

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Rock Creek Salvage
Proposed Implementation Date:	February 2012
Proponent:	Sun Mountain Lumber, Inc.
Location:	NE4SW4 Sec.21, Township 4 South, Range 16 West
County:	Beaverhead

I. TYPE AND PURPOSE OF ACTION

Commercial limited access timber permit to harvest an estimated 50 MBF of lodgepole pine timber from approximately 11 acres. The proposed project would primarily address timber that has been affected by insect and disease infestations, focusing on removing dead, dying, susceptible and overstocked trees. The project would incorporate regeneration harvest methods utilizing conventional/tractor harvest systems. The project would utilize existing roads to access the harvest units. Purpose of action is to generate revenue for the Common School Trust; remove overstocked and suppressed timber before its value is lost to insect and disease or wildfire; promote regeneration of aspen stands and improve the health, vigor and productivity of the forest in the proposed project area. (See Attachment A for site specific location).

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED: *Provide a brief chronology of the scoping and ongoing involvement for this project.*

A field review was conducted in 2005 by DNRC forester Chuck Barone.
Letters were sent to the following seeking comments for the proposed timber harvest:
MT Fish, Wildlife and Parks, Fisheries Management Biologist, M. Jaeger
MT Fish, Wildlife and Parks, Wildlife Biologist, C. Fager
Foster Company (Lessee)
Forty Bar Ranch Inc.

Other contacts:
DNRC, Archaeologist, P. Rennie
Montana Natural Heritage Program
Montana Fisheries Information System

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

The Beaverhead County Weed Control administers the State weed laws in Beaverhead County. The Weed Control is contacted by the DNRC and given a weed plan for each project.
A Beaverhead County burning permit would be required if slash burning is done.

3. ALTERNATIVES CONSIDERED:

Action Alternative: Harvest approximately 50 MBF of bark beetle affected timber from an estimated 11 acres of State land.

Stand treatments would consist of harvesting the majority of the merchantable conifer sawtimber from the harvest units. Non-merchantable conifer, aspen and willow would be reasonably protected during harvest operations. Harvest design is directed at promoting restoration of the original aspen stands and reducing overstocking of conifer species while maintaining some residual cover in the treated stands. Harvest activities would occur during the winter season of 2012 on frozen and snow-covered ground. Existing road would be used to access the harvest units. No road reconstruction or construction would be needed. Excess slash would be consolidated at landings and burned.

No Action Alternative: Current management actions would be maintained and forest management and harvesting actions would be deferred. Opportunity to recovery timber value through limited access would not be realized. These tracts are currently leased for grazing.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

The proposed project area is located on gentle ground on the remnants of tertiary valley-fill sediments consisting of gravelly and cobbly alluvium or glacial till.

Geology is stable and no especially unique or unstable geology occur within the State parcels. Soils within the proposed project area support lodgepole pine and aspen stands, willow and open grassland sites. The soils are moderately drained and erosion risk is low due to the flat topography. The proposed project area is heavily irrigated from spring through fall, leaving the majority of the soils saturated during this period of time. The proposed harvest area slopes are 0-5% and well suited for tractor operations. Soil compaction potential is low with the proposed winter harvest operations.

The primary soil concerns associated with timber harvest are direct effects of rutting and displacement of surface soils by equipment operation and road construction. Winter operations and use of a temporary snow road would provide for minimal potential soil impacts. Harvest operations would retain a proportion of coarse woody debris and fine slash to help provide shade and organic matter to maintain soil productivity.

Soil effects would be minimal and long-term productivity would be maintained or improved by implementing mitigation measures, BMP's and reducing the stocking to make nutrients available to retained trees.

No cumulative effects are expected.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

The proposed project area located within the Big Hole River drainage and lies between Rock Creek, a tributary of the Big Hole River and Big Lake Creek, a tributary of Rock Creek. The Big Hole River and Rock Creek are listed on the Montana 303(d) list as impaired streams, Big Lake Creek is not. Probable causes of the 303(d)

listing include bank erosion, dewatering, flow alteration, metals, and other habitat alterations, and the probable sources include agriculture, crop-related sources, grazing-related sources, resource extraction, mine tailings, habitat modification (other than hydromodification), and bank or shoreline modification/destabilization. As described, the listings are not associated with forest management activities.

The Missouri River drainage, including Rock Creek and Big Lake Creek, 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, and agricultural and industrial 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.

Land management activities such as road construction, maintenance and use, and timber harvest can potentially increase levels of fine sediment delivery to streams if not properly located, designed, and mitigated. The primary risks to water quality that are associated with timber sales are roads, especially roads located along or crossing streams. Project activities would occur during the winter season on frozen and snow-covered ground. A temporary snow road would be used to access the harvest units. No road reconstruction or construction would be needed. Implementation of appropriate Best Management Practices and recommended mitigation measures would reduce the risk of soil erosion and sedimentation.

Given the small harvest area, season and duration of the proposed project, no road reconstruction or construction, flat topography and additional recommended mitigation measures, no foreseeable direct, indirect or cumulative impacts are anticipated to cold-water fisheries, water quality, water yield or any other beneficial uses associated with the Rock Creek and Big Lake Creek watersheds as a result of the proposed project.

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

The project includes piling and burning of logging slash. Localized short duration particulate emissions occur during slash burning. Slash burning is normally conducted in late October through November. The DEQ and the Cooperative Airshed groups regulate particulate emissions during this period. Burning times are coordinated to 1) limit burning periods of acceptable smoke dispersion and 2) to limit the cumulative generation of particulates.

DNRC is a member of the Montana/Idaho Airshed Group, which coordinates burning activities related to forest management among the group's members in order to minimize impacts from smoke generated by those activities. 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 in Missoula, MT. Thus direct, indirect, and cumulative impacts associated with the proposed action are expected to minimal.

7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

The proposed project is located on the east side of the Beaverhead Mountains in the irrigated grass types of the broad, flat upper Big Hole River valley. Slopes range from 0-5% with an elevation range of 6,300-6,500 feet.

Forested acres within the State parcels are dominated by lodgepole pine with a mix of aspen and willow. Regeneration is sparse with little understory vegetation due to heavy cattle use. Coarse woody debris is moderate consisting predominately of aspen.

At the turn of the century, the area was dominated by aspen and willow with a variety of other grasses, forbs and shrubs. Lodgepole pine was most likely not present or only sparsely represented. The absence of fire, in combination with encroachment, has resulted in the aspen being replaced by lodgepole pine. There is currently more total forest cover in Beaverhead County than in prior historical conditions.

Overall health and growth of all the conifer stands is poor. Aspen health ranges from poor to good depending on degree of conifer encroachment. Lodgepole pine is overstocked and infested with Mountain Pine beetle. The stand is presently in the process of converting the original aspen stand to lodgepole pine.

There is evidence of past low-level selective harvest most likely from homesteading activities in the area but no indication of commercial timber harvesting. No old trees (greater than 150 years old) are found on the State tracts.

Of the 1,162 acres of State ownership within the project area, ~30 acres are forested. The proposed harvest represents 36% of the total forested acres and 0.9% of the total acres on the State parcels.

Harvesting an estimated 50 MBF of timber would alter the forest cover on approximately 11 acres. Harvest design is intended to maintain a semblance of historic conditions while promoting forest health, vigor and productivity by reducing overstocking through the emulation of stand replacing fires, recover resource value before it is lost to insect and disease or wildfire; and promote regeneration of aspen stands. Natural regeneration would be expected.

No rare plants or cover types have been noted or observed within the project area.

The DNRC requires the washing of equipment, seeding of grass and monitoring of disturbed areas to minimize the potential of noxious weeds being introduced.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

A variety of big game, small mammals, raptors, song and wading birds potentially use this area. Rock Creek and Big Lake Creek have several cold-water fisheries, including Artic grayling, brook and westslope cutthroat trout.

Due to the size, season and duration of the proposed project, distance from Rock Creek and Big Lake Creek, no road reconstruction or construction and additional recommended mitigation measures, no impacts are expected to wildlife and fisheries habitats.

(See Attachment E – Checklist for Endangered, Threatened and Sensitive Species)

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

No threatened or endangered species have been documented within the proposed project area. Usable habitat for grizzly bear, gray wolf, lynx and bald eagles is present but marginal within the project area. Occasional use of the area from these species could potentially occur but is generally considered outside of their normal occupied habitat.

Of the cold-water fisheries within the project area, the primary species of interest are Artic grayling and westslope cutthroat trout (WCT). Both species are listed as a Montana Animal Species of Concern and identified by the Department of Natural Resources and Conservation (DNRC) as a sensitive species. Artic grayling have been documented in Big Lake Creek within the proposed project area. WCT have been documented in the upper reaches of both of these creeks but there is no indication that WCT inhabit the lower reaches of where the proposed project is located.

Sphagnum bogs and moss mats have been identified one-half mile to the west of proposed unit 1 and are considered habitat for the northern bog lemming, a sensitive species. No northern bog lemming have been documented in this area and adequate habitat is not present within the project area. Habitat potential within the proposed project area is minimal and present grazing activities essentially insure poor habitat conditions will remain. The harvesting of timber during frozen, snow-covered conditions would minimize ground disturbance and would not alter potential habitat. Should sphagnum mats be identified within the proposed project area, the mats would be given an area of protection of 100 meters (per MNHP field guide).

No other sensitive species have been documented or observed within the proposed project area.

Due to the size, season and duration of the proposed project, no road reconstruction or construction and additional recommended mitigation measures, no impacts are expected to occur to any endangered, threatened or sensitive species.

(See Attachments E – Checklist for Endangered, Threatened and Sensitive Species)

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine effects to historical, archaeological or paleontological resources.

There is no record that cultural resources exist within the proposed project area. No additional archaeological investigative work is recommended prior to harvest activities.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

The proposed project is visible to the surrounding sparsely populated area but visual impacts would be buffered due to the gentle topography of the area and harvest design.

It is unlikely that aesthetics would be impacted adversely.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

NONE

13. 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.

An EA was completed in October 2004 for the Rock Bottom Timber Permit for the harvest of 100 MBF from 28 acres on Sections 16 & 22-T4S-R16W.

EA checklists were completed in January and August 2002 for nonmetalliferous mineral leases for Sections 16 & 21-T4S-R16W.

A range evaluation was conducted in August 1999 (Section 21-T4S-R16W).

No cumulative impacts are expected.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

NONE

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

NONE

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

People are currently employed in the wood products industry. Due to the relatively small size of the timber sale program, there will be no measurable cumulative impact from this proposed action on employment.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

People are currently paying taxes from the wood products industry in the region. Due to the relatively small size of the timber sale program, there will be no measurable cumulative impact from this proposed action on tax revenues.

18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services.

There will be no measurable cumulative impacts related to demand for government services due to the small size of the timber sale program, the short-term impacts to traffic and the small possibility of a few people temporarily relocating to the area.

19. 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.

DNRC developed the State Forest Land Management Plan (SFLMP) in 1996, a programmatic plan that outlines the approach and philosophy guiding land management activities on forested school trust lands throughout the state of Montana.

DNRC adopted the Administrative Rules for Forest Management on March 13, 2003, applicable to management activities on forested school trust lands.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

Persons having legal access to the tract and possessing a valid state lands recreational use license or FWP conservation license may conduct recreational activities on the tract. The proposed project would not affect the existing access for the general public.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

There will be no measurable cumulative impacts related to population and housing due to the relatively small size of the timber sale program, and the fact that people are already employed in this occupation in the region.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

NONE

23. CULTURAL UNIQUENESS AND DIVERSITY:

How would the action affect any unique quality of the area?

NONE

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The estimated return to the trust would be \$2,800.00 (50 MBF of tractor sawtimber @ \$56.00/MBF)
Income from grazing licenses of \$545.10/year for 69 AUM of use would continue with or without the harvest proposal.

EA Checklist Prepared By:	Name: Chuck Barone	Date: February 6, 2012
	Title: Dillon Unit Forester	

V. FINDING

25. ALTERNATIVE SELECTED:

Action Alternative: Harvest approximately 50 MBF of bark beetle affected timber from an estimated 11 acres of State land.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

MEASURES RECOMMENDED TO MITIGATE POTENTIAL IMPACTS:

- 1) Compliance with Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws and applicable DNRC Forest Management ARMS.
- 2) The temporary stream crossing would comply with the guidelines and specifications stated in the 124 permit and BLM ROW Grant.
- 3) Proceed with proposed project in accordance with DNRC Attachment 'B' - Road Construction, Improvement and Maintenance Specifications and BLM road use permit and ROW Grant.
- 4) Limit equipment operations to periods when soils are dry (<20% soil moisture), frozen or snow covered (12" packed or 18" unconsolidated) to minimize soil compaction, rutting and vegetative disturbance. Control erosion by installing adequate drainage on roads.
- 5) A designated skid trail would be utilized through the northern portion of the harvest unit to protect riparian areas.
- 6) 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 ≤45%. Sustained slopes >45% would be harvested utilizing a winch and cable line. 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.
- 7) Retain live, healthy older trees and stand attributes suitable for old growth development where available and applicable.
- 8) 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.
- 9) All road construction and logging equipment would be power washed and inspected prior to being brought on site. A noxious weed treatment plan would be developed and filed with the local county weed board and the project area would be monitored for weeds following harvest.
- 10) 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 construction and reconditioning. Provide effective sediment filtration along drainage features near crossing sites.
- 11) New road construction would be physically closed or obliterated. At sale closure, grass seed temporary crossing, roads, skid trails (where needed) and landings with an appropriate seed mixture.
- 12) Contact DNRC wildlife biologist should any threatened or endangered species be encountered within the proposed project area.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

No Further Analysis

EA Checklist Approved By:	Name: Tim Egan
	Title: Dillon Unit Manager
Signature: /S/ Timothy Egan	
Date: 2/6/12	

ATTACHMENTS

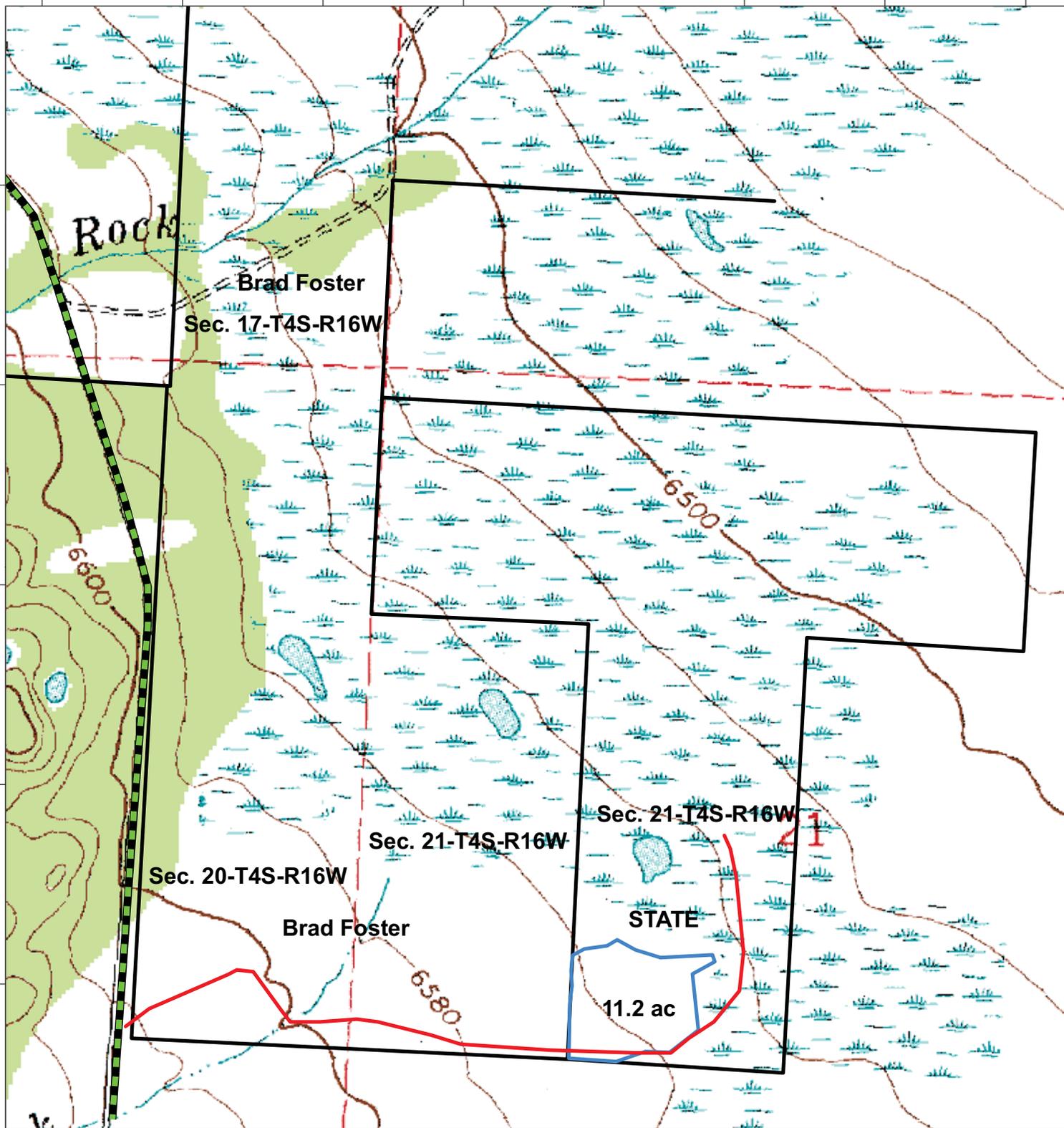
- A – Site Specific Map
- E – Checklist for Endangered, Threatened and Sensitive Species
- F – Vegetative Analysis/Stand Prescription

ATTACHMENT A
Rock Creek Salvage
Sec. 21-T4S-R16W, Beaverhead County

113°36'0"W

113°35'0"W

45°29'0"N



45°28'0"N

45°28'0"N

113°36'0"W

113°35'0"W



1:10,000

-  County Road
-  Access Road
-  Harvest Unit



ATTACHMENT E

ROCK CREEK SALVAGE TIMBER PERMIT CHECKLIST FOR ENDANGERED, THREATENED AND SENSITIVE SPECIES

Pertains to Section II. 9. of the DS-252 DNRC Environmental Checklist
(Rev. August 1, 2007)
CENTRAL LAND OFFICE

Prepared by Chuck Barone

February 6, 2012

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 occur in the project area along Rock Creek and Big Lake Creek. The creeks support moderate levels of hiding cover, and human access levels are presently moderate. No new road would be constructed. Proposed project activities would not occur from March 15 - June 15. Potential for any measurable increases in bear-human conflicts following project activities are not expected. Due to the size, nature, duration and location of the proposed project, activities associated with this proposal are not expected to affect grizzly bears. Adverse direct, indirect and cumulative impacts to grizzly bears as a result of this project are expected to be minimal.</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. Suitable lynx habitat is potentially present in the Beaverhead Mountains (MNHP 2011) and Lynx could occasionally use the project area. However, habitats high in coarse woody debris that are preferred for denning, and large acreages (>50 acres) of dense conifer regeneration at high elevations that are preferred for foraging are not present in the project area. Lynx habitat is marginal due to naturally induced fragmentation, and the very high level of interspersions of native grassland habitat.</p> <p>The habitat on the State parcel would be categorized as "other" habitat (124 ac). There is no identified young/mature foraging or denning habitat within the State parcel. Of the ~124 acres of potential lynx</p>

	habitat on the State parcel, ~11 acres of “other” habitat are proposed for harvest. This would leave ~11 acres converted to temporary non habitat with the remaining 113 acres still categorized as “other” 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.
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DNRC Sensitive Species	[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur (Explain Below)
Gray Wolf (<i>Canis lupus</i>) Habitat: ample big game pops., security from human activity	[N] The proposed project area falls within the Central Idaho Nonessential Experimental Area for gray wolves. The closest packs in the vicinity of the project area are the Bender and Horse Prairie packs. Individuals from these packs 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.
Bald Eagle (<i>Haliaeetus leucocephalus</i>) Habitat: late-successional forest <1 mile from open water	[N] Bald Eagles have been documented within the quarter latilong (L36C) that the proposed project is located in (Skaar 1996, MNHP 2012). 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.
Black-Backed Woodpecker (<i>Picoides arcticus</i>) Habitat: mature to old burned or beetle-infested forest	[N] Black-backed woodpeckers have not been documented within the quarter latilong (L36C) that the proposed project is located in (Skaar 1996, MNHP 2012). Stands found within the project area are presently experiencing substantial insect activity, but no recent burns (≤ 5 years old) have occurred within the State tract or adjoining sections. Foraging and nesting opportunities are presently moderate. No direct, indirect or cumulative effects to black-backed woodpeckers would be expected to occur as a result of this project.
Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>) Habitat: Prairie, shortgrass prairie, badlands	[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>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 2012). The parcel involved in the proposed project maintains elevations that range from about 6,550-6,600 feet, and mature Douglas-fir/ponderosa pine cover types, 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 2012). Sagebrush semi-desert habitats suitable for use by Sage Grouse do occur within one mile of the project area. No leks, lek areas or core areas 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 in the quarter latilong (L36C) that the proposed project is located in (Skaar 1996, MNHP 2012). 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] 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] Sphagnum bogs and moss mats occur within one-half mile but not within the proposed project area. No bog lemmings have been documented in the area. Adequate bog lemming habitat is not present within the proposed project area. Proposed project activities would occur during the wintertime on frozen and snow-covered ground. 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 been documented within the quarter latilong (L36C) that the proposed project is located in (Skaar 1996, MNHP 2012). 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>)</p>	<p>[N] Pileated woodpeckers have been documented within the quarter latilong (L36C) that the proposed project is located in (Skaar 1996, MNHP 2012). The</p>

Habitat: late-successional ponderosa pine and larch-fir forest	project area is very poorly suited for use by pileated woodpeckers. As suitable habitat is not present in the project area, no impacts to pileated woodpeckers 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 2012. National Heritage Tracker.

ATTACHMENT F

Vegetative Analysis/Stand Prescription Rock Creek Salvage Timber Permit

The proposed project is located on the east side of the Beaverhead Mountains along the forest/grassland interface in the irrigated grass types of the broad, flat upper Big Hole River valley. Slopes range from 0-5% with an elevation range of 6,300-6,600 feet. Parcel is primarily leased for grazing and peat production and is flood irrigated for a large portion of the year. ~50 acres of adjacent private lands to the west are presently being harvested.

The State parcel has ~11 forested acres with the remainder of the parcel a mix of shrubs, grassland and swamp. Forested acres within the State parcel are dominated by lodgepole pine as a seral species with a mix of aspen and willow and some scattered spruce limited to microsites. The stand cover type is lodgepole pine and is included in fire group seven where periodic wildfires tended to recycle the stands before any significant amount of mature lodgepole pine dies out. Regeneration is sparse with little understory vegetation due to heavy cattle use. Coarse woody debris is moderate consisting predominately of aspen.

At the turn of the century, the area was dominated by aspen and willow with a variety of other grasses, forbs and shrubs. Lodgepole pine was most likely not present or only sparsely represented but now is presently in the process of converting the original aspen stand to lodgepole pine.

There is evidence of past low-level selective harvest most likely from homesteading activities in the area but no indication of commercial timber harvesting. No old trees (greater than 150 years old) are found on the State tracts. The absence of fire, in combination with encroachment, has resulted in the aspen being replaced by lodgepole pine.

Harvest Unit 1 (11.2 ac) - Stand is composed of a mix of LP small to medium sawtimber, and scattered post and rail. Majority of trees have poor crown ratios (10-30%). Dominate trees are 50-60' and co-dominates are 40-50' with an average age of 115 years. Yield capacity is 60-70 cu. ft/acre/year.

Overall health and growth of all the conifer stand is poor. Aspen health ranges from poor to good depending on degree of conifer encroachment. The stand is overstocked, has a high infestation of Mountain Pine beetle and a moderate mistletoe infestation. A regeneration harvest would be utilized removing all merchantable sawlog, and post and rail material. Retain all fine litter and 10-15 tons/acre of large woody debris >3" diameter as feasible. Consolidate remaining slash at landings for burning. Conduct regeneration survey in 5-7 years.

There is currently more total forest cover in Beaverhead County than in prior historical conditions. The proposed harvest represents ~36% of the total forested acres within the State parcel. Harvesting an estimated 50 MBF of timber would alter the forest cover on approximately 11 acres. Harvest design is intended to maintain a semblance of historic conditions while promoting forest health, vigor and productivity by reducing overstocking through the emulation of stand replacing fires, recover resource value before it is lost to insect and disease or wildfire; and promote regeneration of aspen stands. Natural regeneration would be expected. No rare plants or cover types have been noted or observed within the proposed project area.

MEASURES RECOMMENDED TO MITIGATE POTENTIAL IMPACTS:

- 1) Compliance with Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws and applicable DNRC Forest Management ARMS.
- 2) The temporary stream crossing would comply with the guidelines and specifications stated in the 124 permit and BLM ROW Grant.
- 3) Proceed with proposed project in accordance with DNRC Attachment 'B' - Road Construction, Improvement and Maintenance Specifications and BLM road use permit and ROW Grant.

- 4) Limit equipment operations to periods when soils are dry (<20% soil moisture), frozen or snow covered (12" packed or 18" unconsolidated) to minimize soil compaction, rutting and vegetative disturbance. Control erosion by installing adequate drainage on roads.
- 5) A designated skid trail would be utilized through the northern portion of the harvest unit to protect riparian areas.
- 6) 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 $\leq 45\%$. Sustained slopes $>45\%$ would be harvested utilizing a winch and cable line. 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.
- 7) Retain live, healthy older trees and stand attributes suitable for old growth development where available and applicable.
- 8) 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.
- 9) All road construction and logging equipment would be power washed and inspected prior to being brought on site. A noxious weed treatment plan would be developed and filed with the local county weed board and the project area would be monitored for weeds following harvest.
- 10) 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 construction and reconditioning. Provide effective sediment filtration along drainage features near crossing sites.
- 11) New road construction would be physically closed or obliterated. At sale closure, grass seed temporary crossing, roads, skid trails (where needed) and landings with an appropriate seed mixture.
- 12) Contact DNRC wildlife biologist should any threatened or endangered species be encountered within the proposed project area.