SF hab.types, dense sapling, old forest, deep snow zone		X				X				X			Y	WI-2
<b>Yellow-billed cuckoo</b> ( <i>Coccyzus americanus</i> ) Habitat: open cottonwood riparian forest with dense brush understories (Lake and Flathead counties)	X				X				X					WI-3
<b>Sensitive Species</b>														
<b>Bald eagle</b> <i>(Haliaeetus leucocephalus)</i> Habitat: Late-successional forest within 1 mile of open water	X				X				X					WI-4
<b>Black-backed woodpecker</b> <i>(Picoides arcticus)</i> Habitat: Mature to old burned or beetle-infested forest	X				X				X					WI-3
<b>Common loon</b> <i>(Gavia immer)</i> Habitat: Cold mountain lakes, nest in emergent vegetation	X				X				X					WI-3
<b>Fisher</b> <i>(Martes pennanti)</i> Habitat: Dense mature to old forest less than 6,000 feet		X				X				X			Y	WI-5

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
in elevation and riparian														
<b>Flammulated owl</b> ( <i>Otus flammeolus</i> ) Habitat: Late-successional ponderosa pine and Douglas-fir forest	X				X				X				Y	WI-6
<b>Peregrine falcon</b> ( <i>Falco peregrinus</i> ) Habitat: Cliff features near open foraging areas and/or wetlands	X				X				X					WI-3
<b>Pileated woodpecker</b> ( <i>Dryocopus pileatus</i> ) Habitat: Late-successional ponderosa pine and larch-fir forest		X				X				X			Y	WI-7
<b>Fringed myotis</b> ( <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					WI-3
<b>Hoary bat</b> ( <i>Lasiurus cinereus</i> ) Habitat: coniferous and deciduous forests and roost on foliage in trees, under bark, in snags, bridges		X				X				X			Y	WI-8
<b>Townsend's big-eared bat</b> ( <i>Plecotus townsendii</i> ) Habitat: Caves, caverns, old mines	X				X				X					WI-3
<b>Wolverine</b> ( <i>Gulo gulo</i> ) Habitat: high elevation areas that	X				X				X					WI-3



Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
retain high snow levels in late spring														
<b>Big Game Species</b>														
<b>Elk</b>			X				X			X			Y	WI-9
<b>Whitetail</b>			X				X			X			Y	WI-9
<b>Mule Deer</b>			X				X			X			Y	WI-9
<b>Moose</b>		X				X				X			Y	WI-9
<b>Other</b>														
<b>Mature Forest</b>			X				X			X				WI-10

*Comments:*

**WI-1. Grizzly Bear** – Timber harvest and pre-commercial thinning would affect approximately 172 acres (18.0% of the Project Area) of grizzly bear recovery zone habitat associated with the Northern Continental Divide Ecosystem (NCDE) (USFWS 1993). Of the 636 acres of hiding cover present in the Project Area, the proposed action would remove 121 acres (19.0% of available hiding cover) for at least 10 to 15 years and reduce cover quality on the remaining 51 acres (8.0% of available hiding cover). To mitigate some potential adverse effects, no point within the proposed harvest units would be greater than 600 feet to cover using vegetative or topographic screening. No new permanent roads would be built, but motorized use of 1.6 miles of existing restricted roads within the Project Area would increase during project implementation. In addition, 0.4 miles of new temporary roads would be built. Visual screening would be maintained where occurring along open roads. Existing restricted roads used for harvesting would remain restricted during and after the conclusion of the project. Additionally, timing restrictions would be applied from April 1 – June 15 during project implementation to provide security for grizzly bears in the spring. Any grizzly bears using the Project Area could be temporarily displaced by the proposed activities for up to four years, although grizzly bears using this area are likely habituated to some human disturbance due to high recreational use and adjacent human developments. Following the four years of active management, each parcel would enter a rest period for at least 8 years when large-scale commercial forest management activities would not be allowed during periods when bears are active. After harvest, hiding cover would persist on approximately 57.7% of the 41,880-acre large cumulative effects analysis area (hereafter Large CEAA), predominantly on USFS lands. Impacts to hiding cover and increased disturbance under the Action Alternative would be additive to any ongoing vegetation management projects, agriculture, or development on private and public lands within the Large CEAA, including proposed pre-commercial thinning projects on DNRC lands. Measurable cumulative changes to grizzly bear use of the Large CEAA would be low as a result of the Action Alternative. The greatest risks to bears within the Large CEAA would remain neighboring human habitations, agriculture and associated attractants that bring bears into conflict with people.

**WI-2. Canada Lynx** – Approximately 626 acres of suitable lynx habitat exists in the Project Area (65.5% of the Project Area) with another 330 acres of temporary nonsuitable lynx habitat (34.5% of the Project Area). An estimated 172 acres of suitable lynx habitat (18.0% of the Project Area) would be affected by the proposed Action Alternative. Of these acres, 121 acres (19.3% of suitable lynx habitat in the Project Area) would be treated with harvest prescriptions that would not retain enough conifer cover to continue providing suitable lynx habitat immediately post-harvest. The remaining 51 acres (8.1% of suitable lynx habitat in the Project

Area) would receive treatments that would reduce some habitat attributes but would continue to provide suitable lynx habitat overall. In addition, approximately 105 acres of existing temporary unsuitable lynx habitat in the Project Area would be expected to become suitable lynx habitat within the next 15 years. To ensure that forest structure attributes preferred by lynx and lynx prey (snowshoe hares) remain following harvest, some patches of advanced regeneration and shade-tolerant trees would be retained within portions of suitable lynx habitat. Additionally, 10 to 15 tons/acre of coarse woody debris would be retained in accordance with DNRC Forest Management Rules (ARM 36.11.414) and retention of downed logs  $\geq 15$ -inch diameter would be emphasized. Lynx habitat connectivity within the Project Area would not be substantially reduced under the Action Alternative, but any lynx that might be using the area could temporarily be displaced from the Project Area for up to four years by the proposed activities. However, lynx have not been observed within the Large CEAA (MTNHP 2023) and developed lands containing unsuitable habitat types with lower snow loads occupy surrounding lands to the west; therefore, the likelihood of lynx using the Project Area is low. Disturbance and habitat alteration by the proposed DNRC activities would be additive to any ongoing forest management projects on adjacent private and public lands within the Large CEAA, including proposed pre-commercial thinning projects on DNRC lands. After harvest, suitable lynx habitat would persist on approximately 37.0% of the Large CEAA and provide sufficient connected habitat for lynx persistence at the larger landscape level, predominately on public lands in the eastern half of the CEAA.

**WI-3.** This species was evaluated, and it was determined that the Project Area lies outside of the normal distribution for the species, and/or suitable habitat was not found to be present.

**WI-4. Bald Eagle** – No known active bald eagle nests or territories are in the vicinity of the Project Area. Currently the nearest known nest is 2.8 miles from the Project Area and appreciable use of the Project Area by bald eagles is not anticipated.

**WI-5. Fisher** – Approximately 130 acres of suitable fisher habitat (25.5% of suitable fisher habitat in the Project Area) and another 42 acres of preferred cover types would be affected by the proposed activities (totaling 18.0% of potential fisher habitat available in the Project Area). Of the suitable habitat acres affected, 121 acres (23.8% of suitable fisher habitat available in the Project Area) would not be suitable for fishers post-harvest due to low amounts of mature conifer cover. The remaining 9 acres (1.8% of suitable fisher habitat in the Project Area) would receive treatments that would reduce some suitable habitat attributes but would continue to provide fisher habitat overall. Approximately 42 acres of preferred cover types, which do not currently contain adequate forest structure for fishers, would undergo a reduction in vegetation that would increase the time until those acres grow into suitable habitat. Fisher habitat connectivity would remain relatively similar across the Project Area, although it is currently limited by interspersed unsuitable cover types and low availability of suitable habitat on adjacent private lands. To reduce some adverse effects on fishers, at least 2 large snags and 2 large snag recruitment trees per acre ( $>21$  inches dbh) would be retained (ARM 36.11.411). These snags are important habitat features that provide resting and denning sites for fishers. Approximately 5 acres of suitable riparian fisher habitat would be affected by harvest treatments; however, connectivity of riparian habitat within the Project Area would not be substantially reduced under the Action Alternative. With the availability of mature stands and prevalence of suitable forest types (Olson et al. 2014), use of the Project Area is possible; however, the lack of recent fisher observations within five miles of the Project Area over the last 25 years (MTNHP 2023) suggests that the likelihood of fishers using the Project Area or CEAA is low. Should any fishers be present within the Large CEAA, habitat alteration and potential disturbance would be additive to any activities occurring on surrounding lands. The availability

of potential fisher habitat within the Large CEAA is limited due to development and agriculture on private lands, however 11,935 acres (28.5% of the Large CEAA) would remain as suitable habitat and relatively well-connected, predominantly on USFS lands to the east. However, considering the small amount of harvest at the scale of the Large CEAA (1.1% of potential habitat), low adverse effects to fishers in the Large CEAA would be expected.

**WI-6. Flammulated Owls** – There is no preferred flammulated owl habitat within the Project Area. Suitable flammulated owl habitat likely persists nearby; however, there is insufficient suitable habitat within or adjacent to the Project Area to currently support breeding flammulated owls. To retain potential nesting trees for flammulated owls, at least 2 large snags and 2 large snag recruitment trees per acre (>21 inches dbh) would be retained (ARM 36.11.411). Within the 6,372 -acre small cumulative effects area (hereafter Small CEAA), an estimated 184 acres of forest stands could be potentially suitable for flammulated owls; however, suitable habitat types are not well-represented and snags available for nesting are likely limited in some areas due to differing snag conservation philosophies on surrounding private ownerships.

**WI-7. Pileated Woodpecker** – The proposed activities would affect 61 acres of suitable pileated woodpecker habitat (22.3% of habitat available in the Project Area). Of these acres, 55 acres (20.1% of the habitat available in the Project Area) would be treated with harvest prescriptions causing these stands to become unsuitable for pileated woodpecker use post-harvest. The remaining 6 acres would undergo less intensive harvest and would likely retain some suitable habitat for pileated woodpeckers post-harvest, although with fewer large trees and snags available for nesting and foraging. Approximately 217 acres of relatively well-connected suitable pileated habitat (22.7% of the Project Area) would remain within the Project Area post-harvest. To decrease potential adverse effects on pileated woodpeckers, at least 2 large snags and 2 large snag recruitment trees per acre (>21 inches dbh, or largest size class available) would be retained and all snags cut for safety reasons would be left in the harvest unit (ARM 36.11.411). Additionally, 10 to 15 tons/per acre of downed wood would be retained, with an emphasis on logs >15" diameter. The Project Area would likely continue to support breeding pileated woodpeckers if they are currently present, although any breeding territory would be expected to extend outside of the Project Area into the Small CEAA as well. Habitat alterations due to the proposed action would be additive to recent forest management projects on adjacent private and public lands within the Small CEAA. Habitat availability within the Small CEAA is limited due to human development, forest management, agriculture, and natural clearings on private lands; however, 2,316 acres (36.3% of the Small CEAA) would remain as suitable habitat and relatively well-connected on USFS land. Overall, continued use of the Small CEAA by pileated woodpeckers would be anticipated.

**WI-8. Hoary bat** – The proposed activities would affect approximately 130 acres of potential hoary bat habitat (28.0% of suitable habitat within the Project Area). Because hoary bats typically roost in trees and snags, they could be temporarily disturbed by timber harvesting. Potential disturbance would only be expected from June through September, when hoary bats are in Montana. After the conclusion of activities, continued use of the Project Area, including harvested areas, by hoary bats would be anticipated. At least 2 large snags and 2 large snag recruitment trees per acre (>21 inches dbh, or largest size class available) would be retained and could provide roosting habitat (ARM 36.11.411). Should any hoary bats be present within the Large CEAA, habitat alteration and potential disturbance under the Action Alternative would be additive to any activities occurring or planned on surrounding private and public lands within the Large CEAA. Hoary bats are considered common and widespread throughout Montana, but wind energy and diseases such as white-nosed syndrome pose threats to their population (Bachen et al 2020).

**WI-9. Big Game** – The proposed activities would reduce thermal cover on potential white-tailed deer, elk, and mule deer winter range (DFWP 2008). Occasional summer use by moose would also be expected within the Project Area. The proposed harvest would affect 129 acres of thermal cover (29.6% of thermal cover available in the Project Area). Of these acres, 120 acres (27.3% of thermal cover available in the Project Area) would be treated with harvest prescriptions that would retain 20-30% mature canopy cover, reducing the capacity of these stands to provide thermal cover during typical winter conditions. The remaining 9 acres (2.1% of thermal cover available in the Project Area) would be treated with prescriptions that retain more trees and would continue providing some thermal cover post-harvest, albeit at a reduced quality. High-quality thermal cover with  $\geq 60\%$  canopy cover would persist on 310 acres (32.4% of the Project Area), with another 127 acres (13.3% of the Project Area) of marginal thermal cover containing between 40-60% canopy cover after harvest. Approximately 171 acres of hiding cover (17.9% of the Project Area) would be affected by timber harvest and pre-commercial thinning. Proposed harvests would remove up to 120 acres of hiding cover (20.2% of total hiding cover within the Project Area). Pre-commercial thinning and areas of higher retention would reduce hiding cover quality on the remaining 51 acres. Hiding cover would persist on 54.0% of the Project Area after harvest. No new permanent roads would be built, and visual screening would be retained adjacent to open roads, where possible, to increase security and reduce human-caused mortality. Under the action alternative, 0.4 miles of new temporary roads would be built, increasing the accessibility of the area. During and after harvest, public motorized restrictions will be maintained on all restricted roads, temporary roads, illegal motorized trails, and skid trails in the Project Area via a combination of gates, kelly humps, rocks, and stumps. Impacts to hiding cover and thermal cover/snow intercept under the Action Alternative would be additive to any ongoing vegetation management projects on private and public lands within the Large CEAA, including proposed pre-commercial thinning projects on DNRC lands. Thermal cover ( $\geq 40\%$  mature canopy closure) would remain on 11,374 acres of the 41,880-acre Large CEAA (27.2% of the Large CEAA). After harvest, hiding cover would persist on approximately 57.7% of the Large CEAA. Overall, measurable big game population changes at the scale of the Large CEAA would not be expected as a result of the Action Alternative.

**WI-10. Mature Forest**– The proposed action would affect approximately 119 acres of mature forest (25.6% of mature forest within the Project Area) with a reasonably closed canopy ( $\geq 40\%$  canopy closure). Harvest prescriptions would reduce live tree densities and bring overstory canopy cover below 40% on 113 acres of mature forest (24.3% of the mature forest in the project area). Approximately 352 acres of mature forest (36.8% of the Project Area) would remain within the Project Area post-harvest. Connectivity of mature forest would be reduced overall; however, some connectivity will be retained within riparian management zones (RMZs). Forest management projects on DNRC, USFS, and private lands removed some mature forest within the last 20 years and continue to alter mature forest stands within the small CEAA. The proposed action would be additive to these changes at the broader spatial scale; however, mature forest would remain on 39.7% of the Small CEAA and relatively well connected through DNRC and USFS lands.

*Wildlife Mitigations:*

- If a threatened or endangered species is encountered, consult a DNRC biologist immediately. Similarly, if undocumented nesting raptors or wolf dens are encountered within  $\frac{1}{2}$  mile of the Project Area, contact a DNRC biologist.
- Contractors will adhere to food storage and sanitation requirements as described in the timber sale contract. Ensure that all attractants such as food, garbage, and petroleum products are stored in a bear-resistant manner.

- Prohibit contractors and purchasers conducting contract operations from carrying firearms while on duty as per ARM 36.11.432(1)(c).
- Effectively close restricted roads, temporary roads, illegal motorized trails, and skid trails in the Project Area via a combination of gates, kelly humps, rocks, and stumps. Maintain public motorized restrictions on restricted and temporary roads during and after harvest activities.
- Prohibit all harvesting-related motorized activities more than 100 feet from open roads from April 1 – June 15.
- Conduct major commercial forest management activities for a maximum management period of four years, followed by a mandatory rest period of at least eight years, per *ARM 36.11.432(6)(c)*.
- Within commercial harvest units, retain patches of advanced regeneration trees as per LY-HB4 (USFWS and DNRC 2010).
- Retain shade-tolerant trees (grand fir, subalpine fir, hemlock, and spruce) <3 feet tall that do not pose competition risks to crop trees as per LY-HB4 (USFWS and DNRC 2010) in all pre-commercial thinning units.
- Maintain visual screening along open roads by conserving seedling and submerchantable trees in addition to some merchantable timber.
- Retain at least 2 snags and 2 snag recruits per acre >21 inches dbh or the next available size class, particularly favoring ponderosa pine, western larch, and Douglas-fir for retention. If snags are cut for safety concerns, they must be left in the harvest unit.
- Retain 10 to 15 tons/acre coarse-woody debris according to ARM 36.11.414 and emphasize retention of 15-inch diameter downed logs aiming for at least one 20-foot-long section per acre (USFWS and DNRC 2010).

*Literature:*

- Bachen, D.A., A. McEwan, B. Burkholder, S. Blum, and B. Maxell. 2020. Accounts of Bat Species Found in Montana. Report to Montana Department of Environmental Quality. Montana Natural Heritage Program, Helena, Montana. 58 p.
- DFWP. 2008. Maps of moose, elk, mule deer, and white-tailed deer distribution in Montana. *In* Individual GIS data layers. Available online at: <https://gis-mtfwp.opendata.arcgis.com/>
- Green, P., J. Joy, D. Sirucek, W. Hann, A. Zack, and B. Naumann. 1992. Old Growth Forest Types of the Northern Region. R-1 SES. USDA Forest Service, Northern Region, Missoula MT 60pp.
- Montana Natural Heritage Program (MTNHP). 2023. Environmental Summary Report for Latitude 48.07449 to 48.24071 and Longitude -113.89747 to -114.13456. Retrieved on 8/2/2023, from <http://mtnhp.org/MapView>.
- Olson, L. E., J. D. Sauder, N. M. Albrecht, R. S. Vinkey, S. A. Cushman, and M. K. Schwartz. 2014. Modeling the effects of dispersal and patch size on predicted fisher (*Pekania [Martes] pennanti*) distribution in the U.S. Rocky Mountains. *Biological Conservation* 169:89-98.
- USFWS. 1993. Grizzly bear recovery plan. Report on file at Missoula, MT. 181pp.
- USFWS and DNRC. 2010. Montana Department of Natural Resources and Conservation Forested Trust Lands Habitat Conservation Plan, Final Environmental Impact Statement, Volumes I and II., U.S. Department of Interior, Fish and Wildlife Service, Region 6, Denver, Colorado and Montana Department of Natural Resources and Conservation, Missoula, MT.

**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		
<b>No-Action</b>														
Smoke	X				X				X					
Dust		X				X				X				
<b>Action</b>														
Smoke		X				X				X				
Dust		X				X				X				

*Comments:*

**AQ-1:** Dust may be created from public traffic on roads located in the project area.

**AQ-2:** Smoke will be created from pile burning, and dust may be created from log hauling.

*Air Quality Mitigations:*

Burning would occur only on days approved by the Montana/Idaho Airshed group and the DEQ. A test burn will be conducted to verify good dispersal. The DNRC will implement measures to mitigate dust created from log hauling operations as needed. These mitigations may include slow driving speeds, a restricted haul period, and/or application of dust abatement on road surfaces. There is a high probability harvest operations would occur in the winter given the projects close proximity to mills, low elevation, and favorable ground based harvest conditions.

**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		
<b>No-Action</b>														
Historical or Archaeological Sites	X													ARC-1
Aesthetics	X													
Demands on Environmental Resources of Land, Water, or Energy	X													
<b>Action</b>														
Historical or Archaeological Sites	X													
Aesthetics		X			X				X					ARC-2

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

*Comments:*

**ARC-1:** Timber harvest and restoration activities could potentially disturb historical or archeological resources in the project area.

**ARC-2:** Timber harvest and restoration activities could negatively affect the visual appearance of the area. Specifically, an existing road that accesses the project area is used for hiking, biking, and horse back riding.

*Mitigations:*

Scoping letters were sent to those Tribes that requested to be notified of DNRC timber sales. No response was returned that identified a specific cultural resource issue. 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.

Because the topographic setting and geology suggest a low to moderate likelihood of the presence of cultural or palaeontologic resources, proposed timber harvest activities are expected to have No Effect to Antiquities. No additional archaeological investigative work will be conducted in response to this proposed development. 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.

DNRC made the decision to drop the western hemlock stand out of Unit 1. The existing road goes through this stand of hemlock and many comments were received during the initial scoping process regarding this stand of hemlock. It contains a high aesthetic quality for many of the folks that use the road for hiking, biking, or horse back riding. The stand is approximately 10 acres.

**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.*

- Foothills Final Environmental Impact Statement (DNRC, 2005)

## 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		
<b>No-Action</b>														
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					
<b>Action</b>														
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	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		
Recreational and Wilderness Activities														
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:* The proposed project would have no impacts on the human population.

*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.

The project area was identified in the Montana Forest Action Plan as a priority area due to its location in the wildland urban interface (WUI). Flathead County has a Community Wildfire Protection Plan (CWPP) and identified the proposed project area as 'Area 5' in their plan. This includes the area from Bigfork/Ferndale to Marias Pass.

**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 School for the Deaf and Blind Trust. The estimated return to the trust for the proposed harvest is \$37,000.00 based on an estimated harvest of 285 thousand board feet (1,850 tons) and an overall stumpage value of \$20.00 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: Pete Seigmund**  
**Title: Forest Management Supervisor**  
**Date: July 31, 2023**

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## Finding

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### Alternative Selected

Action Alternative

### Significance of Potential Impacts

I find that the impacts of the proposed action alternative as described in this Environmental Assessment are not significant. This Environmental Analysis has been completed for the Foothills Restoration Project. After a thorough review of the EA, project file, responses/discussions with Department and outside specialists, Department policies, standards, and guidelines, the State Land Management Rules, and the HCP rules, I have made the decision to choose the action alternative. I believe that this EA has provided a good approximation of what this project would accomplish. By promoting a healthy, productive forest by removing decadent and diseased trees and salvaging dead and dying trees DNRC would be able to perform forest management before the timber loses its economic value for the associated trusts. By reducing fuel loadings, DNRC would mitigate the potential for high intensity fires next to private property. This project will also reduce the susceptibility of residual trees to epidemic insect and disease infestations and outbreaks, in addition to improving the availability of necessary nutrients, water, and sunlight that may be limited in this stand. This activity will move this stand towards a future desired condition by converting the stand from a mixed conifer stand towards a Western White pine/ Western Larch stand.

### Need for Further Environmental Analysis

EIS

More Detailed EA

No Further Analysis

### Environmental Assessment Checklist Approved By:

**Name: David M. Poukish**

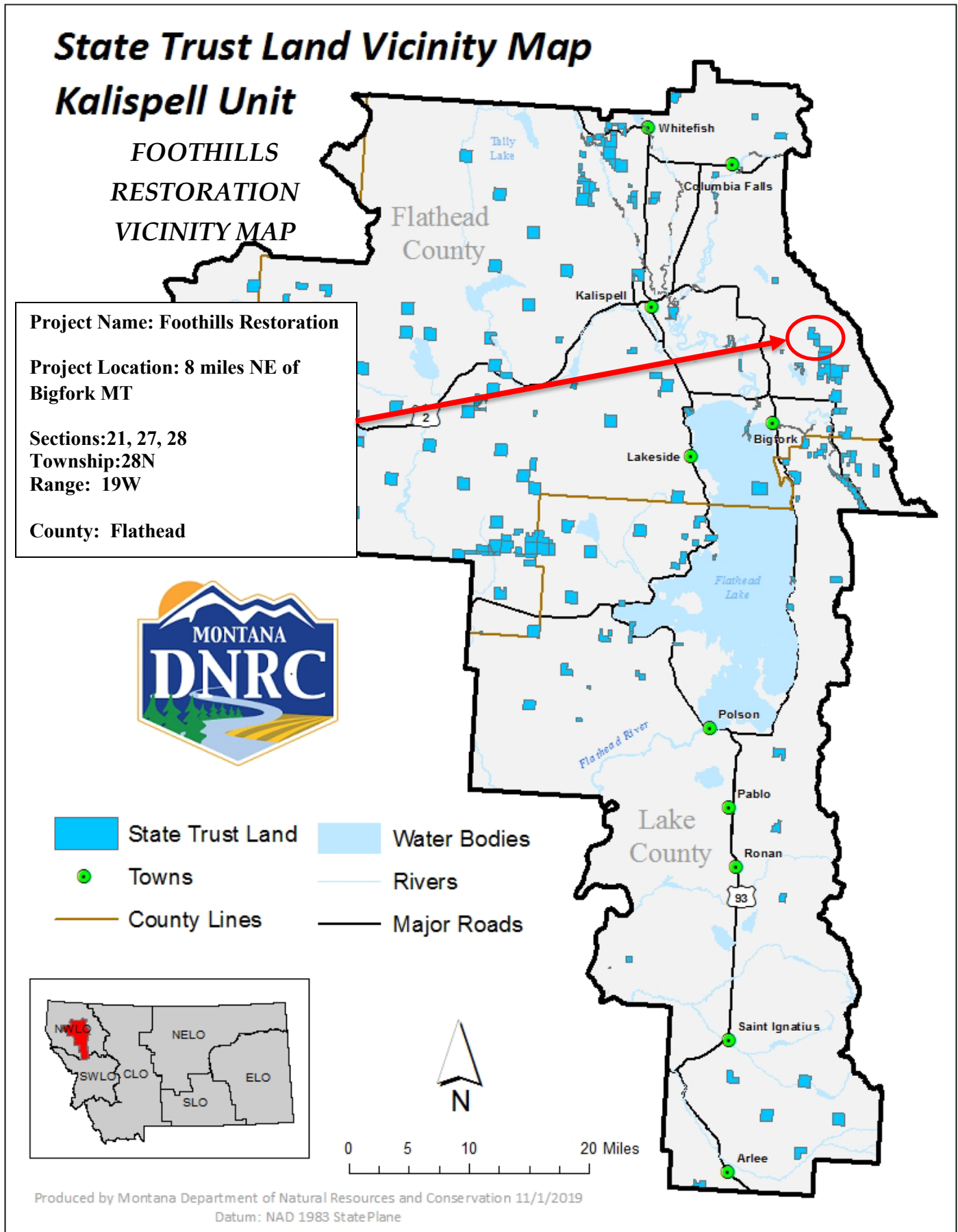
**Title: Kalispell Unit Manager**

**Date: 4/2/2024**

**Signature: /s/ David M. Poukish**

## **Attachment A - Maps**

A-1: Timber Sale Vicinity Map





A-2: Timber Sale Harvest Units

