Environmental Assessment Checklist

Project Name: Ashby Bits Projects EA
Proposed Implementation Date: 2020-2023
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 Ashby Bits Projects EA. These projects are located south 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			
Public Buildings			
MSU 2nd 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 3,4,5 T12N R16W** **Sections 33,34 T13N R16W**	**2,242** **1,032**	**722**

**398 acres of the proposed thinning is within the 470 acre harvest unit. Those acres were only counted once.*

Objectives of the projects include:
-Pre-Commercial Thinning

- Increase growth and vigor of the stand(s),
- Achieve a more uniform stem distribution,
- Concentrate growth on fewer trees in order to attain merchantable size in a shorter time frame.
- Increased vigor in leave trees to reduce the threat of insect and disease infestation.

-Commercial Timber Harvest

- Improve stand genetics by removing phenotypically inferior trees left from a prior harvest.

- Improve aesthetics of stand.
- Salvage dead and dying trees prior to losing all merchantable value.
- Improve vigor of advanced regeneration by reducing competition from stagnant, slow growing residual trees.
- Generate revenue for the Acquired Land Trust.
- Remove overstory trees that contain high amounts of defect.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	
Clearcut	
Seed Tree	
Shelterwood	
Selection	170
Commercial Thinning	
Salvage	
Sanitation	300
Total Treatment Acres	**470**
Proposed Forest Improvement Treatment	
Pre-commercial Thinning	650
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:	3 years- Not continuous activity
Implementation Period:	2020-2023

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 and 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 and pre-commercial thinning would not occur. The submerchantable stands would remain at overstocked levels with low production rates. The residual overstory stand would continue to decline and mortality rates would increase.

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

Ash B. PCT:
(650 acres) DNRC would thin to an approximate 14' spacing. Preferred leave trees would be (in order of preference) western larch (WL), ponderosa pine (PP), Douglas-fir (DF), and lodgepole pine (LPP). Residual stand densities after thinning would be approximately 222 trees per acre (TPA). Approximately 1000-1500 (depending on current stocking) TPA would be removed. The stand is currently overstocked and the post thin spacing would support more optimum conifer growth and health. The unit would be hand thinned and would include all road cut slopes within the units. Slash would be lopped and scattered with a maximum lop height of 18 inches. Trees 24" tall and less would be left uncut.

Ashby Bits Timber Permit:
(470 acres) DNRC would harvest Douglas-fir overstory trees that contain one or more of the following: have been infested by insects, infected by disease, forked tops, crook, fading crowns, sweep or bole damage (approximately 300 acres). In areas where commercial stands exhibit good vigor and phenotypical traits; Individual Tree Selection silviculture would be used to space leave trees to a residual basal area that promote seral species natural regeneration (approximately 170 acres). 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. All ponderosa pine and western larch would be left. Post-harvest, the stand would contain an average of 2 snags and 2 snag recruits per acre within the harvest area.

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: The project area is located within parcels recently acquired from TNC (The Nature Conservancy) during the Potomac Acquisition. Prior to TNC ownership the lands were managed by Plum Creek Timber, a privately owned timber company. The project area was previously harvested within the last 25 years. The residual post-harvest seed-tree stand is dominated with phenotypically inferior Douglas-fir, moderate amounts of western larch, and the occasional ponderosa pine. The current cover type is consistent with the Desired Future Condition (DFC), however western larch has not successfully regenerated in significant numbers.

Ash B. PCT:
(650 acres) Ash B. PCT would occur following the Ashby Bits timber permit harvest; 398 acres of the proposed thinning is within the 470 acre proposed harvest unit. According to the DNRC Stand Level Inventory, there are approximately 300-1100 trees per acre, existing in large clumps (up to 1 or 2 acres in size) with scattered openings. The clumps are heavily stocked with Douglas-fir, lodgepole pine, western larch, ponderosa pine and an occasional subalpine fir. Some areas within these stands were planted following harvests in the 1990's. Trees range in size from <1"-5" dbh with heights of 5-20 feet tall.

Ashby Bits Timber Permit:

(650 acres) The current stand conditions consist of a post-harvest stand with phenotypically undesirable leave trees. The majority of the stand is comprised of suppressed Douglas-fir with high amounts of defect. Crooked boles, faded crowns, and needle discoloration dominate the overstory. Crop tree size class in the area is generally 4”-20” Diameter Breast Height (DBH), with the average DBH 9”. Commercial harvest would consist of 1-2 permits depending on the merchantability of the volume harvested. There would be an estimated 500 board feet per acre harvested from the proposed unit(s). Harvest systems would be ground based; and because of the low harvest volume/acre skid trails would be very scattered. Although the proposed project harvest includes 470 acres; there would be greater than 30% of the unit (in acres) that would be unaffected by the harvest. The clumps of merchantable volume or “cut” trees within most of the proposed harvest unit are separated spatially, with portions of the units devoid of merchantable “cut” trees. The proposed harvest includes multiple areas/acres within the unit that will not be harvested due to lack of merchantable “cut” tree volume, but are included within the proposed unit for mapping, lay-out, and administration simplicity.

Advanced regeneration within the unit is primarily healthy Douglas-fir and subalpine fir with the occasional western larch.

There is no Old Growth within the project area.

Knapweed and houndstongue are common in the project area, especially along roads. Disturbance could lead to an increased risk of noxious weeds. Cattle also use the proposed project area for grazing, and adversely influence the spread of noxious weeds.

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**			**Yes**	**1**
Rare Plants	**x**				**x**				**X**					
Vegetative community	**x**				**x**				**X**					
Old Growth	**x**				**x**				**X**					

Comments:

1. Existing weeds, mainly knapweed, Canadian thistle 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.

2. 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.

Vegetation Mitigations:

- DNRC systematically completes roadside spraying on its ownership 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 as funding allows.
- Equipment would be washed prior to harvest activities to minimize the potential of introducing new weeds to the project area.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions:

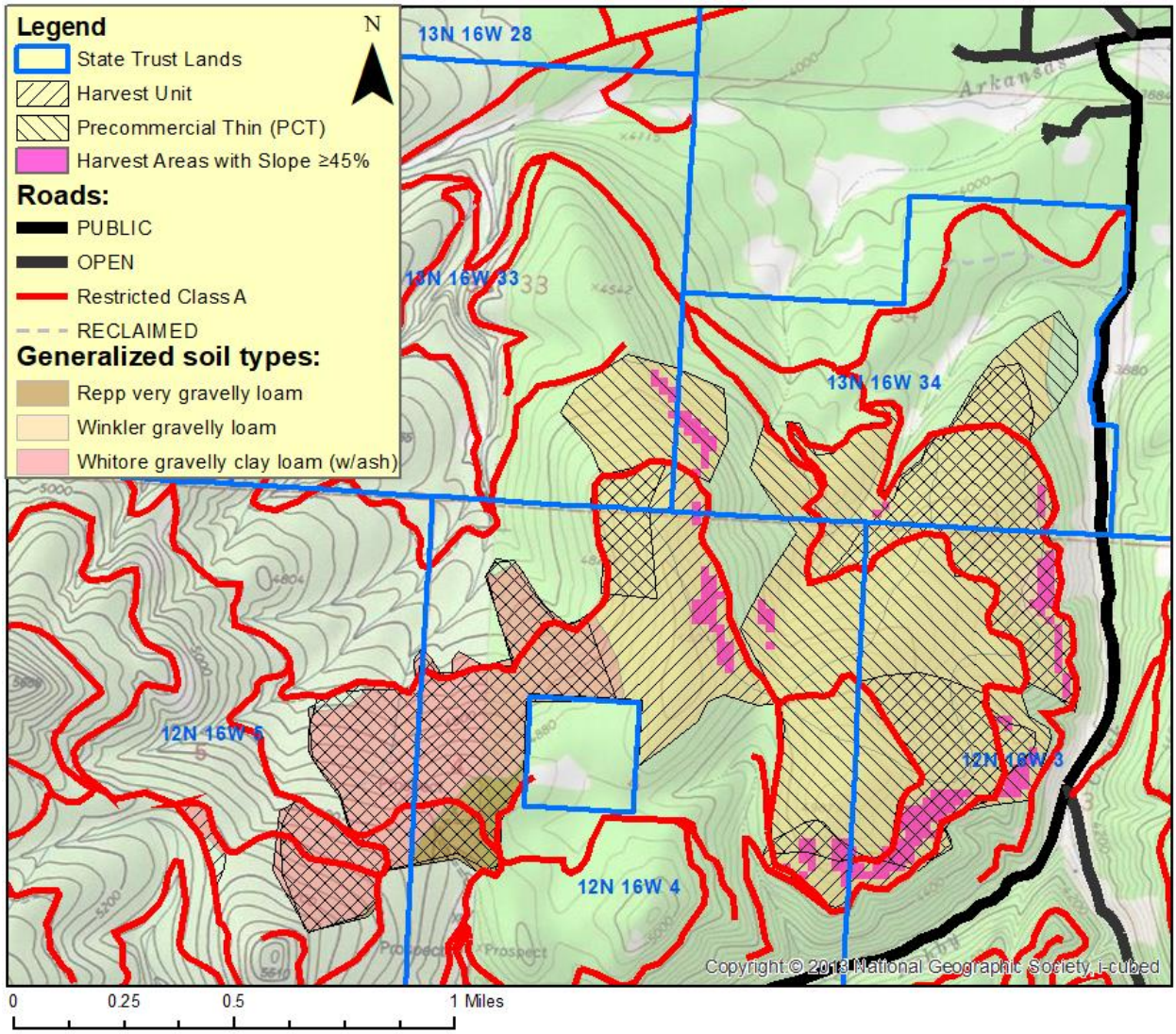
The project is mostly located on northern aspects of the Garnet Range at elevations between 4,000 and 5,400 feet. Soils within the proposed harvest and PCT units include Winkler, Whitore, and Repp gravelly loams and gravelly clay loams.

Roads needed for the project already exist. Slopes in the project area range from 0 to 65 percent.

Soil Disturbance and Productivity	Impact												Comment Number	Can Impact Be Mitigated ?
	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**				**1**	**NA**
Erosion	**X**				**X**				**X**				**1**	**NA**
Nutrient Cycling	**X**				**X**				**X**				**1**	**NA**
Slope Stability	**X**				**X**				**X**				**1**	**NA**
Soil Productivity	**X**				**X**				**X**				**1**	**NA**
Action														
Physical Disturbance (Compaction and Displacement)			**X**		**X**					**X**			**2**	**Yes**
Erosion			**X**			**X**				**X**			**2**	**Yes**
Nutrient Cycling		**X**				**X**				**X**			**3**	**Yes**
Slope Stability		**X**				**X**				**X**			**4**	**Yes**
Soil Productivity		**X**				**X**				**X**			**3**	**Yes**

Comments:

The proposed project would use existing and maintained road infrastructure to access and haul wood from harvest areas. Ground-based equipment would be used for cutting, processing/limbing, and yarding from the harvest areas. These operations will be limited by topography in some areas, mainly those highlighted in pink in the map below.
Slopes calculated using 100-foot resolution digital elevation data that may not be representative of ground conditions that may have breaks in slope and small benches suitable for equipment operations.



1) Soil conditions would likely maintain the current condition with no-action.
2) Some physical disturbance is expected with the proposed action associated with the equipment operation within the forested units. Mitigations listed below would reduce these risks.
3) The proposed action would present low risks to nutrient cycling and soil productivity associated with the removal of organic material. Mitigations listed below would reduce these risks.

4) Risks to slope stability are low because roads proposed for use already exist and have been stable. Operations on steep slopes will present minor risk and would be minimized with mitigations listed below.

Soil Mitigations:

1) DNRC would implement all applicable BMP's, Montana Administrative Rules for Forest Management, and reasonable mitigation and erosion control practices during timber harvest, road maintenance, and road construction and road use activities. The commitments of the DNRC Habitat Conservation Plan (HCP) would be implemented across the area.

2) Limit harvest equipment and hauling operations to periods when soils are relatively dry, (less than 20%), frozen or snow covered to minimize soil compaction and rutting, and maintain drainage features.

3) On tractor harvest units the logger and sale administrator would agree to a general skidding plan prior to equipment operations to limit trails to 15% or less of the harvest unit.

4) Target fine slash and woody debris levels are to retain 5-15 tons/acre well distributed on site while meeting the requirements of the slash law. On sites with lower basal area, retain large woody debris as feasible since it may not be possible to retain 5 tons/acre and the emphasis will be on providing additional coarse woody debris CWD in the future. Slash may be placed on main skid trails to protect soils and reduce erosion potential.

5) Harvest operations would be monitored by the DNRC Forest Officer with particular care to minimize soil disturbance and erosion on slopes identified as 45% or greater in the map above.

WATER QUALITY AND QUANTITY:

<u>Water Quality and Quantity Existing Conditions:</u>

The proposed project is located in the West Fork Ashby Creek, Ashby Creek, and Arkansas Creek watersheds. Arkansas Creek is tributary to Ashby Creek.

Of these nearby streams, the West Fork of Ashby Creek is the only 303D listed impaired stream.

West Fork Ashby Creek (use class B-1 and water quality category 4A) is not fully supporting primary contact recreation and aquatic life due to the following reasons (DEQ, 2018)

- alteration in stream-side vegetative cover attributed to forest roads and silviculture,
- high total phosphorous attributed to natural sources and livestock, and
- sedimentation attributed to forest roads and aquatic life.

Most of the roads planned for use were observed under winter conditions (~1-2 feet snow cover) and appeared to have adequate drainage with regularly spaced drain dips and ditches. Most, if not all roads, planned for use are assumed to have adequate drainage and meet BMP standards as they were recently used for other DNRC timber sales in the last 3 years.

Water Quality & Quantity	Impact												Comment Number	Can Impact Be Mitigated?
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Water Quality	**X**				**X**				**X**				**1**	**NA**
Water Quantity	**X**				**X**				**X**				**1**	**NA**
Action														
Water Quality		**X**			**X**				**X**				**2**	**Yes**
Water Quantity	**X**					**X**				**X**			**3**	**Yes**

Comments:

The proposed project would use existing and maintained road infrastructure to access and haul wood from harvest areas. Ground-based equipment would be used for cutting, processing/limbing, and yarding from the harvest areas. No new roads are proposed and existing roads and associated BMPs would continue to be maintained under the proposed action.

1) Stream conditions and water quality and quantity would likely maintain current conditions with no-action.

2) Water quality is impacted by road use associated with timber harvest and hauling. These risks would be minimized with mitigations listed below.

3) Harvest and PCT areas (combined with other DNRC trust land sales and vegetation management activities) do not exceed 10% of the watershed area above the West Fork Ashby Creek, Arkansas Creek, or Ashby Creek below the confluence of Ashby and Arkansas Creeks. Consequently, there is no risk of a measurable or adverse effect to stream flow such as seasonal peak or low flows.

Water Quality & Quantity Mitigations:

1) DNRC would implement all applicable BMP's, Montana Administrative Rules for Forest Management, and reasonable mitigation and erosion control practices during timber harvest, road maintenance, and road construction and road use activities. The commitments of the DNRC Habitat Conservation Plan (HCP) would be implemented across the area.

2) Road conditions would be monitored by the DNRC Forest Officer as part of the on-going project operations and repairs would be made as needed, including erosion control, culvert cleaning and re-vegetation.

FISHERIES:

Fisheries Existing Conditions:

The proposed project is located in the Ashby and Arkansas Creek watersheds. Both creeks support Westslope Cutthroat Trout, an HCP fish species. No perennial or fish-bearing streams occur within or immediately adjacent to the proposed harvest and PCT units.

Most of the roads planned for use were observed under winter conditions (~1-2 feet snow cover) and appeared to have adequate drainage with regularly spaced drain dips and ditches. Most, if not all roads, planned for use are assumed to have adequate drainage and meet BMP standards as they were recently used for other DNRC timber sales in the last 3 years.

Fisheries	Impact												Comment Number	Can Impact Be Mitigated?
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Sediment	X				X								1	NA
Flow Regimes	X				X								1	NA
Woody Debris	X				X								1	NA
Stream Shading	X				X								1	NA
Stream Temperature	X				X								1	NA
Connectivity	X				X								1	NA
Populations	X				X								1	NA
Action														
Sediment	X					X							2	NA
Flow Regimes	X					X							3	NA
Woody Debris	X				X									NA
Stream Shading	X				X									NA
Stream Temperature	X				X									NA
Connectivity	X				X									NA
Populations	X				X									NA

Comments: No fisheries streams occur within the proposed units.

1) Fish populations and habitat would likely maintain current conditions with no-action.
2) See existing conditions, comments, and mitigations in the water quality section of this analysis.
3) See existing conditions, comments, and mitigations in the water quantity section of this analysis.

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 unit. Unit boundaries were all buffered to exclude the SMZ's. Slash from the lop-and-scatter thinning process would be left in the unit.

WILDLIFE:

Existing Conditions: The project area contains a variety of Douglas-fir, western larch/Douglas-fir, lodgepole pine, and ponderosa pine stands. Grizzly bears have been documented in the vicinity of the project area in the past; the project area is outside of the grizzly bear recovery zone and the 'non-recovery occupied habitat' as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones. Much of the project area (2,193 acres, 82%) is outside of Canada lynx habitats, but suitable Canada lynx habitats exist in the project area; the project area includes winter foraging (326 acres, 12%), summer foraging (118 acres, 4%), temporary non-suitable habitats (47 acres, 2%), and other suitable habitats (11 acres, <1%). Potential habitat exists for fisher, flammulated owls, and pileated woodpeckers in the project area. The Union Peak gray wolf pack is likely in the vicinity, but use of the project area has not been documented. Some white-tailed deer winter range exists in the project area; considerable summer use by deer and elk likely occurs. Portions of the project area likely contributes to a larger block of big game security habitat in the vicinity.

No-Action: Existing stands would continue to mature in a fairly dense condition. Stand growth and maturation would continue at relatively slow speeds, which would delay usefulness of these stands longer into the future for a variety of wildlife that use larger diameter forested conditions. No further potential for disturbance to any wildlife species would be anticipated. Continued wildlife use at levels similar to present conditions would be anticipated.

Action Alternative (see Wildlife table below):

Wildlife	Impact								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
Threatened and Endangered Species										
Grizzly bear *(Ursus arctos)* Habitat: Recovery areas, security from human activity		**X**				**X**			**Y**	**1**
Canada lynx (*Felix lynx)* Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone		**X**				**X**			**Y**	**2**
Yellow-Billed Cuckoo (*Coccyzus americanus*) Habitat: Deciduous forest stands of 25	**X**				**X**					**3**

Wildlife	Impact								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
acres or more with dense understories and in Montana these areas are generally found in large river bottoms										
Sensitive Species										
Bald eagle *(Haliaeetus leucocephalus)* Habitat: Late-successional forest more than 1 mile from open water	**X**				**X**					**3**
Black-backed woodpecker *(Picoides arcticus)* Habitat: Mature to old burned or beetle-infested forest	**X**				**X**					**3**
Coeur d'Alene salamander *(Plethodon idahoensis)* Habitat: Waterfall spray zones, talus near cascading streams	**X**				**X**					**3**
Columbian sharp-tailed grouse *(Tympanuchus Phasianellus columbianus)* Habitat: Grassland, shrubland, riparian, agriculture	**X**				**X**					**3**
Common loon *(Gavia immer)* Habitat: Cold mountain lakes, nest in emergent vegetation	**X**				**X**					**3**
Fisher *(Martes pennanti)* Habitat: Dense mature to old forest less than 6,000 feet		**X**				**X**			**Y**	**4**

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

Wildlife	Impact								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
ponderosa pine and larch-fir forest										
Townsend's big-eared bat *(Plecotus townsendii)* Habitat: Caves, caverns, old mines	**X**				**X**					**3**
Wolverine *(Gulo gulo)*	**X**				**X**					**3**
Big Game Species										
Elk		**X**				**X**			**Y**	**8**
Whitetail		**X**				**X**			**Y**	**8**
Mule Deer		**X**				**X**			**Y**	**8**
Bighorn Sheep	**X**				**X**					
Other										

Comments:

1. The project area is outside of the grizzly bear recovery zone and the 'non-recovery occupied habitat' as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones. Occasional use by grizzly bears could occur as bears continue moving out of the recovery zone to the north of the project area and grizzly bears have been documented in the vicinity in the past. Activities would occur during the non-denning period, thus disturbance to grizzly bears could occur. 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.

2. Over 91% of the proposed units do not contain potential lynx habitats, however approximately 66 acres of suitable Canada lynx habitats exist in the proposed units. These potential habitats are evenly split between summer foraging (33 acres) and winter foraging (33 acres) with a trace amount of temporary non-suitable habitats (<1 acre). The majority of these habitats would likely be in other suitable habitats following proposed treatments, thereby increasing the amount in other suitable to roughly 77 acres; no appreciable changes in availability of suitable Canada Lynx habitats would be anticipated. Within the pre-commercial thinning units in lynx habitats (roughly 62 acres), small shade tolerant trees (such as sub-alpine fir and spruce) would be retained where possible to provide potential habitat structure for snowshoe hares by increasing the levels of horizontal cover and accelerating the development of multi-storied stands. Similarly, within the proposed harvest units that would occur within winter foraging habitats, retention of patches of advanced regeneration of shade-tolerant trees, such as sub-alpine fir and Engelmann spruce, would break-up sight distances, provide horizontal cover, and provide forest structural attributes preferred by snowshoe hares and lynx.

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 415 acres (15%) of potential fisher habitats and another 377 acres (14%) of preferred fisher covertypes exist in the project area. Up to 143 acres of upland fisher habitats and 76 acres of preferred fisher covertypes would be thinned, however many of these potential future habitat are somewhat drier with higher percentages of Douglas-fir and ponderosa pine than generally found in more suitable fisher types. Some of these preferred covertypes could develop into marginal upland habitats in the future. Proposed activities in preferred covertypes could improve tree growth, which could facilitate development of attributes that would enable fisher use of these stands sooner than if left untreated. Activities in upland fisher habitats would not change habitat availability, but could alter overall habitat quality slightly with decreases in tree density.

5. Roughly 694 acres of flammulated owl habitats would be treated, which 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 proposed activities would not affect nesting structures.

6. Gray wolves are in the vicinity and could be using the project area for hunting, breeding, or other life requirements. Proposed activities could occur during the spring when wolves are most sensitive at den or rendezvous sites, but mitigations would be included that would limit potential disturbance should a den or rendezvous site were identified within 1 mile of proposed activities. A moderate amount of white-tailed deer winter range exists in the project area (see comment 6). Minor changes to existing thermal cover on these winter range areas would be anticipated, but no appreciable change in big game use would be anticipated, thus limited effects to wolf prey species would be anticipated.

7. Roughly 154 acres of low quality and discontinuous pileated woodpecker nesting habitat exists in the project area; another 716 acres of potential foraging habitats exist in the project area. Disturbance to pileated woodpeckers could occur if proposed activities occur during the nesting period. Proposed thinning would reduce forested habitats for pileated woodpeckers in the project area. Roughly 33 acres of potential nesting 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 760 acres.

Elk and deer likely use the project area much of the non-winter period. Approximately 313 acres of white-tailed deer winter range exists in the proposed units. Minor reductions to the thermal cover attributes in these stands would be anticipated with the proposed activities. Negligible changes to security habitat would occur, but no changes to open roads or motorized human access would occur.

Wildlife Mitigations:

- A DNRC biologist will be consulted if a threatened or endangered species is encountered to determine if additional mitigations that are consistent with the administrative rules for managing threatened and endangered species (ARM 36.11.428 through 36.11.435) are needed.
- Motorized public access will be restricted at all times on restricted roads that are opened for proposed activities.
- 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.
- Retain small shade tolerant trees (such as sub-alpine fire and spruce to provide potential habitat structure for snowshoe hares by increasing the levels of horizontal cover and accelerating the development of multi-storied stands.

Wildlife References:

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**					
Dust		**X**			**x**				**X**				**y**	

Comments:

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

Air Quality Mitigations:

- In woods processing or return slash skidding would be used during harvest operations therefore there would be no slash to burn.
- 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**			**Y**	**1,2**
Demands on Environmental Resources of Land, Water, or Energy	**X**				**X**				**X**					

Comments:
Ashby Bits PCT

1. Lop-and-scattered slash from hand thinned units is often noticeable for 1-2 years post-treatment.

Ashby Bits Timber Permit

2. Portions of the timber permit would be visible from Hwy 200.

Mitigations:.

- Post-thinning or post-harvest the unit(s) would be lop-and-scattered, slash would usually settle after 1-2 years of snowload. As the slash settles and decomposes it would become less noticeable.

- Unit boundaries would be designed to avoid long, straight lines. Post-harvest conditions would be designed to look similar to neighboring stands.

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.*

Archaeologist Review:

A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search results revealed that no cultural or paleontological resources have been identified in the APE, but it should be noted that Class III level inventory work has not been conducted there to date.

Because the topographic setting and geology suggest a low to moderate likelihood of the presence of cultural or paleontologic 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.

Other MEPA Documents:

- MSO East FY16 PCT EA
- MSO East FY 17 PCT EA
- MSO East FY 18 PCT EA
- S'More Potomac PCT Project EA
- Dirty Donovan Project EA
- Green and Beam TP EA

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					

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		
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				N/A	1
Local Tax Base and Tax Revenues	X				X				X					
Demand for Government Services	X				X				X					
Access To and Quality of Recreational and Wilderness Activities	X				X				X					
Density and Distribution of population and housing	X				X				X					
Social Structures and Mores	X				X				X					
Cultural Uniqueness and Diversity	X				X				x					

Comments:
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 1-3 months of employment for his/herself and his/her employees.

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 cost or revenue to the trust at this time, existing forest conditions would persist.

Action:
Ash B. PCT
The proposed pre-commercial thinning would initially create a cost to the trust; however, this would be a long-term investment in increased productivity for the stand. This increased productivity should result in increased volume, available at an earlier date than would be available without treatment.

Direct Costs associated with this project are estimated to be $130,000. This figure was determined by multiplying the estimated number of acres (650) by the estimated cost per acre ($200). These cost estimates were typical for previous projects similar to the proposed project.

Ashby Bits Timber Permit
Commercial harvest would generate approximately $9,600 for the Acquired Lands – Public Schools Trust. An additional Forest Improvement Fee 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.

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: Scott Allen
Title: Forest Management Supervisor
Date: 1/27/2020

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 harvest and 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

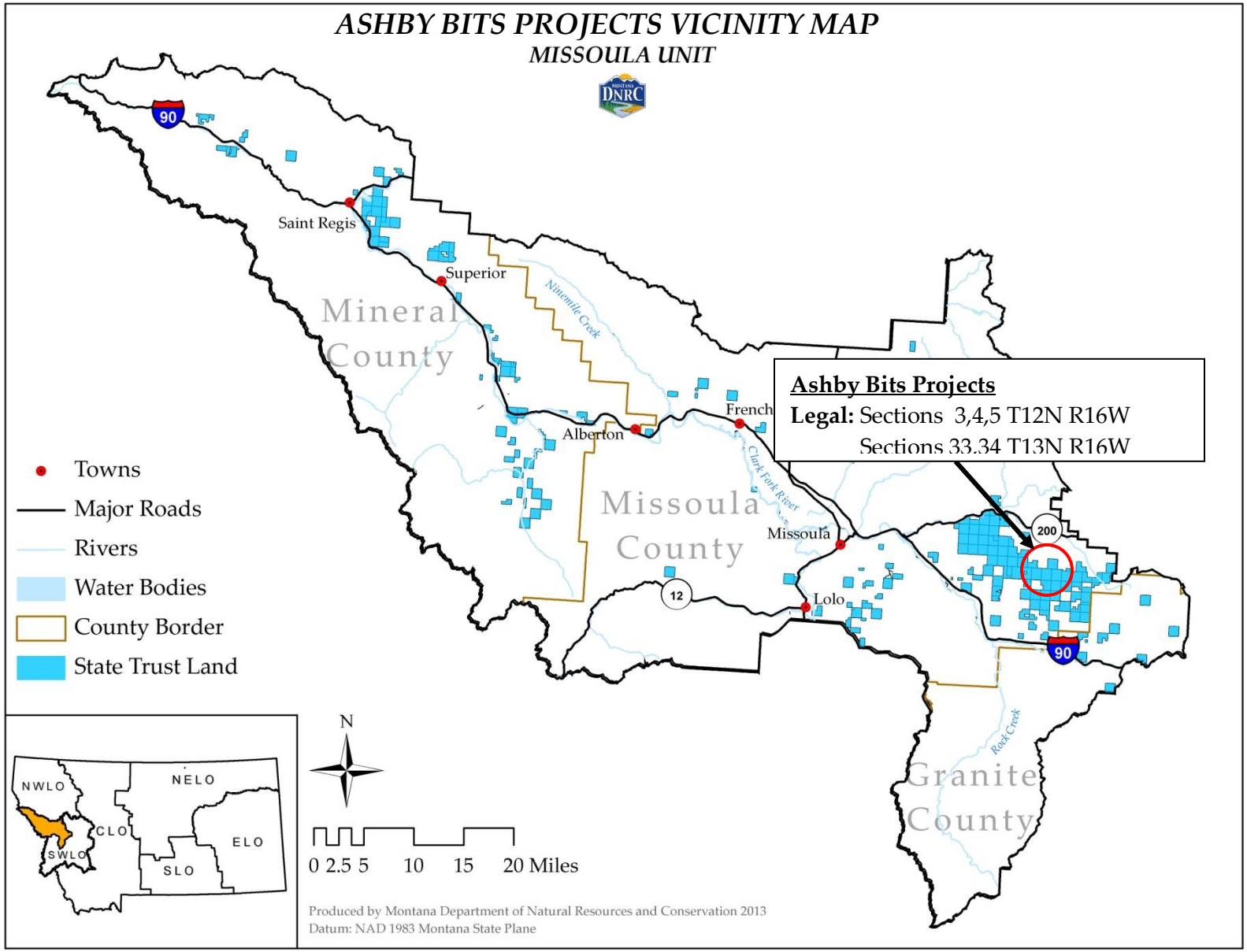
	EIS		More Detailed EA	X	No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Amy Helena
Title: Forest Management Supervisor
Date: 1/28/2020
Signature: /s/ Amy Helena

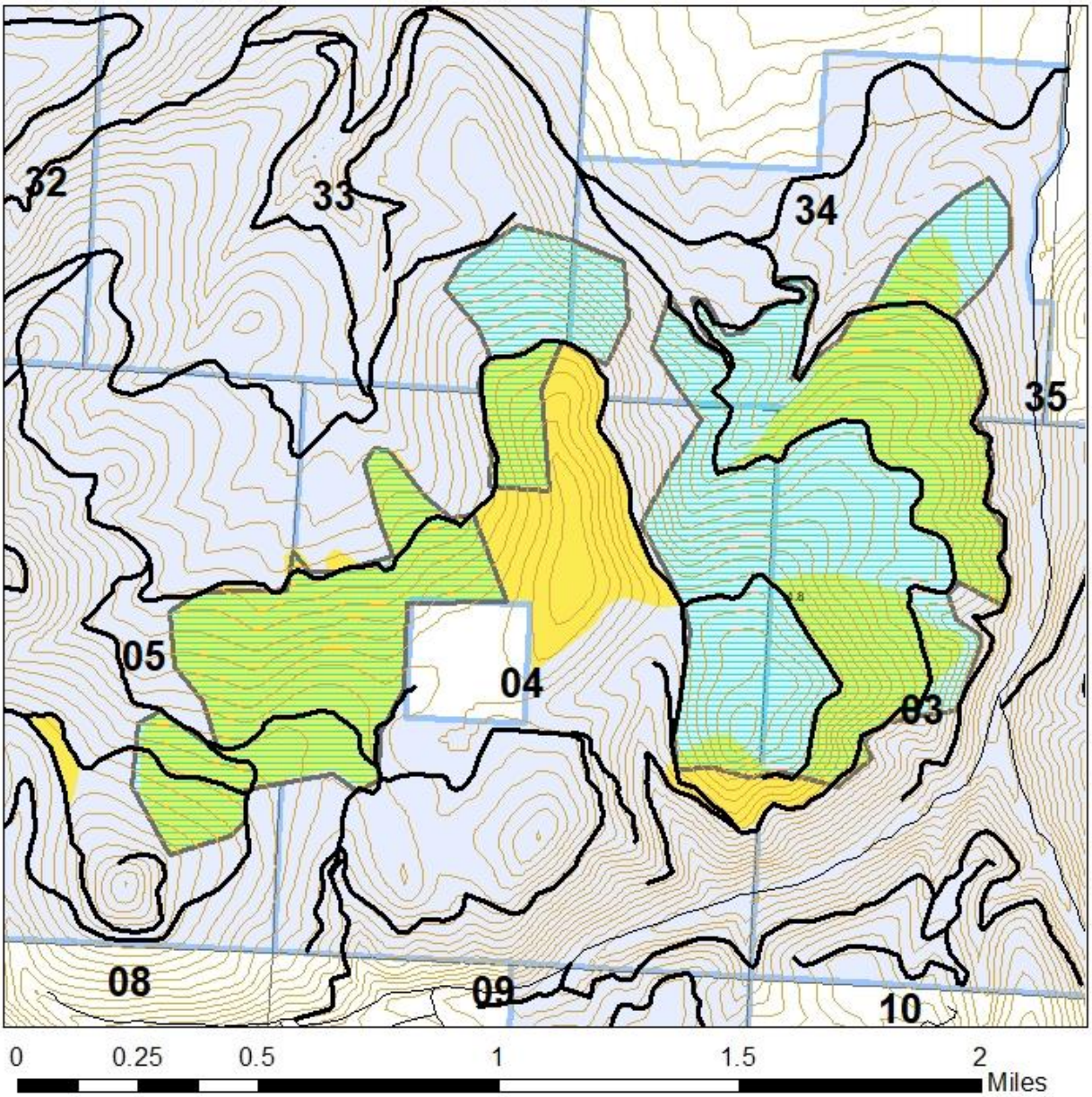
Attachment A- Maps

ATTACHMENT A



Ashby Bits Timber Permit

Sections 3 ,4, 5 T12N R16W
Sections 33, 34 T13N R16W
Missoula Unit



Legend

- Ashby Bits PCT
- Ashby Bits Timber Permit

Ashby Bits Timber Permit : 470 Acres
2 Snags and 2 Snag recruits per acre must be left

N

SA 1/7/2020