

Environmental Assessment Checklist

Project Name: Cooper Creek 2
Proposed Implementation Date: October 2015
Proponent: Anaconda Unit, Southwest Land Office, Montana DNRC
County: Powell County

Type and Purpose of Action

Description of Proposed Action:

The Anaconda Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the Cooper Creek Salvage Timber Sale. The project is located approximately 7 miles southeast of Helmville, Montana (refer to Attachments vicinity map A-1 and project map A-2) and includes the following section:

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools	T12N, R10W, S16	640	230
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:

- Salvage Lodgepole pine and Douglas-fir, consistent with MCA 77-5-207.
- Promote long-term revenue generating capability through biodiversity and regeneration of forested stands.
- Reduce current stocking levels to improve growth
- Maintain forest productivity.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	# Acres
Clearcut	65
Seed Tree	100
Shelterwood	65
Selection	
Commercial Thinning	
Salvage	
Total Treatment Acres	230
Proposed Forest Improvement Treatment	# Acres
Pre-commercial Thinning	
Planting	
Proposed Road Activities	# Miles
New permanent road construction	2.0
New temporary road construction	1.0
Road maintenance	0.7
Road reconstruction	
Road abandoned	
Road reclaimed	
Other Activities	

Duration of Activities:	24 months
Implementation Period:	October 2015 – October 2017

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

SCOPING:

- DATE: **May 2015**
- PUBLIC SCOPED:
 - The scoping notice was posted on the DNRC Website:
<http://dnrc.mt.gov/PublicInterest/Notices/Default.asp>
 - A legal notification was placed in the Missoulian.
 - Adjaent landowners and those listed on the Statewide list
- AGENCIES SCOPED:
 - Scoping notices were sent to MTFWP and Tribal members on the Statewide list.
- COMMENTS RECEIVED:
 - No external comments were received.

DNRC specialists were consulted, including: Jeff Collins, Hydrologist and Soil Scientist; Garrett Schairer, Wildlife Biologist; Patrick Rennie, Archaeologist; Jeff Schmalenberg, DNRC MEPA Planner; Sonya Germann, Forest Management Bureau Chief.

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

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

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

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

- **Montana/Idaho Airshed Group-** The DNRC is a member of the Montana/Idaho Airshed Group which was formed to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction (Montana/Idaho Airshed Group 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.

- **Montana Department of Fish, Wildlife and Parks (DFWP)**- A Stream Protection Act Permit (124 Permit) is required from DFWP for activities that may affect the natural shape and form of a stream's channel, banks, or tributaries. Such activities include:
 - **Installation of a 20-30' native stringer bridge or other bridge structure across the West Fork of Braziel Creek**

ALTERNATIVES CONSIDERED:

No Action Alternative: The no alternative would not harvest any timber from Common School Trust Lands. No new roads would be built. DNRC approved practices, such as the existing forest grazing license, would remain unchanged.

Action Alternative: The action alternative is a combination of salvage harvest of dead, dying and high-risk trees to capture value, consistent with MCA 77-5-207, reduce stocking levels, promote regeneration of diverse conifer species and improve tree growth. Approximately 230 acres would be harvested through ground based and cable yarding systems. Approximately 3 miles of new road would be constructed for this project. All newly constructed roads would be closed to unauthorized travel. Approximately 3 miles of existing roads would be maintained and improved to meet BMP's and control sedimentation for the period of DNRC operations.

Silvicultural treatments would be salvage, designed to remove all Lodgepole pine, and Individual Tree Select, removing lesser quality Douglas-fir heavily impacted by Western Spruce Budworm. Harvests are expected to promote regeneration and improve overall forest health. Regeneration would be accomplished through natural regeneration and inter-planting if necessary. Prescribed burning may be utilized as necessary.

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: No rare plants or cover types have been identified. Current Stand Level Inventory identifies 88 acres as potential old growth. Field reviews determined that within these stands, there are scattered clumps of old relic trees that are 200+ years of age. However, these patches do not provide enough large (>21" DBH) trees to meet the department's old growth requirements. Thus, it has been determined through field reviews, these stand do not meet the department's criteria for old growth.

Stand Level Inventory shows all 230 acres as Lodgepole Pine sawlog cover type with species composition as 70% LP and 30% DF. Field reviews show there is a great deal of variability, in the species composition, across all 230 acres. There are patches (generally < 5 acres) of 100% Douglas-fir, and patches of 100% Lodgepole pine scattered throughout. However, most of the area is of mixed

composition of varying degrees. A minor amount of Ponderosa pine is found within the project area as well. Field reviews show the stands as predominantly even aged at approximately 120 – 130 years old with scattered, 200+ year old, relic trees found throughout.

The majority (95%) of the Lodgepole > 7" DBH have been killed by Mountain Pine Beetle. Many of these trees are starting to fall over and create a heavy fuel loading. Many of the smaller LP have also been killed but to a lesser degree. Most (75%) of the Douglas-fir trees are being impacted by Western Spruce Budworm to varying degrees.

Noxious Weeds: The state lands section has a few spot infestations of knapweed, thistle and houndstongue along existing roads and along the north and west boundary lines and are more prolific on adjacent lands.

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	
Rare Plants		x				X				X			N/A	
Vegetative community		x				X				X			Yes	
Old Growth	x				X				X				N/A	

Noxious Weeds Mitigations:

1. DNRC plans to complete herbicide treatments of spot infestations on the state project parcel and segments of the access roads on adjacent ownerships to control existing weeds. All off road equipment would be washed and inspected prior to start of work. All new roads would be reseeded to site adapted grass to reduce the threat of noxious weed spread. 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: Geology is durable, belt argillites and tertiary volcanics (basalt) on steeper slopes and ridges. Footslopes towards the northeast and east are tertiary valley fill deposits of silts and clays. No unique geology occurs in the project area. Small areas of past slope instability were identified within the state section but are not in the project area and would not be impacted by the proposed action. A soils report is included in the project file.

Soils in the project area are Winkler very gravelly loams along ridge and moderate to steep sideslopes on the flanks of W. Braziel Creek and in the NW corner of section. Winkler soils are low to moderate productivity with moderate erosion risks. Soils are well drained and droughty, especially on southerly aspects and plant competition for limited moisture and nutrients limits tree growth. Shallow surface soils are subject to displacement, and shallow depth to fractured rock is common.

Soils in the southwest corner of the section are complexes of Winkler gravelly loams and Bignell and Yreka soils that have higher clay contents in subsoils. Erosion potential is moderate. The existing access road from the NE crosses high clay contents (Bignell, Crow soils) associated with tertiary valley fill deposits that are prone to rutting if operated on when wet and short segments of existing road are rutted. The southeast corner of the section will tend to remain moist to wet later in the spring than the Winkler soils to the NW.

The proposed harvest areas have minimal previous harvest and no cumulative effects would be anticipated with the action alternative. There are moderate to high levels of woody debris on the ground due to mortality and very limited previous harvest entries. The moderate slopes and dry sites have a long season of use and are well suited to ground based operations. Past harvests have occurred in the section, mainly on the lower slopes, and skid trails have revegetated well. No apparent BMP departures were observed and there were low cumulative effects associated with the previous harvest.

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

Soil Comments and Mitigations:

1. DNRC project manager completed a road log for location and design of drainage improvements on existing roads and new roads. BMP's would be implemented on all roads and harvest units. A short segment of existing road would be graveled with pit-run to prevent rutting and maintain drainage. To minimize soil impacts, tractor operations would be limited to slopes less than 45%, with cable operation on steeper slopes. Operations would be limited to dry, frozen or snow covered conditions. Wind-throw risk can be reduced by promoting co-dominant trees that are well spaced to reduce moisture competition and improve growth.

2. Mitigations would include season of use limitations, retaining a portion of woody debris for nutrients, while providing of 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 during harvest for soil productivity/moisture/and conifer microsites. Slash from cut trees would be return skidded to the harvest unit, or lopped and scattered within the unit. Nutrients from slash would be available to soils as they decompose.

WATER QUALITY AND QUANTITY:

Water Quality and Quantity Existing Conditions: Water quality is impacted by road use and inadequate road drainage on portions of roads in the Nevada Creek valley and mixed uses of timber harvest, grazing and rural development. Two streams, Cooper Creek and W. Braziel Creek flow through the project section. Cooper Creek and W. Braziel Creek flows are largely diverted for irrigation below the state parcel. Water Quantity is expected to increase from extensive tree mortality from insects and is within a natural range.

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		Natural	
Action														
Water Quality		X				X				X			Y	1
Water Quantity			X				X				X		Y	2

Water Resources Comments and Mitigations:

The harvest will remove dead and dying trees 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. Based on the harvest and road design, there is low risk of direct, indirect or cumulative effects to water quality or downstream beneficial uses from the action alternative

1. The Montana Administrative Rules for Forest Management; Watershed Management and MT Habitat Conservation Plan would be implemented. All BMP's would be applied and administered during road construction and harvest operations. Unit boundaries were buffered to exclude the SMZ/RMZ on Cooper Creek. Harvest of dead/dying trees would occur in the RMZ of W. Braziel Creek along the outside boundary of 50-75 ft. from the stream and would maintain a wide vegetated sediment buffer with low potential for sediment delivery. Harvest equipment with a track mounted saw-head would be positioned outside the RMZ to avoid disturbance in the RMZ, and then reach in to fell and pull out selected trees from an RMZ segment of up to 600 ft. on one side of W. Braziel Creek. Skid trails would be stabilized by slashing and installing drainage where needed to prevent erosion.

The proposed haul route would use existing roads and construct about 3 miles of combined temporary and permanent roads. The DNRC project manager completed a road log for location and design of drainage improvements on existing roads and new roads. BMP's would be implemented on all roads and within the harvest units. Hauling operations would be limited to

frozen or snow covered conditions to prevent rutting disturbance and sedimentation. Any damages to roads would be repaired.

Installation of a crossing on W. Braziel Creek would have a short term increase in sediment during construction but would quickly subside. Road drainage features (drain-dips) would be installed on both sides of crossing to divert sediment away from the crossing site and slash filter windrows would be installed to control erosion.

2. The proposed salvage of dead, dying and overstocked 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 compared to the no-action alternative and unlikely to be measurable or deliver off-site to surface waters.

FISHERIES:

Fisheries Existing Conditions: **Fisheries Existing Conditions:** Within the Nevada Creek watershed, irrigation has reduced flows to fisheries streams and sediment delivery is a concern from grazing and roads. Two streams, Cooper Creek and W.Braziel Creek flow through the project section. Cooper Creek is considered to support westslope cutthroat trout by extrapolation (MFISH) but there is no data on fish populations.

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

Action Alternative (see Fisheries table below):

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

Comments:

- 1.) Cooper Creek flows are partially diverted for irrigation below the state parcel. There are low levels of impacts from grazing in the state section. An electro-shocking survey of the W. Braziel Creek tributary found no fish and this stream is not considered a fish bearing stream, possibly due to lower flows below the state parcel and irrigation diversion. There is low risk of impacts to fisheries from sediments associated with the proposed action alternative, since only Cooper Creek is a fisheries stream. No road crossings of Cooper Creek are planned and no harvest would occur within the Streamside Management Zone of 100 ft. or the Riparian Management Zone which is 80 ft. The proposed cable harvest upslope of the Cooper Creek SMZ would cause low soil disturbance and has low potential for sediment contribution to Cooper Creek. The proposed cable unit access road is over 500 ft. from the creek and there is low potential for sediment delivery through this wide vegetation buffer. A new road crossing would be completed on the non-fish bearing W. Braziel Creek. There would be a short term pulse of sediment during construction that would have low downstream effects and quickly subside, based on previous monitoring of culvert installations by DNRC. All BMP's and erosion control measures including slash filter windrows and grass seeding are expected to control erosion.

- 2.) There is no effect on connectivity on the state parcel. Flow is limited on private lands downstream by irrigation diversions and low flows affects connectivity. The action alternative would not have measurable changes to flow regimes, although there may be a slight increase in flows associated with tree mortality.

WILDLIFE:

Wildlife Existing Conditions: The project area is a mix of forested Douglas-fir, Lodgepole pine and Ponderosa pine stands. Potential habitat exists for grizzly bears, flammulated owls, and pileated woodpeckers in the project area. Big game winter range exists in the project area; non-winter habitat for a variety of big game species also exists.

No-Action: Continued maturation could improve pileated woodpecker habitats and 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	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 (<i>Ursus arctos</i>) Habitat: Recovery areas, security from human activity		X				X			Y	W-1

Wildlife	Impact								Can Impact be Mitigated ?	Comment Number
	Direct and Indirect				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
Canada lynx <i>(Felix lynx)</i> Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone	X				X					
Sensitive Species										
Bald eagle <i>(Haliaeetus leucocephalus)</i> Habitat: Late-successional forest within 1 mile of 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>(Tymanuchus 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	X				X					

Wildlife	Impact								Can Impact be Mitigated ?	Comment Number	
	Direct and Indirect				Cumulative						
	No	Low	Mod	High	No	Low	Mod	High			
less than 6,000 feet in elevation and riparian											
Flammulated owl <i>(Otus flammeolus)</i> Habitat: Late-successional ponderosa pine and Douglas-fir forest		X				X				Y	W-2
Gray Wolf <i>(Canis lupus)</i> Habitat: Ample big game populations, security from human activities	X				X						
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		X				X				Y	W-3

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 <i>(Plecotus townsendii)</i> Habitat: Caves, caverns, old mines	X				X					
Wolverine <i>(Gulo gulo)</i>	X				X					
Big Game Species										
Elk		X				X			Y	W-4
Whitetail		X				X			Y	W-4
Mule Deer		X				X			Y	W-4
Bighorn Sheep	X				X					
Other										

Comments:

W-1). The project area is 11 miles south of the Northern Continental Divide Ecosystem grizzly bear recovery area and is in the '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 foraging, and they could be displaced by project-related disturbance if they are in the area during proposed activities. Proposed activities would occur between June 15 and March 1. No direct effects to grizzly bears would be anticipated for any activities conducted during the denning period. Some disturbance of grizzly bears could be possible with any activities that may occur during the non-denning period. Hiding cover would be reduced on 230 acres. No appreciable reductions in security habitat would occur. 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 minor effect on grizzly bears.

W-2). There are approximately 643 acres of potential flammulated owl habitats in ponderosa pine and dry Douglas-fir stands across 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. Proposed activities could overlap the nestling and fledgling period. Since some snags would be retained, loss of nest trees would be expected to be minimal. Proposed activities on 230 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-3). Roughly 108 acres of pileated woodpecker nesting habitat 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 35 acres of potential habitat would be too open to be used by pileated woodpeckers following proposed treatments. 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 230 acres.

W-4). Montana Department of Fish, Wildlife, and Parks identified elk (520 acres) and moose (218 acres) winter range in the project area. These winter ranges are part of larger winter ranges in the area. Mature Douglas-fir, lodgepole pine, and ponderosa pine stands in the project area are providing attributes facilitating some use by wintering big game. Proposed activities could occur between June 15 and March 1, and disturbance created by mechanized logging equipment and trucks could temporarily displace big game animals during periods of operation for 2 to 4 years; however, winter logging provides felled tree tops, limbs, and slash piles that could concentrate feeding big game. 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. Proposed activities would reduce canopy closure on roughly 157 acres of winter range. Following proposed activities, the capacity of these stands to intercept snow and provide thermal cover for big game would be 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 units.

Non-winter habitat for deer and elk exists in the project area. Proposed activities could reduce hiding cover and thermal cover which could increase sight distances and potential for increased disturbance to big game. Non-motorized access could increase with the proposed increase in restricted roads, but no changes in availability of security habitats 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 harvesting activities; signs will be used during active periods and a physical closure (gate, barriers, equipment, etc.) will 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 will be managed according to *ARM 36.11.411* through *36.11.414*, particularly favoring ponderosa pine. Clumps of existing snags could be maintained where they exist to offset areas without sufficient snags.
- Contractors and purchasers conducting contract operations will be prohibited from carrying firearms while on duty.
- Food, garbage, and other attractants will be stored in a bear-resistant manner.
- Design seed tree units such that no point within those units would be more than 600 feet from visual screening or topographic breaks that would hide a grizzly bear.
- Provide connectivity by maintaining corridors of unharvested and/or lighter harvested areas along riparian areas, ridge tops, and saddles.
- Reduce potential for disturbance to spring nesting season and elk calving season by permitting an operating season of June 15 – March 1.

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			No	2.

Comments:

1. All burning would be done in accordance to the Montana Idaho Airshed Group guidelines.
2. A very minor amount of dust particulate would occur if operation were to occur during summer time.

ARCHAEOLOGICAL SITES / AESTHETICS / DEMANDS ON ENVIRONMENTAL RESOURCES:

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Historical or Archaeological Sites	X				x				X					

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Aesthetics	X				X				X					
Demands on Environmental Resources of Land, Water, or Energy	x				X				X					
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.*

- In 2012 an EA checklist was completed to salvage harvest a minor amount of Ponderosa pine killed by Mountain Pine Beetle. The current proposed project would not be over the same ground. Thus no un-acceptable cumulative impacts would be anticipated with either alternative from this previous action.

Impacts on the Human Population

Evaluation of the impacts on the proposed action including **direct, secondary, and cumulative** impacts on the Human Population.

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

Comments: N/A

Mitigations: N/A

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

- None

Other Appropriate Social and Economic Circumstances:

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

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

Action: The timber harvest would generate additional revenue for the Common School Trust. The estimated return to the trust for the proposed harvest is \$100,000 based on an estimated harvest of 5,000 tons and an overall stumpage value of \$20.00 per ton. Costs, revenues, and estimates of return are estimates intended for relative comparison of alternatives, they are not intended to be used as absolute estimates of return.

References

DNRC 1996. State forest land management plan: final environmental impact statement (and appendixes). Montana Department of Natural Resources and Conservation, Forest Management Bureau, Missoula, Montana.

DNRC. 2010. Montana Department of Natural Resources and Conservation Forested State Trust Lands Habitat Conservation Plan: Final EIS, Volume II, Forest Management Bureau, Missoula, Montana.

Does the proposed action involve potential risks or adverse effects that are uncertain but extremely harmful if they were to occur?

No potential risks or adverse effects have been identified.

Does the proposed action have impacts that are individually minor, but cumulatively significant or potentially significant?

No potentially significant impacts were identified.

Environmental Assessment Checklist Prepared By:

Name: Brian Robbins
Title: Forester
Date: 07/23/2015

Finding

Alternative Selected

The action alternative is the selected alternative.

Significance of Potential Impacts

No significant or un-acceptable impacts are anticipated with implementation of the action alternative.

The project area is located on State-owned lands, which are “principally valuable for the timber that is on them or for growing timber or for watershed” (**MCA 77-1-402**). The proposed action is similar to past projects that have occurred in the area. Since the EA does not identify future actions that are new or unusual, the proposed timber harvest is not setting precedence for a future action with significant impacts.

Taken individually and cumulatively, the identified impacts of the proposed timber sale are within established threshold limits. Proposed timber sale activities are common practices and none of the project activities are being conducted on fragile or unique sites.

The proposed timber sale conforms to the management philosophy adopted by DNRC in the SFLMP and is in compliance with existing laws, Administrative Rules, and standards applicable to this type of action.

Need for Further Environmental Analysis

EIS

More Detailed EA

No Further Analysis

Environmental Assessment Checklist Approved By:

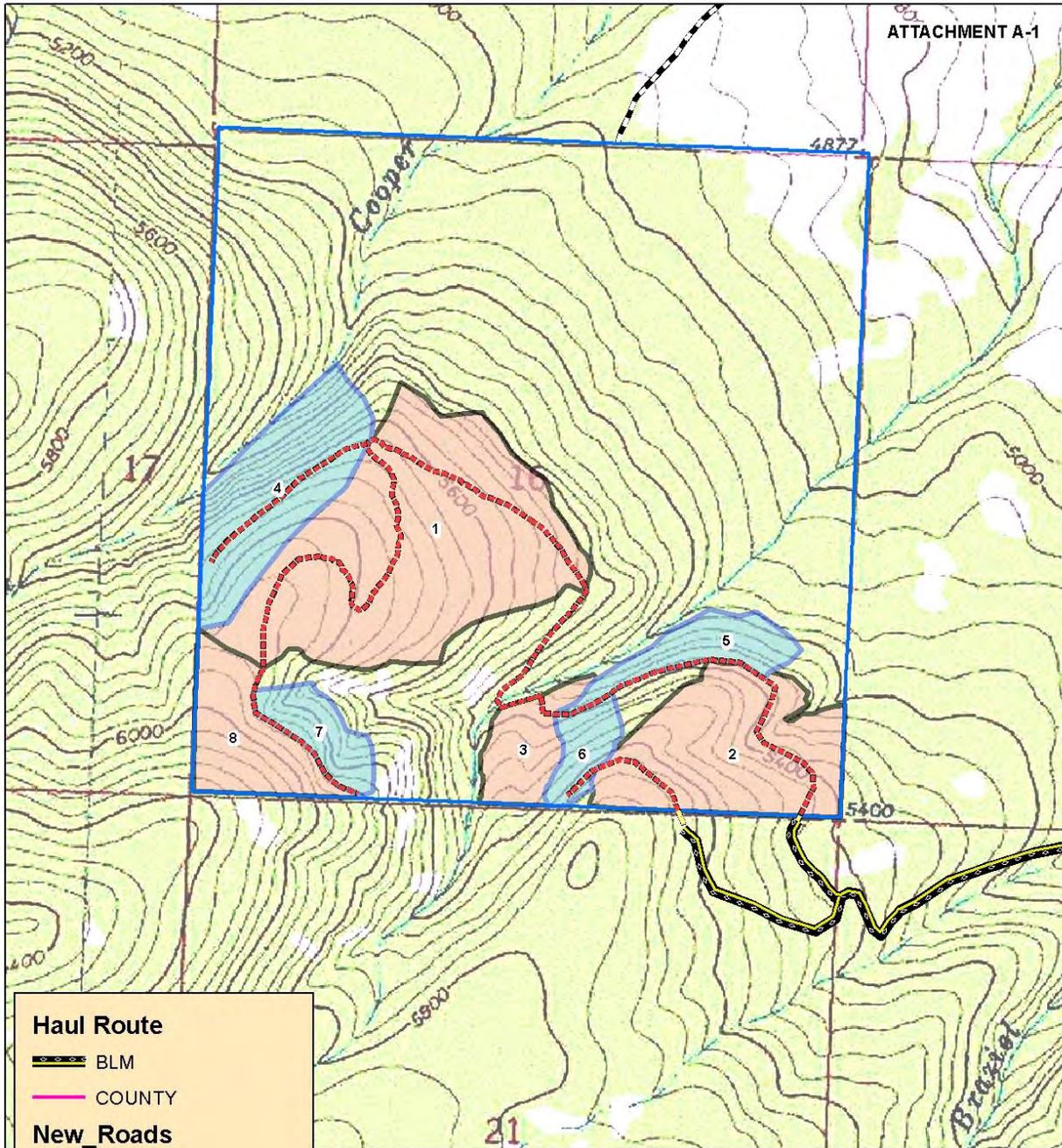
Name: Jon M. Hayes

Title: SWLO Forest Management Program Supervisor

Date: August 19, 2015

Signature: _____

Attachment A-1 Proposal Map



Haul Route

- BLM
- COUNTY

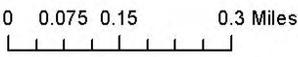
New_Roads

- BLM
- State
- 20150121_AU_Parcels

Harvest Proposal

- Tractor
- Cable

COOPER CREEK 2 TIMBER SALE PROPOSAL MAP T12N, R10W, S16



A-2: Timber Sale Vicinity Map

COOPER CREEK 2 VICINITY MAP

