

CATEGORICAL EXCLUSION DOCUMENTATION FOR DNRC FOREST MANAGEMENT ACTIVITY

Project Name: Miner League Salvage II Timber Permit

Proposed Implementation Date: December 2011

Proponent: Department of Natural Resources and Conservation

Type and Purpose of Action: Commercial salvage harvest of an estimated 1400 tons of lodgepole pine post and rail material and salvage of up to up to 350 thousand board feet of sawtimber that has been affected by or is "at-risk" of insect and disease infestations from approximately 42 acres. Approximately 0.6 miles of new road would be needed to access the harvest areas. The proposed timber harvest would begin in December of 2011. The new road would be physically closed after the project is completed. Purpose of action is to provide revenue to the Common School trust, recover value from damaged and overstocked timber and improve the health and productivity of the forest stands in the proposed project area.

Location: W2W2 Section 36, Township 5 South, Range 16 West

County: Beaverhead

Category (refer to ARM 36.11.447 for additional detail):

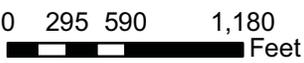
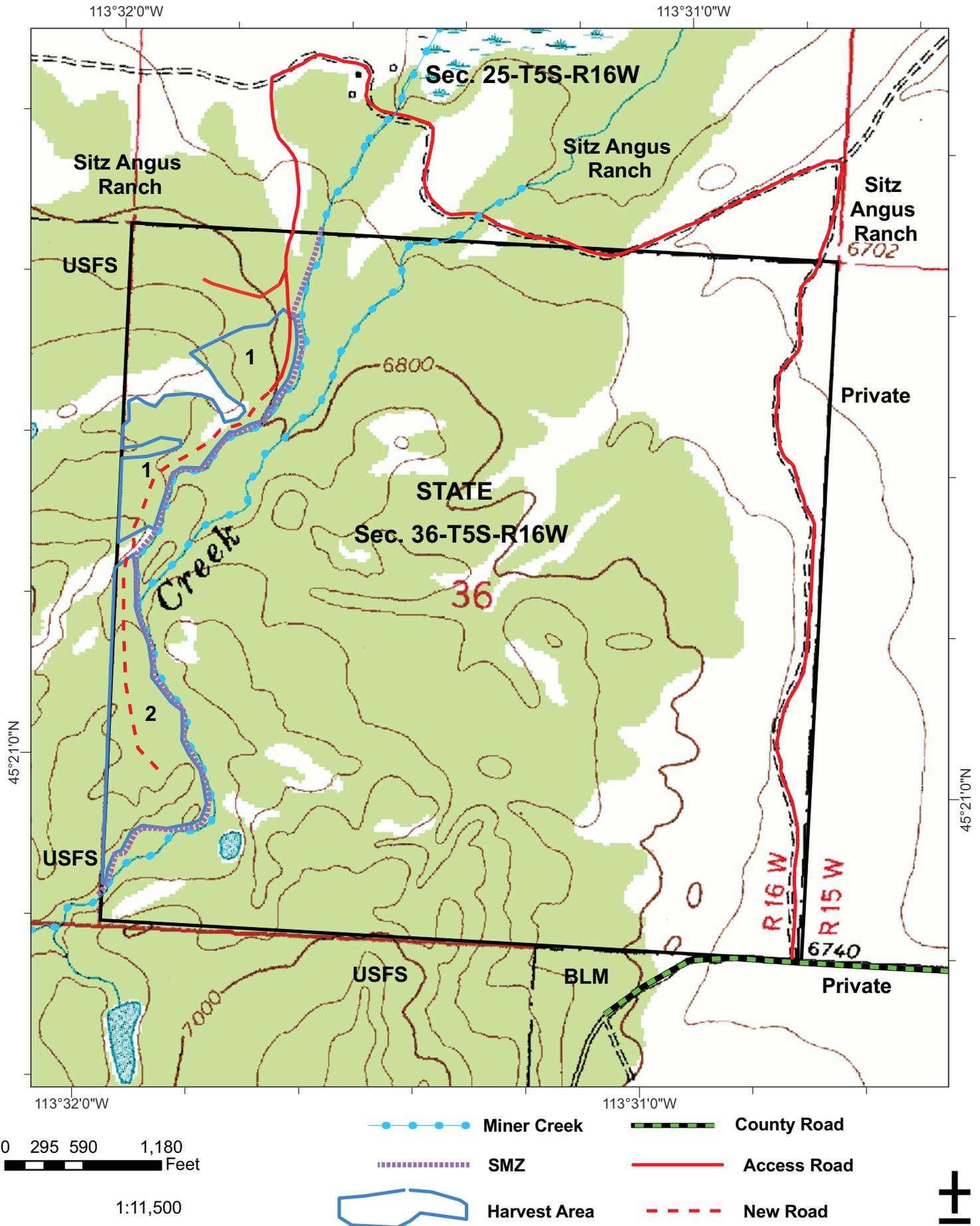
- 1) Temporary Uses of Land with Negligible Effects
- 2) Plans and Policies
- 3) Leases and Licenses
- 4) Acquisition of Land or Interest in Land
- 5) Road Maintenance and Repair
- 6) Bridges and Culverts
- 7) Crossing Class 3 Streams
- 8) Temporary Road Use Permits
- 9) Road Closure
- 10) Material Stockpiles
- 11) Backfilling
- 12) Gathering Forest Products for Personal Use
- 13) Regeneration
- 14) Nursery Operations
- 15) Water Wells
- 16) Herbicides and Pesticides
- 17) Other Hazardous Materials
- 18) Fences
- 19) Waterlines
- 20) Removal of Small Trees
- 21) Removal of Hazardous Trees
- 22) Cone Collection
- 23) Timber Harvest (<100 MBF green or 500 MBF salvage)

By process of the adoption of the Administrative Rules for Forest Management on February 27, 2003, pursuant to ARM 36.2.523(5)(a), the Department of Natural Resources and Conservation, Trust Land Management Division, has adopted the above

ATTACHMENT A

Miner League Salvage II Timber Permit

Sec. 36-T5S-R16W, Beaverhead County



1:11,500

- Miner Creek
- - - - - SMZ
- ▭ Harvest Area
- - - - - County Road
- Access Road
- - - - - New Road



ATTACHMENT B

SOIL AND GEOLOGY ASSESSMENT PROPOSED MINER DITCH TIMBER SALE SECTION 36-T5S-R16W, BEAVERHEAD COUNTY

JEFF COLLINS, Soil Scientist
January 11, 2005

Existing Conditions: Geology & Soils

The site was previously reviewed for timber management field review and EA comments are noted in memo of September 18, 1987. The Miner Creek sale area is located on a gently rolling terrain of glacial outwash and alluvial fan deposits derived from Ravalli quartzite. No unstable or unique geology occurs on the project area. Topsoils are typically moderately deep (about 6 -8") sandy loams and silt loams over deep cobbly sandy loams. On forested and range sites, the small outwash hummocks have sandy loam surfaces (with more surface cobbles) and are droughty in nature. On forested sites with more flat and concave terrain, topsoils are deeper mixed sands and silt loams from volcanic ash (Crater Lake) that are slightly higher productivity sites. Soils in the proposed harvest area are very well drained and tend to be droughty with a long dry season of use. Small potholes have deeper silty soils which can be mucky when wet and should be avoided when skidding.

These well-drained gravelly soils on gentle slopes have low erosion risk, but can be erosive along waterways where disturbed. We reviewed the harvest area from 1989 and found minimal soil effects and no existing erosion problems. The harvest units have regenerated to lodgepole pine and some sage.

Harvest Effects of the Proposed Action

Primary soil concerns are potential rutting, and excessive surface disturbance with harvest operations and site preparation. To maintain soil productivity, and promote conifer regeneration, BMP's and the following mitigation measures would be implemented to minimize the area and degree of soil effects associated with harvest operations.

Mitigations include skid trail planning, limiting season of use to dry or frozen conditions, installing drainage where needed and retaining woody debris for nutrients and protection of seedlings. The proposed harvest would not have any additive effect on previous harvest units and there is low risk of cumulative effects.

The area is a cool site subject to frost and the proposed harvest is expected to encourage lodgepole regeneration. Leaving slash can provide shade to enhance survival of seedlings and provide protection from animal use.

Recommended harvest mitigation measures for the proposed project:

Implement Forestry BMP's as the minimum standard for all operations with the proposed timber sale. The contractor and sale administrator should agree to a general skidding plan prior to equipment operations. Control the area and degree of disturbance to levels desired for silvicultural goals.

Use minimum SMZ width as required by law and noted in hydrology report. No high erosion risk soil types were noted in the proposed harvest units for location of SMZ or RMZ boundaries. Protect all wet areas with marked equipment restriction zones (ERZ) as needed.

Limit equipment 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. Check soil moisture conditions prior to equipment start-up.

Down Woody Material: Harvest operations should retain five to ten tons per acre of woody material larger than 3 inches diameter to be left scattered throughout regeneration the sale units. Slash should be left in the harvest units where feasible, and distributed on skid trails upon completion of use, for nutrient cycling

and to provide shade and protection for seedlings

Recommended road mitigation measures:

Install adequate road drainage such as drain-dips to control erosion concurrent with harvest activities and road construction and reconditioning. Provide effective sediment filtration along drainage features near crossing sites. On this gentle ground, slash distributed on trails or temporary roads would be adequate to control erosion and prevent unauthorized use.

Installation of a temporary ditch crossing can be effectively built with native fill by blading in material from adjacent areas, but the cobbly subsoils will form a rough crossing.

Weed Management No noxious weeds were observed. The following prevention measures would be implemented to limit the possible introduction of noxious weeds and into the project area.

All road construction and harvest equipment will be cleaned of plant parts, mud and weed seed to prevent the introduction of noxious weeds. Equipment will be subject to inspection by forest officer prior to moving on site.

All newly disturbed soils on road cuts and fills will be promptly reseeded to site adapted grasses to reduce noxious weed encroachment and stabilize roads from erosion.

DNRC would review the proposed harvest area for weeds following the sale. If any noxious weeds are identified, a weed management plan would be developed and implemented with the lessee.

RECOMMENDED SEED MIX for BROADCAST APPLICATION

“Revenue or Primar” Slender Wheatgrass	6#
“Durar or Whitmar” hard Fescue	4#
Pubescent Wheatgrass	5#
“Bromar” Mountain Brome	3#
“Ruebens” Canada Bluegrass	3#
TOTAL LBS./ACRE Corrected Pure Live Seed	21#

. Recommended Checklist format for Soils and Noxious Weeds

II. IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES N = Not present or No Impact will occur. Y = Impacts may occur (explain below)
4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactable or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations? Are cumulative impacts likely to occur as a result of this proposed action?	[Y] Geology is very well-drained gravelly outwash and alluvium. No unstable slopes or unique geology features are present. Erosion risk is low on these 0-15% slopes. Planned ground skidding operations should have moderate to low direct, in-direct and cumulative impacts based on implementing BMP's and mitigation measures. Mitigations include season of use limits, general skidding plans, retaining woody debris for nutrients and seedling protection and prompt revegetation of disturbed sites on roads to protect soil resources.
7. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present? Are cumulative impacts likely to occur as a result of this proposed action?	[N] Vegetation Analysis, Stand conditions, Old growth analysis etc. RARE PLANTS AND WEEDS PORTION No rare plants have been identified in the project area (Reference Project File, Montana Natural Heritage Program letter). To prevent introduction of new weeds, off-road equipment will be cleaned and inspected prior to entry into harvest areas. Newly disturbed roads and landing will be seeded to grass. There is low risk of direct or cumulative impacts to weeds

ATTACHMENT C

WATER RESOURCE ASSESSMENT

KADES LAMENT, MINER LEAGUE AND MINER LEAGUE II TIMBER PERMITS

Gary Frank, Resource Mgmt Section Supervisor, FMB

December 31, 2010

AFFECTED ENVIRONMENT – EXISTING CONDITIONS

The proposed Kades Lament Timber Permit, Miner League Salvage Sale and Miner League Salvage II Sale are all located on a single parcel of State trust land in Section 36, Township 5 South, and Range 16 West in Beaverhead County. This parcel is located in the Miner Creek watershed, which is tributary to the Bighole River in the Missouri River Basin. The Class I (SMZ Law) mainstem of Miner Creek flows through the proposed timber harvest project areas. The main channel within the proposed harvest areas is split into two different forks. The State parcel and immediate permit project area also contains numerous active and abandoned irrigation ditches, and depressional wetlands (potholes).

The Missouri River drainage, including tributaries to the Bighole River, is classified as B-1 in the Montana Surface Water Quality Standards. The B-1 classification is for multiple use waters suitable for domestic use after conventional treatment, growth and propagation of cold-water fisheries, associated aquatic life and wildlife, agricultural, and industrial uses. Among other criteria for B-1 waters, no increases are allowed above naturally occurring concentrations of sediment, which will prove detrimental to fish or wildlife. Naturally occurring conditions or materials present from runoff on developed land where all reasonable land, soil, and water conservation practices have been applied. Reasonable practices include methods, measures, or practices that protect present and reasonably anticipated beneficial uses. The State has adopted Forestry Best Management Practices through its Nonpoint Source Management Plan as the principle means of controlling nonpoint source pollution from silvicultural activities.

Downstream beneficial uses in the affected watershed include include: irrigation, livestock watering, and cold-water fisheries. There are numerous existing water right for irrigation and livestock watering immediately downstream of the proposed project area. Potentially affected reaches of Miner Creek support brook trout, burbot, longnose dace, mottled sculpin and mountain whitefish. Brook trout are abundant throughout the entire Miner Creek drainage. While arctic grayling are present in Lower Miner Lakes, located several miles upstream of the proposed permit area, they have not been found in surveys conducted within or immediately downstream of the proposed permit area. In addition, westslope cutthroat trout have also been absent from all surveys conducted throughout the entire Miner Creek drainage.

Water Quality

Miner Creek was included on the 1996 and 1998 versions of the State of Montana 303(d) list of impaired bodies of water in need of TMDL development. The 303(d) list are compiled by the Montana Department of Environmental Quality (DEQ) as required by the Montana Water Quality Act (MCA 75-701-705) and Section 303(d) of the Federal Clean Water Act, and the Environment Protection Agency (EPA) Water Quality Planning and Management Regulations (40 CFR, Part 130). Under these laws, the State is required to identify water bodies that do not fully meet water quality standards; or where beneficial uses are threatened or impaired.

Miner Creek (from headwaters to the confluence with the Bighole River) was included on the 1996 and 1998 303(d) list because the aquatic life support and cold-water fisheries beneficial uses were thought to be only partially supported. The probable causes of impairment were listed as flow alteration, other

habitat alteration and siltation. The probable sources of impairment included agriculture, irrigated crop production, rangeland, streambank modification /destabilization. Miner Creek was removed for the State 303(d) list in 2002 because it was found to be fully supporting all beneficial uses.

The existing low standard roads used to access all three project areas will require some maintenance of the existing road surface drainage features and installation of additional surface drainage to fully meet BMPs. However, there is low risk that the existing haul routes contributing direct sediment delivery to Miner Creek.

The existing road used to access the northwest ¼ of the section and west side of Miner Creek (Kades Lament Permit Harvest Units #1 and #2, and the Miner League Salvage II Sale Harvest Units #1 and #2) includes two bridge crossing of Miner Creek that are located on adjacent private land (Stiz Angus Ranch). Both bridges are low standard and will need improvements to safely accommodate logs hauling traffic. Road approaches to both bridge sites have inadequate road surface drainage resulting in road surface runoff being routed to the stream crossing site.

The first bridge is a wooden structure with concrete abutments. The structure only has four 12"x6" stringers with a wooden plank deck that is bolted to the stringers with lag bolts. The adequacy of the structure for log hauling is definitely questionable. While the concrete abutments appear to be sound and adequate, most bridges of similar design generally have at least 6-8 wooden stringers. For example, a standard USFS bridge specs for treated timber bridges specify at least 7 -6"x18" stringers even for shorter spans of 13-15 feet. In summary, I believe that the superstructure may not be adequate to safely accommodate log hauling vehicles. In any case the addition of running planks is also necessary. Running planks are generally constructed from 3"x 8" up to 3"x12" material.

The second bridge is constructed from 5-8"x16" stringers with a spiked down deck. This bridge also does not have running planks. Therefore, the addition of running planks is necessary as described for the other bridge site. The abutments for this bridge are consists of timber sills sitting on top of large rocks that are in turn stacked on top of low concrete abutments. I am concerned that the stacked block might shift or ravel loose or apart due to the load and vibrations caused by log truck traffic. If this bridge was the state's responsibility I would definitely recommend replacement of the abutments. In any case they should be watched closely for evidence of failure. Further damage or failure of the abutment during ongoing harvest and hauling operations could present a safety risk or cause potential delays to the project schedule.

Cumulative Watershed Effects

Based on aerial photo analysis, there appears to be a low level of road density, as well as past timber harvests, within the Miner Creek watershed. The estimated harvest area in the watershed is less than 2% of the total watershed area. The total estimated road miles in the watershed is 18 miles. These levels are well below the levels of forest crown removal that are normally associated with increased water yields. Stream channel conditions on the State parcel were rated as "good" and considered relatively stable. Therefore, it is unlikely that there are measurable effects on stream flow regimes (water yield, magnitude and duration of peak flows) due to vegetation manipulation in the Miner Creek.

No know chronic or large sources of sediment delivery have been identified within the proposed project areas. Stream channel conditions within the project are considered relatively stable. Therefore, it is unlikely that there are any measurable cumulative increases in sediment yield occurring due to sediment sources located with the State parcel.

ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

The proposed timber permit and salvage timber sales would result in salvage of up to 1050 MBF of sawtimber and 3800 tons of post and rail material from approximately 132 acres forest area affected by

insect and disease infestations. Approximately 0.75 miles of existing road would be reconstructed, and 1.1 miles of temporary low standard road would be constructed. No new stream crossings are included in the proposed actions. Two existing bridge crossings of Miner Creek would be utilized on an existing access road located on private land adjacent to the State parcel.

Several of the proposed harvest units are located immediately adjacent to the mainstem forks of Miner Creek. Miner Creek is a Class 1 stream supporting populations of brook trout. Salvage harvest of dead and dying lodgepole pine would occur within the Streamside Management Zone (SMZ) / Riparian Management Zone (RMZ). No wheeled or tracked equipment operation would be conducted within the SMZ/RMZ. The minimum RMZ width was determined to be 55-60 feet based on 100 year site index tree heights measured on site during field review (ARM 36.11.425 (5)). Harvest within the SMZ/RMZ would retain approximately 50% of trees ≥ 8 " dbh, and all shrubs and submerchantable trees to the extent possible as required under the Montana SMZ Law (ARM 36.11.305)..

No direct, indirect, or cumulative impacts to water quality, cold- water fisheries, or other downstream beneficial uses in Miner Creek are expected due to accelerated rates of sediment delivery resulting from the proposed actions. Timber harvest and associated road activities would implement all applicable forestry BMPs to avoid or minimize the risks of excessive soil erosion and potential for sediment delivery. No new stream crossings or road construction immediately adjacent to streams is proposed. No equipment operation or activities with a substantial risk of causing soils disturbance would be conducted in the SMZ/RMZ. Stream bank trees providing for channel stability would not be harvested. Harvest units and roads are located on gentle slopes (generally $< 20\%$) with low erosion and sediment delivery risks. Soils within the proposed project area are low to moderate erosion risks, therefore, SMZ buffers are likely to be highly effective filtration zones and prevent sediment delivery to streams.

When compared to the no-action, the proposed SMZ/RMZ harvests will likely result in some low level, short-term impacts to future LWD recruitment to Miner Creek. These impacts are expected to minimal (low level) due to following reasons: 1) The planned retention of at least 50% of the larger trees; 2) retention of all stream bank trees, which are those trees most likely to be recruited to the stream; 3) lack of historic SMZ/RMZ harvests; and 4) the existing SMZ stands are fully stocked with mature trees.

The impacts are expected to be short-term due to the already catastrophic levels of insect mortality that are occurring under no action. Under no action a large pulse of potential LWD can be expected in the first decade followed by a stand rotation period of time with very low levels of LWD recruitment. The level of trees removed versus retained will likely only affect potential recruitment within the first decade following harvest.

In addition, immediately downstream of the State ownership the mainstem of Minor Creek flows into a large wetland complex and range ecosystem where streamside riparian vegetation is dominated by willows and other riparian shrubs where conifer LWD is not a habitat element nor does it influence stream channel morphology. Much of the riparian forest cover on the State section is most likely conifer encroachment out into the historic range foothills and the grassland valley bottom. Therefore, the current stocking and potential levels of LWD recruitment within the conifer dominated riparian stands are likely higher or on the upper end of the range of what occurred naturally prior to European settlement.

No direct or indirect, or cumulative effects to channel form and function are anticipated. Existing levels of in channel LWD are within the range expected for stream and stand type. Retention tree requirements and retention of streambank trees should provide for streambank stability and maintenance of existing channel form and function.

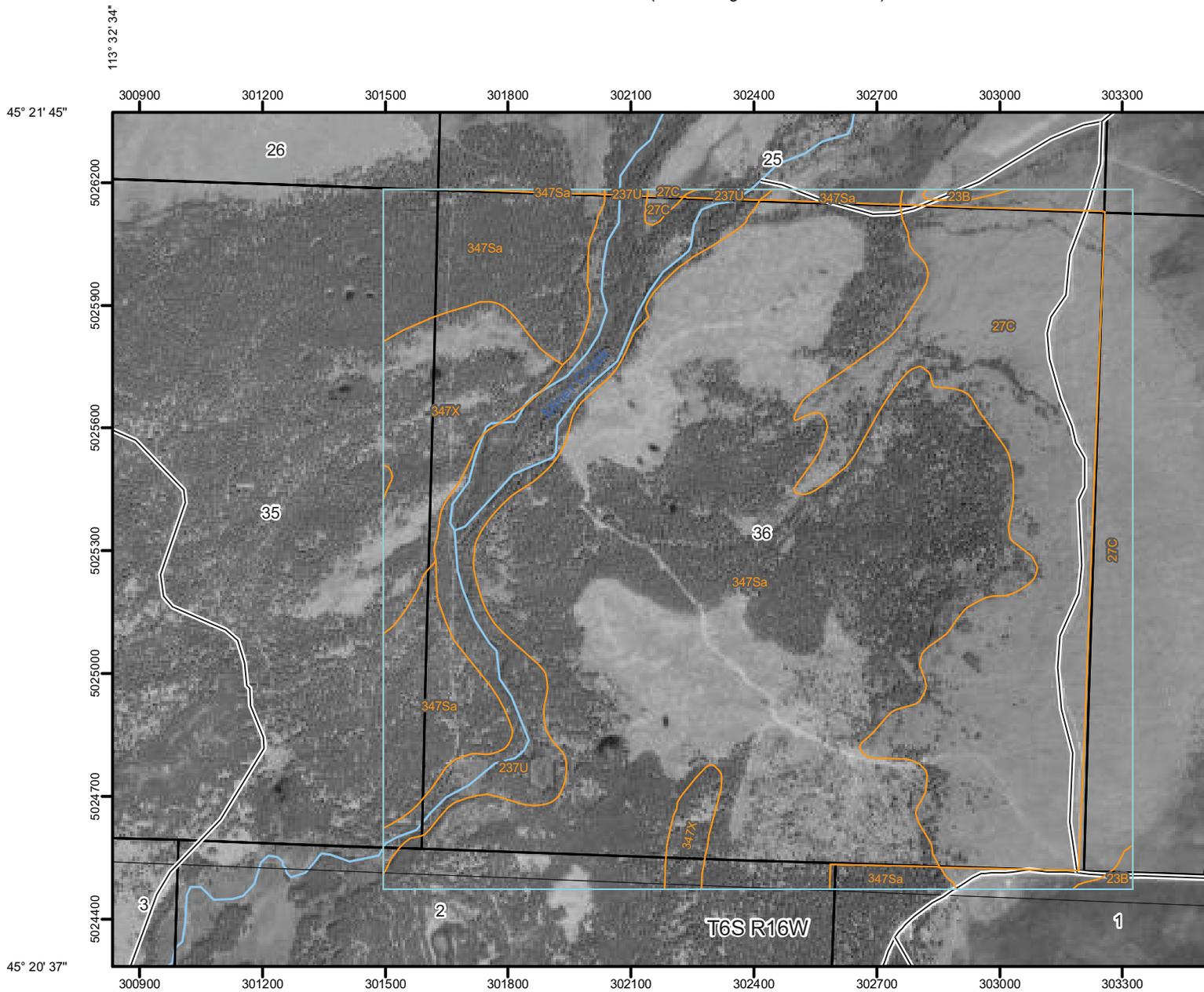
The trees harvested from the SMZ/RMZ are dead or at high risk of mortality from mountain pine beetle. Therefore there is low risk of additional impacts to stream temperature resulting from loss of shade, over what would be expected to occur under no action.

Access to Permit Harvest Unit #1 will require driving across a pasture on private land that is seasonally flood irrigated. Use of this access route should be limited to dry or frozen and/or snow covered conditions. Otherwise, these saturated soils with low-bearing capacity are likely to become severely rutted and channel irrigation water and runoff, which would likely result in low to moderate levels of on-site erosion. Risks of sediment delivery would likely remain low due to large buffer area and lack of direct return flows to streams. I recommend that the ditch operators be contacted to verify the irrigation and ditch use schedule to determine the feasibility of seasonal use.

The proposed timber harvests and road construction and maintenance are not expected to contribute to adverse cumulative watershed impacts due increase sediment yield, increased water yield, increased peak flows or modified stream flow regimes. The existing and proposed levels of harvest are well below the levels normally associated with detrimental increases in water yield, peak flow, or duration of peak flows. Subsequently, no direct, indirect, or cumulative impacts to water quality or beneficial uses are anticipated to result from bank destabilization and in-stream sedimentation.

No direct, indirect, or cumulative impacts to water quality, cold-water fisheries, or other beneficial uses in Miner Creek or the Bighole River are expected to result from the proposed actions.

Soil Map—Beaverhead National Forest Area, Montana, and Big Hole Area—Part of Beaverhead County, Montana
(Miner League II Timber Permit)



Map Scale: 1:14,900 if printed on A size (8.5" x 11") sheet.

113° 32' 31"



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

 Very Stony Spot

 Wet Spot

 Other

Special Line Features

-  Gully
-  Short Steep Slope
-  Other

Political Features

-  Cities
-  PLSS Township and Range
-  PLSS Section

Water Features

-  Oceans
-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

Map Scale: 1:14,900 if printed on A size paper

The soil surveys that comprise your area of interest may have been made at different times.

Please rely on the bar scale on each map sheet for distance measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.sc.egov.usda.gov>

Coordinate System: UTM Zone 12N FIPS 1000

This product is generated from the USDA National Cooperative Soil Survey, the version date(s) listed below.

Soil Survey Area: Beaverhead National Forest Area

Survey Area Data: Version 12, Aug 2001

Soil Survey Area: Big Hole Area—Part of Beaverhead County, Montana

Survey Area Data: Version 15, Aug 1998

Your area of interest (AOI) includes more than one soil survey area.

These survey areas may have been mapped for a different land use in mind, at different times, and with varying degrees of detail. This may result in map unit symbols that are not completely accurate interpretations that do not completely agree with the actual boundaries.

Date(s) aerial images were photographed: 1998, 2001

The orthophoto or other base map on which this map is based was compiled and digitized probably differs from the imagery displayed on these maps. As a result, some map unit boundaries may be evident.



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

Map Unit Legend

Beaverhead National Forest Area, Montana (MT605)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
27C	Bearmouth, stony-Bearmouth complex, 2 to 8 percent slopes	154.4	20.0%
237U	Garlet-Como-Lilylake families, complex, trough bottoms	64.4	8.3%
347Sa	Waldbillig-Bata-Upsata families, complex, glacial moraines	446.0	57.7%
347X	Elve-Gateview-Sebud families, complex, glacial moraines	48.2	6.2%
Subtotals for Soil Survey Area		713.0	92.2%
Totals for Area of Interest		773.6	100.0%

Big Hole Area—Part of Beaverhead County, Montana (MT610)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
23B	Wisdom-Shewag-Mooseflat complex, 0 to 4 percent slopes	2.6	0.3%
27C	Bearmouth, stony-Bearmouth complex, 2 to 8 percent slopes	49.2	6.4%
237U	Garlet-Como-Lilylake families, complex, trough bottoms	1.5	0.2%
347Sa	Waldbillig-Bata-Upsata families, complex, glacial moraines	7.3	0.9%
Subtotals for Soil Survey Area		60.6	7.8%
Totals for Area of Interest		773.6	100.0%

ATTACHMENT E

Vegetative Analysis/Stand Prescription Miner League Salvage II Timber Permit

The State parcel is located on the east side of the Beaverhead Mountains along the forest/grassland interface. Slopes range from 5-45% with an elevation of 6900 feet. The State parcel has ~400 forested acres and was harvested approximately 20 years ago, removing 875 MBF from 129 acres. These harvested acres have regenerated with 4-12' lodgepole pine stock. The Miner Ditch Timber Sale was harvested in 2007, removing ~344 MBF from 35 acres. The Ditch ROW timber permit was harvested in 2008, removing ~130 MBF from 13 acres. Kades Lament timber permit was sold in 2010 for the harvest of 1400 tons of post and rail and ~200 MBF from 29 acres. An EA for the Miner League Salvage timber permit was approved in January 2011 for the harvest of ~200 MBF from 29 acres. Post and rail harvests have been conducted from 2005 to present on ~63 acres.

Lodgepole pine dominants as a seral species with Subalpine fir/Grouse Whortleberry (Abla/Vasc) as the dominant habitat type. The area lies along the drought limitations of the habitat type and consequently subalpine fir is sparsely represented. Douglas-fir is indicated as a climax species on the drier slopes with Douglas-fir/Pine Grass (Psme/Caru) as the habitat type. The irregular topography and hummocky features in the area are conducive for forming frost pockets that favor lodgepole pine as the seral species. Douglas-fir is quite often poorly formed and stunted in these areas but does grow well on the upland slopes and sites indicating Douglas-fir climax.

The cover type is lodgepole pine and the majority of forested stands are included in fire group seven where periodic wildfires tended to recycle the stands before any significant amount of mature lodgepole pine dies out. The isolated Douglas-fir climax areas are included in fire group six.

Stand Prescriptions:

Treatments for lodgepole pine cover types would target all dead, dying and at-risk lodgepole pine and other shade intolerant species exhibiting signs of insect/disease, poor health and/or poor tree form characteristics for removal and overall stand density reduction, utilizing regeneration harvests. Older, large shade tolerant trees would be harvested to cull out defective or damaged trees, where applicable. Younger, smaller diameter shade tolerant trees exhibiting good health and form would be protected, where applicable.

Severity of stand conditions would dictate harvest method used, emulating severe ground fire to stand replacing fire. Harvest prescription would recover value from resources before it is lost, reduce overstocking, fire hazard, and additional insect and disease while promoting forest health, vigor and productivity. Additionally, harvest would open the stands to encourage natural regeneration of shade tolerant species; maintain a lodgepole pine cover type while maintaining a semblance of historic stand conditions; and promote existing aspen stands.

Aspen Areas - A regeneration harvest of all conifer sawtimber within 50-100 feet of the aspen clone would be used to reduce conifer encroachment into aspen stands and promote aspen regeneration where available and applicable. Submerchantable conifer and aspen would not be protected during harvest operations to further reduce conifer encroachment and induce suckering of aspen. Post harvest treatment to fall and lop any remaining submerchantable conifer trees.

Excess slash would be consolidated at landings and burned. Natural regeneration would be expected. No rare plants or cover types have been noted by the Montana Natural Heritage Program or observed within the proposed project area.

Harvest Unit 1 (20.1 ac - 170 MBF sawlog/550 tons post & rail), Unit 2 (21.1 ac - 180 MBF sawlog/850 tons post & rail) - Stands are composed of a mix of LP post and rail and small to medium sawtimber. A few aspen clones and spruce are scattered throughout the area. The stands are overstocked and have Mountain Pine Beetle and mistletoe infestations. Majority of trees have poor crown ratios (10-30%). Dominate trees are 55-65' and co-dominates are 45-55' with an average age of 125 years. Yield capacity

is 40-50 cu. ft/acre/year. Regeneration and understory vegetation is sparse with moderate coarse woody debris.

All merchantable post and rail (3.0-<7.0" DBH) would be harvested along with firewood. All other submerchantable trees and shrubs would be protected and retained for visual screening.

A regeneration harvest would remove all merchantable lodgepole pine material and all merchantable conifers within 50-100' of aspen colonies for aspen restoration. One large snag or snag recruit (≥ 21 " dbh) per acre would be left where available. Retain all fine litter and 5-10 tons/acre of large woody debris >3" diameter as feasible. Consolidate remaining slash at landings for burning. Conduct regeneration survey in 5-7 years and a thinning survey in 15 years after harvest.

There is currently more total forest cover in Beaverhead County than in prior historical conditions. Harvesting an estimated 50 MBF of sawtimber would alter the forest cover on approximately 42 acres. Harvest design is intended to maintain a semblance of historic conditions while promoting forest health and productivity by reducing overstocking through the emulation of stand replacing fires.

MEASURES RECOMMENDED TO MITIGATE POTENTIAL IMPACTS:

- 1) Compliance with Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws, the Montana Stream Protection Act (124 Permit) and applicable DNRC Forest Management Administrative Rules.
- 2) Limit equipment operations to periods when soils are dry (less than 20% soil moisture), frozen or snow covered (12 inches packed or 18 inches unconsolidated) to minimize soil compaction, rutting, vegetative disturbance and maintain drainage features. Control erosion by installing adequate drainage on roads and skid trails.
- 3) The Forest Officer shall approve a plan for felling, yarding and landing location in each harvest unit prior to the start of operations in the unit. The locations and spacing of skid trails and landings shall be designated and approved by the Forest Officer prior to operations and skid trails will not be spaced less than 60 feet. Retain all fine litter as feasible and 5-10 tons/acre of large woody debris >3" diameter. Minimize soil disturbance by general skid trail planning and limit sustained tractor skidding to slopes $\leq 50\%$. Limit scarification to 30-40% of the harvest area. Slash would be left in the harvest units where feasible, and distributed on skid trails upon completion of use, for nutrient cycling, to control erosion and to provide shade and protection for seedlings.
- 4) For slope stability on the road construction segments, construct cutslopes at 1:1 (run/rise) in common material and 1/4:1 for rock. Install adequate road drainage to control erosion concurrent with harvest activities and road opening and new construction. Provide effective sediment filtration along drainage features near crossing sites. New construction and major skid trails on State lands would be closed with slash and debris and/or barriers, and adequate drainage provided.
- 5) All road and logging equipment would be power washed and inspected prior to being brought on site. Sale area would be monitored for weeds following harvest and a treatment plan would be developed should noxious weeds occur.
- 6) At sale closure, grass seed roads, skid trails (where needed) and landings with an appropriate seed mixture.
- 7) One snag and one snag recruit per acre, of the largest diameter class, would be retained where applicable. Cull live trees and cull snags would be retained where applicable.
- 8) Retain live, healthy older trees and stand attributes suitable for old growth development where available and applicable.
- 9) Contact DNRC wildlife biologist should any threatened or endangered species be encountered within the proposed project area.

**ATTACHMENT F
MINER LEAGUE SALVAGE II TIMBER PERMIT**

**CHECKLIST FOR ENDANGERED, THREATENED AND SENSITIVE SPEICES
Pertains to Section II. 9. of the DS-252 DNRC Environmental Checklist
(Rev. August 1, 2007)
CENTRAL LAND OFFICE**

Prepared by Chuck Barone

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Threatened and Endangered Species	[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur (Explain Below)
<p>Grizzly Bear (<i>Ursus arctos</i>) Habitat: recovery areas, security from human activity</p>	<p>[N] The proposed project area lies outside of any grizzly bear recovery area. The nearest recovery area is the Yellowstone Grizzly Bear Recovery Zone (USFWS 1993) situated 100 miles southeast of the project area. Grizzly bear use of the Beaverhead Mountains may occur, however, the project area is currently considered outside of occupied habitat (Interagency Occupied Habitat Map, September 2002). Riparian habitats preferred by bears may occur in the project area along Miner Creek but the creek supports relatively low levels of hiding cover, and human access levels are presently moderate due to public access. Approximately 0.6 miles of new road would be needed. The new road would be to minimum standard and would be physically closed at project completion. The potential for any measurable increases in bear-human conflicts following the project activities are expected to be negligible. Adverse direct, indirect and cumulative impacts to bears as a result of this project are not expected.</p>
<p>Lynx (<i>Felis lynx</i>) Habitat: mosaics--dense sapling and old forest >5,000 ft. elev.</p>	<p>[N] The proposed project area is located along the fringes of preferred lynx habitat. The habitat on the State parcel would be categorized as "other" and "temporary non" habitat. There is no mature foraging habitat, young foraging or denning habitat, within the State parcel. Of the ~242 acres of potential lynx habitat on the State parcel, ~42 acres of "other" habitat are proposed for harvest leaving ~42 acres converted to temporary non-habitat. Preferred lynx habitat is marginal within the proposed project area due to the lack of highly desirable habitat conditions for lynx and their primary prey, snowshoe hares. Adverse direct, indirect or cumulative impacts to lynx as a result of this project are expected to be minimal.</p>

<p>Gray Wolf (<i>Canis lupus</i>) Habitat: ample big game pops., security from human activity</p>	<p>[N] The proposed project area falls within the Central Idaho Nonessential Experimental Area for gray wolves. The nearest is the Miner Lakes pack. Individuals from this pack or transients from other packs could occasionally use portions of the project area; however, due to the size, nature and location of the proposed project, activities associated with this proposal are not expected to effect wolves or recovery efforts. Should a new den be located within one mile of the project area, activities would cease and a DNRC Biologist would be contacted immediately. Mitigations would then be developed and implemented to minimize adverse impacts to wolves prior to initiating any activity.</p>
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<p>DNRC Sensitive Species</p>	<p>[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur (Explain Below)</p>
<p>Bald Eagle (<i>Haliaeetus leucocephalus</i>) Habitat: late-successional forest <1 mile from open water</p>	<p>[N] Bald Eagles have been documented within the quarter latilong (L36C) that encompasses the proposed project area (Skaar 1996, MNHP 2010). No known nesting habitat occurs on, or within one mile of the proposed project area, and the project area likely occurs outside of any Bald Eagle nesting home range. No direct, indirect or cumulative effects to Bald Eagles associated with this project are anticipated.</p>
<p>Black-Backed Woodpecker (<i>Picoides arcticus</i>) Habitat: mature to old burned or beetle-infested forest</p>	<p>[N] Black-backed woodpeckers have not been documented within the quarter latilong (L36C) that encompasses the proposed project area (Skaar 1996, MNHP 2010). Stands found within the project area are presently experiencing substantial insect activity. No recent burns (≤ 5 years old) have occurred within the State tracts or adjoining sections. Foraging and nesting opportunities are presently limited. No direct, indirect or cumulative effects to black-backed woodpeckers would be expected to occur as a result of this project.</p>
<p>Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>) Habitat: Prairie, shortgrass prairie, badlands</p>	<p>[N] Grassland habitats suitable for use by black-tailed prairie dogs do not occur within one mile of the proposed project area. Impacts to black-tailed prairie dogs are not anticipated.</p>
<p>Flammulated Owl (<i>Otus flammeolus</i>) Habitat: late-successional ponderosa pine and Doug.-fir forest</p>	<p>[N] Flammulated owls have not been documented within the quarter latilong (L36C) that encompasses the proposed project area (Skaar 1996, MNHP 2010). The parcel involved in the proposed project maintains an elevation of about 6800 feet and mature Douglas-fir and ponderosa pine cover types,</p>

	<p>which are preferred habitat for flammulated owls, are not characteristic of this area. Direct, indirect and cumulative effects to Flammulated Owls would not be expected to occur under the alternatives considered.</p>
<p>Greater Sage-grouse (<i>Centrocercus urophasianus</i>) Habitat: sagebrush semi-desert</p>	<p>[N] Sage grouse have been documented in the quarter latilong (L36C) that encompasses the proposed project area (Skaar 1996, MNHP 2010). Sagebrush semi-desert habitats suitable for use by sage grouse do occur within one mile of the project area. Sage Grouse may occur within one mile of the project area but no leks have been identified within one mile of the project area or haul route. Should sage grouse be present in the vicinity of the project area, any effects to habitat or disturbance-related effects would be expected to be minimal, due to the late start-up date of activities (i.e., post June 15), and preferred sagebrush habitat would not be altered. Impacts to sage grouse are not anticipated.</p>
<p>Harlequin Duck (<i>Histrionicus histrionicus</i>) Habitat: white-water streams, boulder and cobble substrates</p>	<p>[N] Harlequin ducks have not been documented within the quarter latilong (L36C) that encompasses the proposed project area (Skaar 1996, MNHP 2010). No high gradient streams suitable for use by harlequins occur within the project area or along proposed haul routes. No impacts to harlequin ducks would be expected to occur as a result of this project.</p>
<p>Mountain Plover (<i>Charadrius montanus</i>) Habitat: short-grass prairie, alkaline flats, prairie dog towns</p>	<p>[N] Mountain Plover have not been documented within the quarter latilong (L36C) that encompasses the proposed project area (Skaar 1996, MNHP 2010). No short-grass prairie or prairie dog towns occur on, or within one mile of the proposed project area. No impacts to mountain plovers are expected as a result of this project.</p>
<p>Northern Bog Lemming (<i>Synaptomys borealis</i>) Habitat: sphagnum meadows, bogs, fens with thick moss mats</p>	<p>[N] No sphagnum meadows or bogs occur in the proposed project area. No impacts to bog lemmings would be expected to occur as a result of this project.</p>
<p>Peregrine Falcon (<i>Falco peregrinus</i>) Habitat: cliff features near open foraging areas and/or wetlands</p>	<p>[N] Peregrine Falcons have not been documented within the quarter latilong (L36C) that encompasses the proposed project area (Skaar 1996, MNHP 2010). No cliff features suitable for use by nesting peregrine falcons occur within 1 mile of the project area. No direct, indirect or cumulative effects associated with this project are anticipated.</p>
<p>Pileated Woodpecker (<i>Dryocopus pileatus</i>) Habitat: late-successional ponderosa pine and larch-fir forest</p>	<p>[N] Pileated woodpeckers have not been documented within the quarter latilong (L36C) that encompasses the proposed project area (Skaar 1996, MNHP 2010). The project area is poorly suited for use by pileated woodpeckers. As suitable habitat is not present in the project area, no impacts to pileated woodpeckers</p>

	would be expected to occur as a result of this project.
Townsend's Big-Eared Bat (<i>Plecotus townsendii</i>) Habitat: caves, caverns, old mines	[N] The DNRC is unaware of any mines or caves within the proposed project area or close vicinity that would be suitable for use by Townsend's big-eared bats. Impacts to Townsend's big-eared bats are not anticipated as a result of this project.

*Skaar, P.D. 1996. Montana bird distribution, fifth edition. Montana National Heritage Program 2010. National Heritage Tracker.