

Environmental Assessment Checklist

Project Name: Bybee Carriage and Trappin' Shack 612 Permits
Proposed Implementation Date: 2020-2022
Proponent: Missoula Unit, Southwest Land Office, Montana DNRC
County: Missoula

Type and Purpose of Action

Description of Proposed Action:

The Missoula Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the Bybee Carriage and Trappin' Shack 612 Timber Permits. The projects are located east of Potomac, MT. (refer to vicinity & project maps in Attachment A) and include the following sections:

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools	Sec 16 T12N R16W	640	68
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	Sections 15 & 22 T12N R16W	1280	362

Objectives of the projects include:

Commercial Timber Harvest

- Remove overstory trees that contain high amounts of defect.
- Reduce competition for limited water and nutrients.
- Generate revenue for the Acquired Lands-Public Schools Trust and the Common Schools Trust.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	
Clearcut	
Seed Tree	
Shelterwood	
Selection	
Commercial Thinning	75
Salvage	
Sanitation	355
Total Treatment Acres	430
Proposed Forest Improvement Treatment	
Pre-commercial Thinning	
Planting	
Proposed Road Activities	
New permanent road construction	
New temporary road construction	
Road maintenance	
Road reconstruction	
Road abandoned	
Road reclaimed	
Other Activities	

Duration of Activities:	2 years- Not continuous activity
Implementation Period:	2020-2022

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)
- all other applicable state and federal laws.

Project Development

SCOPING:

DNRC specialists were consulted, including: Andrea Stanley-Hydrologist, Soil Scientist, & Garrett Schairer-Wildlife Biologist, & Patrick Rennie-Archeologist

Issues and concerns were incorporated into project planning and design and would be implemented in associated contracts.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS

NEEDED: (*Conservation Easements, Army Corps of Engineers, road use permits, etc.*)

- **Montana Department of Environmental Quality (DEQ)-** DNRC is classified as a major open burner by DEQ and is issued a permit from DEQ to conduct burning activities on state lands managed by DNRC. As a major open-burning permit holder, DNRC agrees to comply with the limitations and conditions of the permit.
- **Montana/Idaho Airshed Group-** The DNRC is a member of the Montana/Idaho Airshed Group which was formed to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction (Montana/Idaho Airshed Group 2006). The Group determines the delineation of airsheds and impact zones throughout Idaho and Montana. Airsheds describe those geographical areas that have similar atmospheric conditions, while impact zones describe any area in Montana or Idaho that the Group deems smoke sensitive and/or having an existing air quality problem (Montana/Idaho Airshed Group 2006). As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Smoke Management Unit.
- **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 www.dnrc.mt.gov/HCP.

ALTERNATIVES CONSIDERED:

No-Action: The proposed commercial timber harvest would not occur. The stands would remain at overstocked levels with low production rates.

Action Alternative (Provide a brief description of all proposed activities):

Bybee Carriage & Trappin' Shack Timber Permits:

(430 acres) DNRC would harvest overstory trees that contain one or more of the following: have been infested by insects, infected by disease, forked tops, crook, sweep or bole damage. Timber would be harvested using ground-based methods. Trees would be processed in the

woods. Unmerchantable portions of the butt ends of felled trees (longbutting) would be left in harvest units to retain large woody debris onsite.

Impacts on the Physical Environment

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

VEGETATION:

Vegetation Existing Conditions:

Sections 15 & 22:

(362 acres) The current stand conditions are a result of past harvests conducted by the previous owners. Stumps from several different entries can be observed with the last entry being made right before the DNRC was granted ownership of the land. The majority of the remaining overstory contains some form of defect, insect or disease. These trees are currently competing with a population of healthy advanced regeneration (6" dbh and smaller) for sunlight, water and nutrients. Stocking levels and species composition in the overstory varies by aspect. However, regardless of stocking or species composition, the overall overstory condition is constant (high defect or impacted by insects and/or disease). Douglas-fir, ponderosa pine, lodgepole pine subalpine fir, and western larch exist in the stand. Douglas-fir is the dominant species across all size classes.

DNRC Stand Level Inventory (SLI) identified 19 acres of Old Growth in section 22. This information was collected in 2009. Since that time, mountain pine beetle has caused significant mortality in the lodgepole pine. Much of the stand has fallen over and is on the ground. Because of the high levels of mortality, this stand no longer meets DNRC's Old Growth criteria.

Section 16:

(68 acres) This area was not harvested during the Kamas Point timber sale. The stand is densely stocked with subalpine-fir, lodgepole pine, western larch and Douglas-fir. Portions of the overstory are experiencing up to 20% mortality because of the spruce budworm. The existing regeneration has mortality rates closer to 50%. Scattered large western larch and Douglas-fir can be found in the overstory. These trees are generally high in defect.

There is no Old Growth in the project area.

Knapweed is common in the area, especially along roads. Houndstongue can also be found along portions of the roads in the project area.

No rare plants were identified during field reconnaissance or within the Montana Natural Heritage Program dataset.

Vegetation	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Noxious Weeds		X				X				X				
Rare Plants	X				X				X					
Vegetative community		X				X				X				2
Old Growth	X				X				X					
Action														
Noxious Weeds		X				X				X			y	1
Rare Plants	x				x				X					
Vegetative community	x				x				X					
Old Growth	X				X				X				n/a	3

Comments:

- Existing weeds, mainly knapweed and houndstongue are common in the Potomac Valley, especially along roads and within disturbed areas. Increased activity in the project areas, as well as a more open canopy, can lead to an increased risk of noxious weeds.
- Competition among conifers would be reduced, allowing the remaining stands to capture more water, sunlight and nutrients, thereby having a positive direct, secondary and cumulative impact.
- Natural occurring mortality (mountain pine beetle activity) has already caused the stand to no longer meet Old Growth criteria outlined in Green et al.

Vegetation Mitigations:

- DNRC systematically completes roadside spraying in the Potomac Valley, yet noxious weeds continue to occur, spread by disturbance, equipment operations, animals and wind. Project areas would be monitored for noxious weeds after implementation and herbicide may be applied when and if needed.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions:

The Hydrologist/Soil Scientist reviewed NRCS soil data (for Missoula County), recent and historic aerial imagery, topographic data, and soil observations completed in a nearby area (13N 15W Sec 36). The table below summarizes soil conditions in the project area.

	Mapping Unit Name	Soil Description	Erosion Potential	Displacement hazard	Compaction Hazard	Notes
133	Winkler-Kadygulch family, complex, 30 to 60	Shallow-mod deep residuum & colluvium	Low, very coarse K .02	Mod to high on slopes >45%	Mod	Shallow-Mod depth soils with fractured rock at shallow depth, northerly aspect cool and more

	percent slopes	low clay content				productive than soils located on adjacent south-facing slope (south of commercial unit).
37	Evavo gravelly loam, 30 to 60 percent slopes	Gr Silt Loam Colluvium from argillites / quartzite Volcanic ash Surface Low clay content	Moderate K .17	Mod to high on slopes >45%	Mod	Avoid excessive disturbance of ash surface.

Erosion Factor **K** indicates the susceptibility of a soil to sheet and rill erosion and considers rock fragments. K of .02 is low and .69 is highest

Soil Disturbance and Productivity	Impact												Can Impact Be Mitigated?	Comment Number	
	Direct				Secondary				Cumulative						
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High			
No-Action															
Physical Disturbance (Compaction and Displacement)		X			X					X				y	1
Erosion	X				X				X						
Nutrient Cycling	X				X				X						
Slope Stability	X				X				X						
Soil Productivity	X				x				X						
Action															
Physical Disturbance (Compaction and Displacement)		X				X				X					
Erosion		X			X				X				y	2	
Nutrient Cycling		X			X				X				y	2	
Slope Stability	X				X				X						
Soil Productivity	X				X				X						

Comments:

1. Soil disturbance from harvest activities may result in increased risk of erosion issues.
2. Where slash is piled, nutrients would be concentrated at the piles. Where the unit would be lop-and-scattered, not all the nutrients in the slash would be available immediately.

Soil Mitigations:

- Best Management Practices (BMPs) would be implemented on all roads and within the units. Unit boundaries exclude the Streamside Management Zones (SMZs). Slash from the lop-and-scatter thinning process would be left in the units to mitigate erosion risks.
- Residual slash from cut trees would be lopped and scattered to a maximum depth of 18 inches and left within the unit. Nutrients would become available to soils as they decompose.
- Ground-based logging equipment (tractors, skidders, and mechanical harvesters) would be limited to slopes less than 45% unless not causing excessive disturbance.
- The Contractor and Sale Administrator would agree to a general skidding plan prior to equipment operations. Skid trails would be mitigated following harvesting and yarding operations with water bars or slash.
- To prevent soil compaction, ground-based mechanical felling and yarding would be restricted to one or more of the following conditions:
 - Soil moisture content at 4-inch depth less than 20% oven-dry weight.
 - Minimum frost depth of 4 inches.
 - Minimum snow depth of 18 inches of loose snow or 12 inches packed snow.
- A minimum of 4 tons/acre and up to 9 tons/acre, of coarse and fine woody debris would be retained on site to meet the concentration for the DF/PHMA habitat type recommended by Graham et al (1994).

WATER QUALITY AND QUANTITY:

Water Quality and Quantity Existing Conditions:

- The project is within the Cramer Creek watershed (HUC 12 Code ID: 170102021401).
- There are no fish bearing streams within the treatment area.
- There are Class B-1 waters adjacent to the project area. Class B-1 Waters are classified as suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.

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				
Water Quantity		X				X				X				

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		
Action														
Water Quality		X				X				X			Y	1,2
Water Quantity		x				X				X			Y	2,3

Comments:

1. Water quality is impacted by road use and inadequate road drainage on portions of roads in the Potomac Valley and mixed uses of timber harvest, grazing and rural development.
2. The harvest would remove a very low volume per acre (~1,750 board feet per acre), and is not expected to have a measurable influence on: water quality, the amount or timing of runoff (water yield), or downslope stream stability from the proposed project area when compared to the effects anticipated under No Action. In summary, all BMP's, would be applied and administered during harvest operations. There would be low risk of disturbance or off-site erosion as a result of the use of existing roads for access and log hauling. Based on the harvest design, there is a low risk of direct, indirect or cumulative effects to water quality or downstream beneficial uses from the action alternative.
3. The removal of overstocked submerchantable trees has a low potential to increase runoff from decreased interception and transpiration; due to moderate precipitation and retaining well stocked and spaced conifers to maximize growth. Any potential change in water yield is expected to be minor and unlikely to be measurable or deliver off-site to surface waters.

Water Quality & Quantity Mitigations:

- No harvest activities proposed within SMZs.
- The Montana Administrative Rules for Forest Management; Watershed Management and watershed RMS would be implemented. BMP's and SMZ's would be implemented. Unit boundaries were all buffered to exclude the SMZ's.
- Thinning and harvest operations would be restricted to dry or frozen conditions to avoid road damage which could lead to increased runoff.
- The proposed haul route would use existing roads.
- Skid trails would be mitigated following harvesting and yarding operations with water bars or slash.

Fisheries	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Action														
Sediment		X			X				X				y	1
Flow Regimes	X				X				X					
Woody Debris	X				X				X					
Stream Shading	X				X				X					
Stream Temperature	X				X				X					
Connectivity	X				X				X					
Populations	X				X				X					

Comments:

There are no fish bearing streams within the treatment area.

Fisheries Mitigations:

1. The Montana Administrative Rules for Forest Management; Watershed Management and watershed RMS would be implemented. BMP's would be implemented on all roads and within the harvest units. Slash from the lop-and-scatter thinning process would be left in the unit.

WILDLIFE:

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

Wildlife Existing Conditions: The project area is a mix of forested Douglas-fir, western larch, lodgepole pine, and mixed conifer stands. Grizzly bears could occasionally use the vicinity of the project area. There are roughly 944 acres of suitable Canada lynx habitats in the project area, which includes 694 acres of winter foraging habitats, 126 acres of summer foraging, 31 acres of 'other suitable' habitats, and 93 acres of temporary non-suitable habitats; many of these habitats are interspersed with unsuitable habitats and are generally rather lower quality transitional habitats. Potential habitat exists for fisher, flammulated owls, and pileated woodpeckers in the project area. Gray wolves have been in the vicinity in the past and likely use the project area. In the project area there is some elk winter range along with summer ranges for deer, elk, and moose. Habitats in the project area contribute to larger blocks of potential big game security in the cumulative effects analysis area.

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. Continued maturation could slowly improve habitat attributes for Canada lynx, pileated woodpeckers, fisher, and grizzly bear security habitats but could reduce habitat quality for flammulated owls and big game foraging habitats over the long term. Continued wildlife use at levels similar to present conditions would be anticipated. Generally, negligible direct, 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
Canada lynx <i>(Felix lynx)</i> Habitat: Subalpine fir habitat types, dense sapling, old		X				X				X			Y	2

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
forest, deep snow zone														
Yellow-Billed Cuckoo <i>(Coccyzus americanus)</i> Habitat: Deciduous forest stands of 25 acres or more with dense understories and in Montana these areas are generally found in large river bottoms	X				X				X					3
Sensitive Species														
Bald eagle <i>(Haliaeetus leucocephalus)</i> Habitat: Late-successional forest less than 1 mile from open water	X				X				X					3
Black-backed woodpecker <i>(Picoides arcticus)</i> Habitat: Mature to old burned or beetle-infested forest	X				X				X					3
Coeur d'Alene salamander <i>(Plethodon idahoensis)</i> Habitat: Waterfall spray zones, talus near cascading streams	X				X				X					3
Columbian sharp-tailed grouse <i>(Tympanuchus Phasianellus columbianus)</i> Habitat: Grassland, shrubland, riparian, agriculture	X				X				X					3
Common loon <i>(Gavia immer)</i> Habitat: Cold mountain lakes,	X				X				X					3

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
nest in emergent vegetation														
Fisher <i>(Martes pennanti)</i> Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian		X				X				X			Y	4
Flammulated owl <i>(Otus flammeolus)</i> Habitat: Late-successional ponderosa pine and Douglas-fir forest		X				X				X			Y	5
Gray Wolf <i>(Canis lupus)</i> Habitat: Ample big game populations, security from human activities		X				X				X			Y	6
Harlequin duck <i>(Histrionicus histrionicus)</i> Habitat: White-water streams, boulder and cobble substrates	X				X				X					3
Northern bog lemming <i>(Synaptomys borealis)</i> Habitat: Sphagnum meadows, bogs, fens with thick moss mats	X				X				X					3
Mountain plover <i>(Charadrius montanus)</i> Habitat: short-grass prairie & prairie dog towns	X				X				X					3
Peregrine falcon <i>(Falco peregrinus)</i> Habitat: Cliff features near open foraging areas and/or wetlands	X				X				X					3
Pileated woodpecker		X				X				X			Y	7

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														
Townsend's big-eared bat <i>(Plecotus townsendii)</i> Habitat: Caves, caverns, old mines	X				X				X					3
Wolverine <i>(Gulo gulo)</i> Habitat: Alpine tundra and high-elevation boreal forests that maintain deep persistent snow into late spring	X				X				X					3
Big Game Species														
Elk		X				X				X			Y	8
Whitetail		X				X				X			Y	8
Mule Deer		X				X				X			Y	8
Bighorn Sheep	X				X				X					
Other														

Comments:

1. The project area is 15 miles south of the Northern Continental Divide Ecosystem grizzly bear recovery area and is 11 miles southwest of 'occupied' grizzly bear habitat as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones (Wittinger et al. 2002). Individual animals could occasionally use the project area while dispersing or possibly foraging, and they could be displaced by project-related disturbance if they are in the area during proposed activities. Negligible changes to grizzly bear habitats would occur. No changes to open road densities, security habitats, or human-related food, garbage, or other unnatural grizzly bear attractants would occur. However, given their large home range sizes, and manner in which they use a broad range of forested and non-forested habitats, the proposed activities and alterations of forest vegetation on the project area would have negligible influence on grizzly bears.
2. There are roughly 944 acres of suitable Canada lynx habitats in the project area, which includes 694 acres of winter foraging habitats, 126 acres of summer foraging, 31 acres of 'other suitable' habitats, and 93 acres of temporary non-suitable habitats. In general the

habitats in the project area are rather low quality since many of the stands are transitional in nature with elements of warmer and drier habitats from lower elevations intermingled with areas exhibiting characteristics of more suitable types from higher elevations. Largely the north facing aspects contain some suitable habitats and the south facing aspects do not, thus there is limited connectivity of lynx habitats. Similarly, habitats across the cumulative effects analysis area are somewhat limited and interspersed with unsuitable habitats. In general, extensive use of the project area and larger cumulative effects analysis area by Canada lynx would not be anticipated. Proposed harvesting would alter 276 acres of suitable lynx foraging habitats (204 acres of winter foraging and 70 acres of summer foraging), 1 acre of other suitable habitat, and 26 acres of temporary non-suitable lynx habitats. Following proposed treatments, all 302 acres (an increase of 276 acres) would likely be considered temporary non-suitable habitats; however, some of these habitats may still meet the minimum requirements for 'other suitable' depending on retention tree density following proposed treatments. Overall a reduction in potential lynx habitats would occur at the project level due to the anticipated openness of the resulting stands, but given the anticipated use levels by lynx, the effect would be minor to lynx. Coarse woody debris would be retained (emphasizing retention of some logs 15 inches dbh and larger) to provide some horizontal cover and security structure for lynx. Minor further reductions in forested connectivity would be anticipated, but given the intermixing of suitable types with not preferred lynx types in the project and cumulative effects analysis areas, reductions in connectivity would not likely alter lynx use of these area. The reduction would further decrease the quality of habitats in the cumulative effects analysis area, but given the nature of habitats in the cumulative effects analysis area and anticipated use levels, minor cumulative effects would be anticipated with the proposed harvesting. Roughly 79% of habitats on DNRC-managed lands administered by the Southwestern Land Office under the HCP and outside of the Lynx Management Areas would be in suitable lynx habitat categories following proposed treatments.

3. The project area is either out of the range of the normal distribution for this species or suitable habitat is not present. Thus, no direct, indirect, or cumulative effects would be anticipated.
4. Roughly 281 acres of potential upland fisher habitats and another 84 acres of preferred fisher cover types that lack structural attributes that would facilitate use by fisher occur in the project area. These habitats are largely on the northern aspects in the project area and are disconnected and separated by drier and more open habitats. No riparian habitats exist in the project area. Similarly, habitats in the cumulative effects analysis area are also somewhat discontinuous and interspersed with drier and/or more open habitats than generally used by fisher, thus extensive use would not be anticipated. Approximately 95 acres of potential upland habitats and 38 acres of upland preferred cover types would receive treatments. Proposed treatments in upland habitats would reduce canopy closure and resultant stands would be too open to be used by fisher. No changes in open roads would be anticipated; trapping pressure and the potential for fisher mortality would not change. The amount of the preferred riparian fisher cover types meeting structural requirements for fishers at the cumulative-effects analysis area would not change on DNRC-

managed lands. Reductions in upland habitats would further reduce the amount of suitable upland fisher habitats in the cumulative effects analysis area. These reductions would be additive to the losses associated with past timber harvesting in the cumulative-effects analysis area, but given the nature of the habitats present, little or no changes in fisher use of the cumulative effects analysis area would be anticipated.

5. Roughly 950 acres of flammulated owl habitats exist in the project area in dry Douglas-fir and ponderosa pine types. Proposed treatments on approximately 165 acres of flammulated owl habitats would further open the canopy while favoring ponderosa pine, western larch and Douglas-fir. The more open stand conditions, the retention of fire adapted tree species, and the maintenance of snags would move the proposed project area toward historical conditions, which is preferred flammulated owl habitat. Proposed activities could occur during the flammulated owl nesting season, which could introduce some disturbance of nesting owls, but activities would not affect nesting structures.
6. Gray wolves are in the vicinity and the project area is close to the Chamberlain and Union Peak wolf pack home ranges;. Big game species exist in the area much of the year. Roughly 1,004 acre of elk winter range exists in the project area and no deer or moose winter range exists in the project area (see comment 8). Wolves using the area could be disturbed by proposed activities and are most sensitive at den and rendezvous sites, which are not known to occur in the project area or within 1 mile of the project area. Disturbance at potential den sites and rendezvous sites could exist if these features are in the vicinity and operations were conducted during the spring period. Should either a den or rendezvous site be identified within 1 mile of the project area, a DNRC biologist would be consulted to determine if additional mitigations would be necessary. In the short-term, the proposed activities could lead to slight shifts in big game use, which could lead to a shift in wolf use of the area. Proposed activities would alter canopy closure, winter range, and summer big game habitats, which could alter some big game use of the area but would not be expected to appreciably alter wolf prey abundance.
7. Roughly 455 acres of pileated woodpecker nesting habitat exist in the project area; another 1,285 acres of potential foraging habitats exist in the project area. Disturbance to pileated woodpeckers could occur if proposed activities occur during the nesting period. Harvesting would reduce forested habitats for pileated woodpeckers in the project area. Roughly 58 acres of potential nesting habitats and another 338 acres of potential foraging habitats would be opened up with proposed treatments. Some potential continued use as foraging habitats would be possible depending on density of trees retained. Elements of the forest structure important for nesting pileated woodpeckers, including snags, coarse woody debris, numerous leave trees, and snag recruits would be retained in the proposed harvest areas. Since pileated woodpecker density is positively correlated with the amount of dead and/or dying wood in a stand (McClelland 1979), pileated woodpecker densities in the project area would be expected to be reduced on 447 acres.
8. Big game species exist in the project area much of the year. Roughly 1,004 acres of elk winter range exists in the project area. No deer or moose winter range exists in the project

area. Activities conducted during the non-winter periods could disturb big game from seasonal ranges, but other suitable habitats are more widely available during those non-winter time periods. Proposed activities would alter 228 acres of elk winter range as well as canopy closure and summer big game habitats on roughly 447 acres, which could alter some big game use of the area. Big game security habitat exists in the project area that contributes to larger blocks of security habitats in the cumulative effects analysis area. No changes to status of existing roads or open road densities would occur, thus negligible changes to big game security habitat would occur.

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.
- Motorized public access would be restricted at all times on restricted roads that are opened for harvesting activities; signs would be used during active periods and a physical closure (gate, barriers, equipment, etc.) would be used during inactive periods (nights, weekends, etc.). These roads and skid trails would be reclosed to reduce the potential for unauthorized motor vehicle use.
- Snags, snag recruits, and coarse woody debris would be managed according to *ARM 36.11.411* through *36.11.414*, particularly favoring western larch and ponderosa pine. Clumps of existing snags could be maintained where they exist to offset areas without sufficient snags. Coarse woody debris retention would emphasize retention of downed logs of 15-inch diameter or larger.
- Contractors and purchasers conducting contract operations would be prohibited from carrying firearms while on duty.
- Food, garbage, and other attractants would be stored in a bear-resistant manner.
- Retention of patches of advanced regeneration of shade-tolerant trees, such as sub-alpine-fir and spruce, in units containing lynx habitats would break-up sight distances, provide horizontal cover, and provide forest structural attributes preferred by snowshoe hares and lynx.

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:

Under the Action Alternative, there would be no slash piles generated because the purchaser has an in woods harvesting system.

Dust may be produced along the haul route if wood is hauled during summer months.

Air Quality Mitigations:

- *Because of the small project area, hauling would be short in duration.*
- *The Forest Officer may impose speed restrictions to limit dust along the haul route behind the gate as needed.*

Will the No-Action or Action Alternatives 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					
Aesthetics	X				X				X					
Demands on Environmental Resources of Land, Water, or Energy	X				X				X					

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

Will the No-Action or Action Alternatives result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Cultural Uniqueness and Diversity	X				X				x					

Comments:

The project size is of a scale that would not have a large effect on local employment; however each unit may provide a private contractor with short term employment.

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:

No Action: The No Action Alternative would generate no revenue to the trust at this time, existing forest conditions would persist.

Action: The proposed harvest would generate approximately \$4,167 for the Acquired Land-Public Schools Trust and \$9,078 for Common Schools Trust. An additional Forest Improvement Fee of \$6,578 (Common Schools) and \$9,544 (Acquired Lands) would be charged on a per ton basis for all sawlog loads.

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.

McClelland, B.R. 1979. The pileated woodpecker in forests of the Northern Rocky Mountains. Pages 283-299 *in* Role of insectivorous birds in forest ecosystems. Academic Press.

Wittinger, W.T. 2002. Grizzly bear distribution outside of recovery zones. Unpublished memorandum on file at USDA Forest Service, Region 1. Missoula, Montana.2pp.

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: Amy Helena
Title: Forest Management Supervisor
Date: 7/22/20

Finding

Alternative Selected

The Action Alternative

Significance of Potential Impacts

- A. The Action Alternative meets the specific Objectives of the Proposed Action as described on page 1 of the EA. The Action Alternative is likely to produce an economic return to the Acquired Lands Trust in the long run, while providing a mechanism whereby the existing timber stands would be moved towards conditions more like those which existed historically.
- B. The analysis of identified issues did not disclose any reason compelling the DNRC to not implement this pre-commercial thinning project.
- C. The Action Alternative includes mitigation activities to address environmental concerns identified during the project analysis.

Need for Further Environmental Analysis

EIS

More Detailed EA

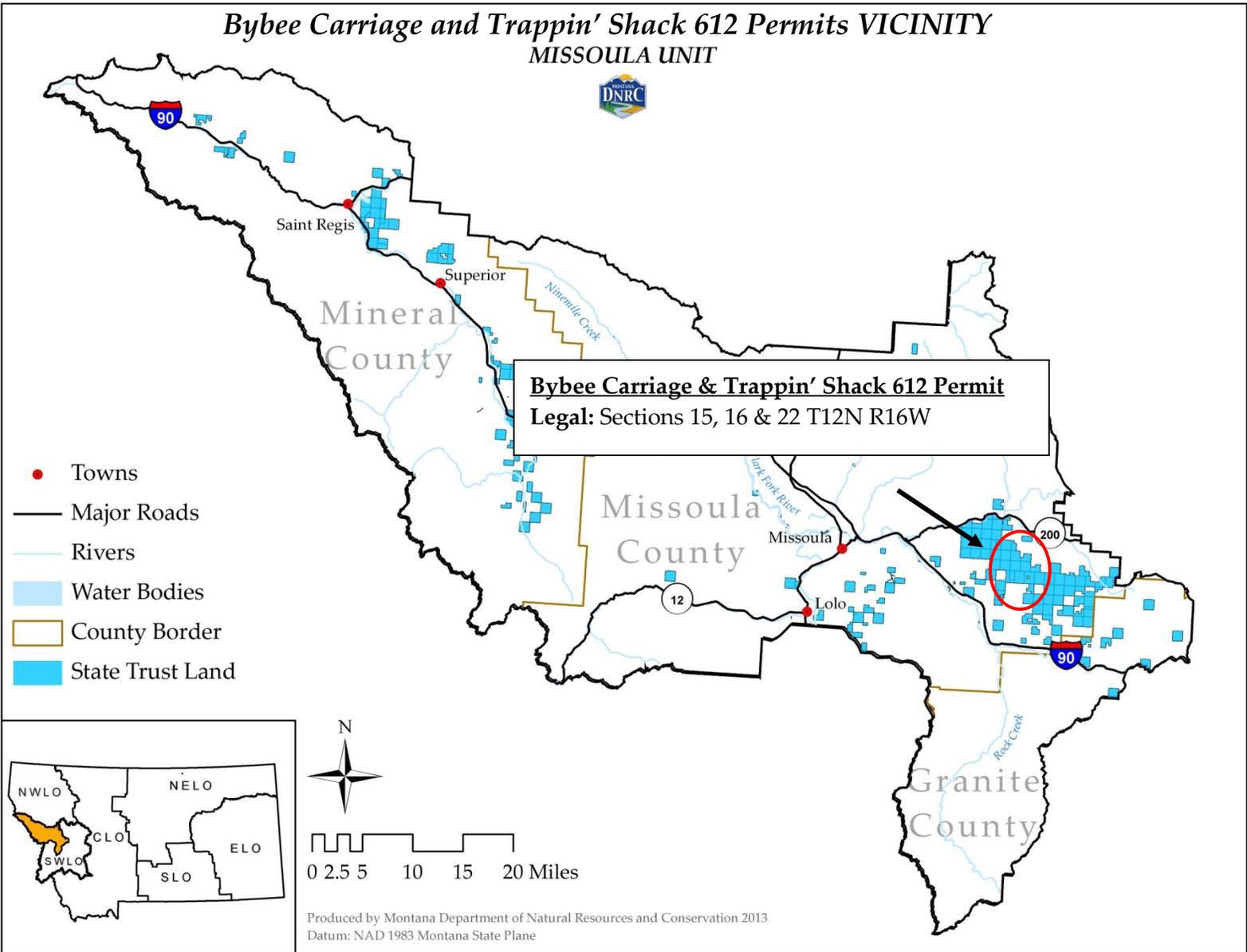
No Further Analysis

Environmental Assessment Checklist Approved By:

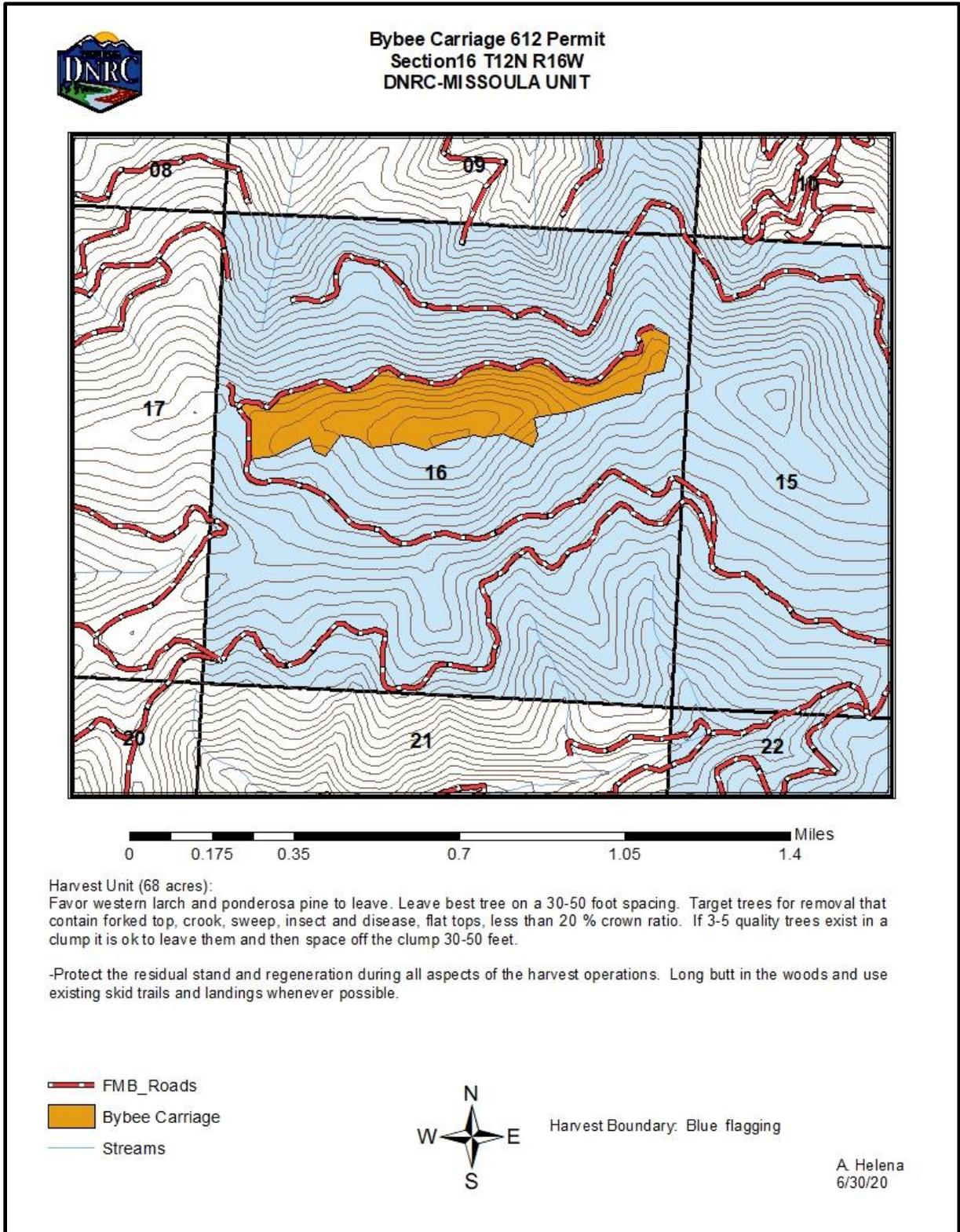
Name: Jonathan Hansen
Title: Missoula Unit Manager
Date: 7/27/20
Signature: /s/ *Jonathan Hansen*

Attachment A- Maps

Attachment A: Timber Sale Vicinity Map

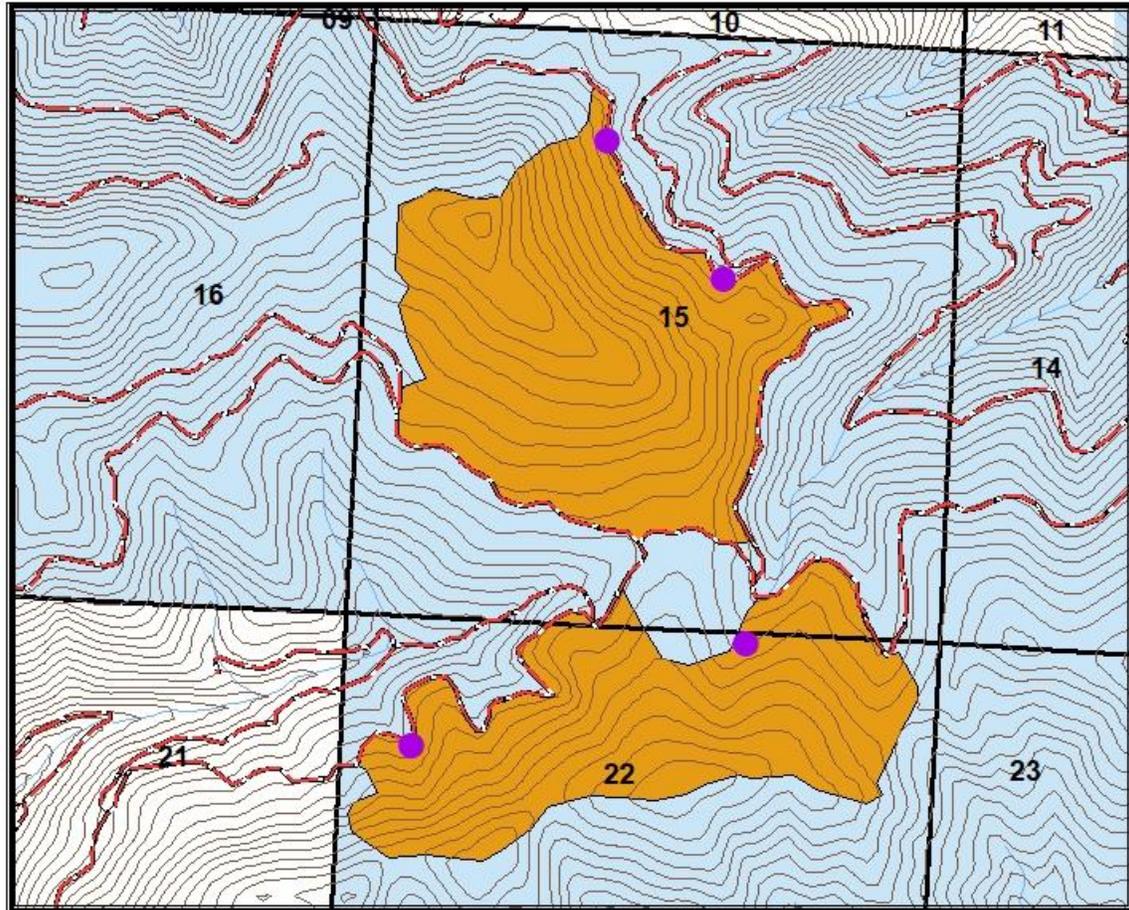


Attachment A-1





Trappin' Shack 612 Permit
Section 15 & 22 T12N R16W
DNRC-MISSOULA UNIT



Harvest Units (362 acres):

-Commercial Thin Areas: Favor western larch and ponderosa pine to leave. Leave best tree on 20-30 foot spacing. Target trees for removal that contain forked top, crook, sweep, insect and disease, flat tops, less than 20 % crown ratio.

-Sanitation Areas: Favor western larch and ponderosa pine to leave. Leave best tree on a 30-50 foot spacing. Target trees for removal that contain forked top, crook, sweep, insect and disease, flat tops, less than 20 % crown ratio. If 3-5 quality trees exist in a clump it is ok to leave them and then space off the clump 30-50 feet.

-Protect the residual stand and regeneration during all aspects of the harvest operations. Long butt in the woods and use existing skid trails and landings whenever possible.

-  SMZ
-  FMB_Roads
-  Trappin' Shack
-  Streams



Harvest Boundary: Blue flagging

A. Helena
 6/30/20