

Environmental Assessment Checklist

Project Name: Ace in the Hall
Proposed Implementation Date: 2015-2016
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 Ace in the Hole timber permit. The project is located three air miles southeast of Potomac, MT (refer to vicinity map Attachment A-1 and project map A-2) and includes the following section:

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools	Section 36 T13N R16W	33	33
Public Buildings			
MSU 2 nd Grant			
MSU Morrill			
Eastern College-MSU/Western College-U of M			
Montana Tech			
University of Montana			
School for the Deaf and Blind			
Pine Hills School			
Veterans Home			
Public Land Trust			
Acquired Land			

Objectives of the project include:

- Reduce fire hazard along private property owner in Potomac Valley
- Reduce the overstocked conditions within treated stands by removing suppressed and unhealthy ponderosa pine.
- Reduce the potential for Mountain Pine Beetle infestation by reducing stocking levels within treated stands.
- Salvage dead and dying trees which are currently infested with Mountain Pine Beetle.
- Reduce competition for limited water and nutrients.
- Generate revenue for the Common Schools Trust.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	
Clearcut	0
Seed Tree	0
Shelterwood	0
Selection	0
Commercial Thinning	0
Salvage	20 MBF
Sanitation	80 MBF
Total Treatment Acres	
Proposed Forest Improvement Treatment	
Pre-commercial Thinning	0
Planting	0
Proposed Road Activities	
New permanent road construction	0
New temporary road construction	0
Road maintenance	0
Road reconstruction	0
Road abandoned	0
Road reclaimed	0
Other Activities	
Duration of Activities:	1 year
Implementation Period:	8/2015-8/2016

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

DNRC specialists were consulted, including: Garrett Schairer-Wildlife Biologist and Jeff Collins-Soils Scientist/Hydrologist.

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: No commercial harvest would occur at this time.

Action Alternative (Provide a brief description of all proposed activities): A commercial timber harvest would take place to remove no more than 100 thousand board feet (MBF) of timber. Timber would be harvested using ground based methods.

Impacts on the Physical Environment

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

VEGETATION:

Vegetation Existing Conditions: The project area is pre-dominantly ponderosa pine with Douglas-fir and occasional western larch present. This is consistent with the Desired Future Condition (DFC) in the stands.

This area was previously harvested 15-20 years ago, although post-harvest the stand was left overstocked with trees of varying levels of defect. Currently there are desirable trees (straight boles, single top, good leader growth, limited defect) growing 10-15 feet away from trees high in defect (crook, sweep, forked or multiple tops). Mountain Pine Beetles are also in the area and are causing pockets of mortality throughout the stand.

Size class in the area is generally 10-26" Diameter Breast Height (DBH), with the average DBH 16". This stand currently has a high stand density with tree spacing ranging from 5-20 feet.

There is no Old Growth in the project area.

Knapweed is common in the area, especially along roads. Disturbance could lead to an increased risk 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					
Old Growth	X				X				X					
Action														
Noxious Weeds			X				X				X		Yes	1
Rare Plants	X				X				X					
Vegetative community		X				X				X			Yes	2
Old Growth	X				X				X					

Comments:

- The project area would be monitored for noxious weeds after implementation and herbicide may be applied along the access road. If mechanical methods are used, all equipment would be washed and inspected prior to start of work.*

2. *The Action Alternative would remove no more than 100 thousand board feet of sawlogs across 33 acres. Healthy well-spaced ponderosa pine would be left in the project area. Reducing the stocking level within the overstory would free up limited water and nutrients for the understory and the residual ponderosa pine overstory, increasing their growth and vigor. Under the Action Alternative, stand density would be reduced favoring species consistent with the DFC, therefore the proposed alternative would have a low risk of direct, indirect and cumulative effects on the vegetative community.*

Vegetation Mitigations:

- *Leave ponderosa pine in the overstory as a seed source*
- *Protect advanced regeneration during all aspects of timber harvest*
- *Clean equipment to minimize the potential of introducing new weeds to the project area.*

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions: The primary soil types in the project area are MU 33 Crow silty clay loams and Lubrecht silt loams on 2-8% slopes. These soils are deep and well drained and are prone to rutting if operated on when wet. Past harvests have occurred in the area, leaving existing skid trails and landings. These previous selection harvests were on gentle slopes and skid trails and have re-vegetated, and even though there was past disturbance, cumulative effects were low as noted in 1988 monitoring.

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					
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			Yes	1
Erosion		X				X				X			Yes	1
Nutrient Cycling		X				X				X			Yes	2
Slope Stability		X				X				X			Yes	1
Soil Productivity		X				X				X			Yes	1,2

Comments:

1. *BMP's would be implemented on all roads and within the units. To minimize soil impacts, operations would be limited to moderate slopes less than 40% and dry, frozen or snow covered conditions.*

2. *Mitigations would include season of use limits, and retaining a portion of woody debris for nutrients, while providing hazardous fuel reduction and prompt revegetation as needed to protect soil resources. 5 tons/ acre of well distributed slash (fine and coarse woody debris) would be retained following harvest for soil productivity/moisture/and conifer microsites. Nutrients would be available to soils as they decompose.*

WATER QUALITY AND QUANTITY:

Water Quality and Quantity Existing Conditions: **There are no stream courses within the project area.**

Water Quality and Water Quantity	Impact								Can Impact Be Mitigated?	Comment Number
	Direct & Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
No-Action										
Water Quality	X									
Water Quantity	X									
Action										
Water Quality		X				X			Y	1
Water Quantity		X				X			Y	1

Comments:

1. *The harvest would remove a very low volume 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 Best Management Practices (BMPs), 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 road for access and log hauling, and conducting activities during dry or frozen conditions. Based on the harvest design, there is low risk of direct, indirect or cumulative effects to water quality or downstream beneficial uses from the action alternative.*

Water Quality & Quantity Mitigations:

- *The proposed activities would take place while soils are dry or frozen to limit rutting or disturbance. If soil/snow conditions deteriorate and we enter a spring "break-up" condition, harvest would be discontinued until soils are adequately dry, based on inspection.*

- *The proposed haul route would use existing roads. Hauling operations would be limited to dry, frozen or snow covered conditions to prevent rutting disturbance and sedimentation. Any damages to roads would be repaired as soon as conditions allow.*

- *Skid trails would be stabilized by slashing and installing drainage where needed to prevent erosion.*

FISHERIES:

Fisheries Existing Conditions: There are no streams containing fish within the project area.

No sediment impacts are expected with either No-Action or Action Alternative

Fisheries Mitigations:

- *Should the Action Alternative be implemented, road drainage on existing roads would be maintained concurrent with hauling operations*

WILDLIFE: Evaluation of the impacts of the No-Action and Action Alternatives including **direct, indirect, and cumulative** effects on Wildlife.

Wildlife Existing Conditions: The project area is a mix of forested ponderosa pine stands. Potential habitat exists for flammulated owls in the project area. Gray wolves may be in the vicinity, but use of the project area has not been documented. White-tailed deer and elk winter range exists in the project area.

No-Action: Continued maturation could improve big game winter range attributes, but could reduce habitat quality for flammulated owls over the long term. Generally, negligible direct, indirect, or cumulative effects would occur.

Action Alternative (see Wildlife table below):

Wildlife	Effects								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	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					
Canada lynx <i>(Felix lynx)</i> Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone	X				X					
Sensitive Species										

Wildlife	Effects								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
Bald eagle <i>(Haliaeetus leucocephalus)</i> Habitat: Late-successional forest more than 1 mile from open water	X				X					
Black-backed woodpecker <i>(Picooides arcticus)</i> Habitat: Mature to old burned or beetle-infested forest	X				X					
Coeur d'Alene salamander <i>(Plethodon idahoensis)</i> Habitat: Waterfall spray zones, talus near cascading streams	X				X					
Columbian sharp-tailed grouse <i>(Tympanuchus Phasianellus columbianus)</i> Habitat: Grassland, shrubland, riparian, agriculture	X				X					
Common loon <i>(Gavia immer)</i> Habitat: Cold mountain lakes, nest in emergent vegetation	X				X					
Fisher <i>(Martes pennanti)</i> Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian	X				X					
Flammulated owl <i>(Otus flammeolus)</i> Habitat: Late-successional ponderosa pine		X				X			Y	W-1

Wildlife	Effects								Can Impact be Mitigated?	Comment Number	
	Direct and Indirect				Cumulative						
	No	Low	Mod	High	No	Low	Mod	High			
and Douglas-fir forest											
Gray Wolf (<i>Canis lupus</i>) Habitat: Ample big game populations, security from human activities		X				X				Y	W-2
Harlequin duck (<i>Histrionicus histrionicus</i>) Habitat: White-water streams, boulder and cobble substrates	X				X						
Northern bog lemming (<i>Synaptomys borealis</i>) Habitat: Sphagnum meadows, bogs, fens with thick moss mats	X				X						
Mountain plover (<i>Charadrius montanus</i>) Habitat: short-grass prairie & prairie dog towns	X				X						
Peregrine falcon (<i>Falco peregrinus</i>) Habitat: Cliff features near open foraging areas and/or wetlands	X				X						
Pileated woodpecker (<i>Dryocopus pileatus</i>) Habitat: Late-successional ponderosa pine and larch-fir forest	X				X						
Townsend's big-eared bat (<i>Plecotus townsendii</i>) Habitat: Caves, caverns, old mines	X				X						

Wildlife	Effects								Can Impact be Mitigated?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
Big Game Species										
Elk		X				X				W-3
Whitetail		X				X			Y	W-3
Mule Deer		X				X			Y	W-3
Bighorn Sheep	X				X					
Other	X				X					

Comments:

W-1 *There are approximately 244 acres of potential flammulated owl habitats in ponderosa pine and dry Douglas-fir stands in the project area. Portions of the project area and cumulative effects analysis area have been harvested in the recent past, potentially improving flammulated owl habitat by creating foraging areas and reversing a portion of the Douglas-fir encroachment and opening up stands of ponderosa pine; however retention of large ponderosa pine and/or Douglas-fir was not necessarily a consideration in some of these harvest units, thereby minimizing the benefits to flammulated owls. Flammulated owls can be tolerant of human disturbance (McCallum 1994), however the elevated disturbance levels associated with proposed activities could negatively affect flammulated owls should activities occur when flammulated owls are present, however activities would likely occur outside of the nesting season. Since some snags would be retained, loss of nest trees would be expected to be minimal. Proposed activities on 23 acres of potential flammulated owl habitats would open the canopy while favoring ponderosa pine and Douglas-fir. The more open stand conditions, the retention of fire adapted tree species, and the maintenance of snags would move the project area toward historical conditions, which is preferred flammulated owl habitat.*

W-2 *The Union Peak wolf pack is likely in the vicinity. In general, some wolf use of the project area is possible. No known den or rendezvous sites occur in the project area, but some use of the project area by wolves could occur for breeding, hunting, or other life requirements. Big game species exist in the vicinity of the project area much of the year and winter range exists in the project area. 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. Furthermore, activities would likely occur outside of the time periods when wolves may be using these habitat features. 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, summer big game habitat, and big game winter range habitat, which could alter some big game use of the area, but would not be expected to appreciably alter wolf prey abundance.*

W-3 *Montana Department of Fish, Wildlife, and Parks identified white-tailed deer and elk winter range in the project area. These winter ranges are part of larger winter ranges in the area.*

Ponderosa pine stands in the project area are providing attributes facilitating some use by wintering big game. Proposed activities would not likely disturb wintering big game, but would reduce canopy closure. Following proposed activities, the capacity of these stands to intercept snow and provide thermal cover for big game would be largely removed, reducing habitat quality for wintering big game. Proposed activities would not prevent big game movement through the project area appreciably in winter and could stimulate browse production in the unit. No long-term effect to winter range carrying capacity or factors that would create long-term displacement or reduced numbers of big game would be anticipated. No potential big game security habitat exists in the project area.

Wildlife Mitigations:

- *A DNRC biologist would be consulted if a threatened or endangered species were 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.*
- *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.*

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			Yes	1
Dust		X				X				X			Yes	2

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

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

Air Quality Mitigations:

- *Burning within the project area would be short in duration and would be conducted when conditions favored good to excellent ventilation and smoke dispersion as determined by the Montana Department of Environmental Quality and the Montana/Idaho Airshed Group.*
- *The DNRC, as a member of the Montana/Idaho Airshed Group, would burn only on approved days.*
- *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									
Aesthetics	X				X									
Demands on Environmental Resources of Land, Water, or Energy	X				X									
Action														
Historical or Archaeological Sites	X				X									
Aesthetics	X				X									
Demands on Environmental Resources of Land, Water, or Energy	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						1
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						

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		
Access To and Quality of Recreational and Wilderness Activities	X				X				X					
Density and Distribution of population and housing	X				X				X					
Social Structures and Mores	X				X				X					
Cultural Uniqueness and Diversity	X				X				X					

Comment:

1. *The action alternative would have an overall positive impact on health and human safety by reducing fuel loading adjacent to private property in the Potomac valley.*

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

- None

Other Appropriate Social and Economic Circumstances:

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

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

Action: The timber harvest would generate additional revenue for the Common Schools Trust. The estimated return to the trust for the proposed harvest is \$9,540 based on an estimated harvest of 100 thousand board feet and an overall stumpage value of \$15.90 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: Amy Helena
Title: Missoula Unit Forest Management Supervisor
Date: 8/31/2015

Finding

Alternative Selected:

The Action Alternative

Significance of Potential Impacts:

- A. The Action Alternative meets the Project Need and the specific Objectives of the Proposed Action (Desired Outcomes and Conditions) as described on pages 1 and 2 of the EA. The Action Alternative would produce an economic return to the Common Schools Trust, 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 the Action Alternative.
- 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

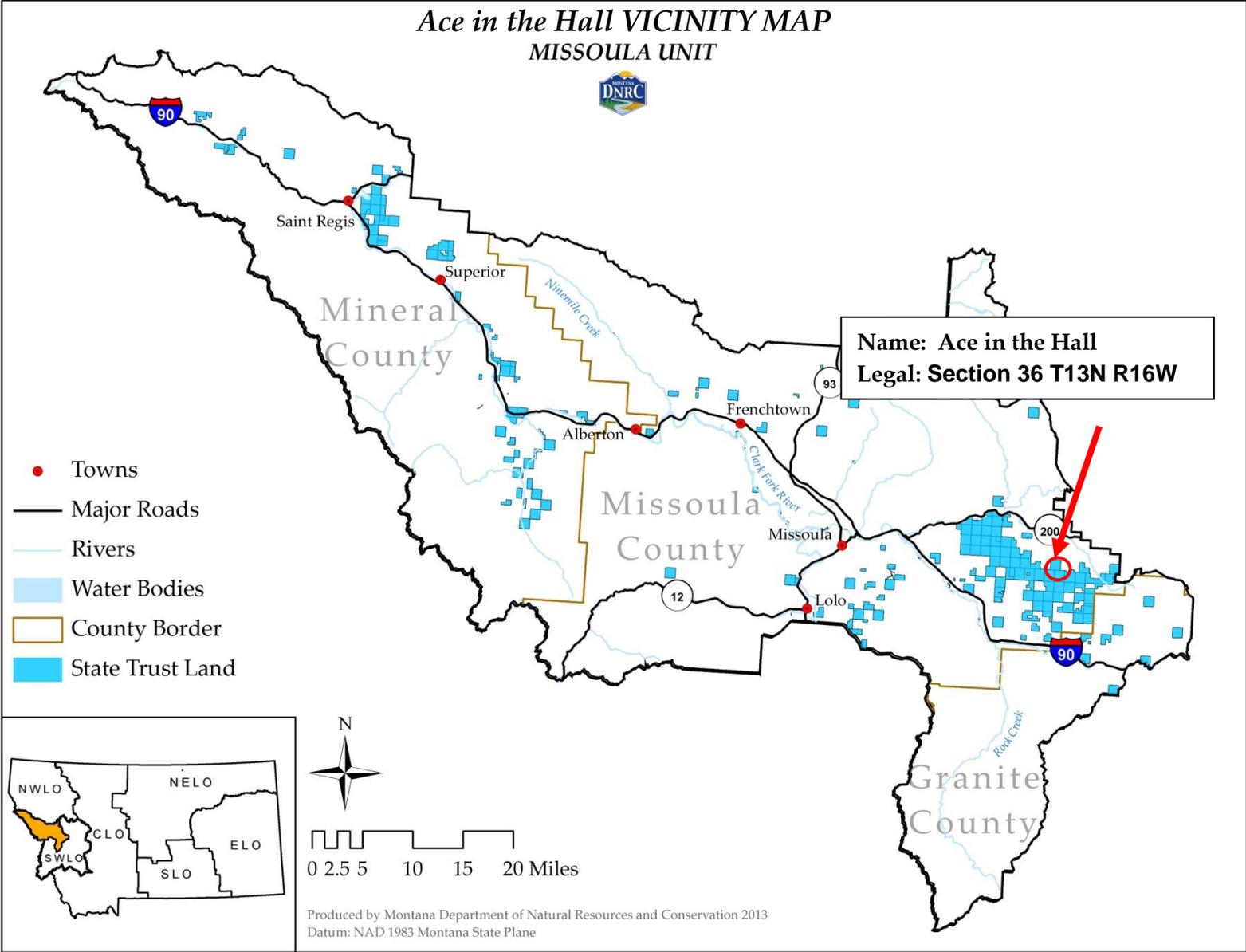
No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Jonathan Hansen
Title: Missoula Unit Manager
Date: September 1, 2015
Signature: *Isl Jonathan Hansen*

Attachment A- Maps

A-1: Timber Sale Vicinity Map



A-2: Timber Sale Harvest Unit

