

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Sun Mountain Lumber – Holland Ranch Alternative Practice
Proposed Implementation Date:	July 2013
Proponent:	Sun Mountain Lumber Co, Deerlodge, MT
Location:	E2SW4 Section 18, Township 6S , Range 11W (see attached map)
County:	Beaverhead

I. TYPE AND PURPOSE OF ACTION

Sun Mountain Lumber (SML) has applied for an Alternative Practice (AP) to salvage all merchantable beetle killed lodgepole pine trees adjacent to a stream course (SMZ) on private land (Holland/HRL Ranch). The stream is an un-named tributary to Taylor Creek located in Section 18, T6S, R11W (see attached map). This un-named creek generally does not support fish, and normally does not have surface flow six months of the year or more, but does contribute to Taylor Creek, a Class 1 stream, which contributes to Grasshopper Creek, also a Class 1 stream. The project would be expected to impact approximately 2,700 lineal feet (.05+ miles) of stream bank. This area has been significantly affected by Mountain Pine Beetle infestations in the lodgepole pine stands. Under the Action Alternative: The harvest of commercially viable dead and dying lodgepole trees would exceed the normal retention level under the SMZ law. Approval of the Action Alternative with specific mitigation requirements is expected to reduce potential loss and impacts associated with wildfire, safety hazard to humans and livestock and associated impacts to the stability of the watershed.

According to MCA 77-5-301 through 307, DNRC is authorized to administer and enforce the provisions of the SMZ Law. This Law was developed to protect the public interest of water quality and quantity within forested areas; provide for standards, oversights and penalties to ensure forest practices conserve the integrity of SMZ's; provide guidelines for wildlife management within SMZ's; and allow operators necessary flexibility to use practices appropriate to site-specific conditions in the SMZ. ARM 36.11.301 through 313 further specify the design of SMZ boundaries, allowable activities and prohibitions within the SMZ, penalties and other related provisions.

According to MCA 77-5-304 and ARM 36.11.310, DNRC may approve alternative practices that are different from practices required by the SMZ Law only if such practices would be otherwise lawful and continue to conserve or not significantly diminish the integrity and function of the SMZ. The proximity of the beetle infested trees to roads, ranching, and recreation areas have created safety and forest health issues that would require treatments outside of the allowances of the SMZ law. Treatment would be limited to operation of a feller-buncher inside the 50 foot SMZ buffer, but no closer than 25 feet to the ordinary high water mark (OHWM). In locations where the SMZ width is expanded to 100 feet due to slope, equipment would not be allowed to physically enter the SMZ. Under the Action Alternative mechanical harvest treatment would be conducted on slopes less than 20% and would allow removal of lodgepole pine to below minimum retention standards as identified under Rules 4 and 5 in the *Montana Guide to the Streamside Zone Law and Rules 2006* (ARM 36.11.310-313). Additional stipulations of this request would include:

- All SMZ's will be marked prior to harvest.
- Operation of the feller-buncher inside the SMZ would be in a straight-in and straight-out manner to minimize disturbance inside the 50 foot SMZ boundary, but no closer than 25 feet of the ordinary high water mark of the stream course.
- Operation would only occur during periods when soil disturbance can be minimized under conditions when soils are dry (soil moisture is less than 20%) or during winter with frozen ground to a depth of four inches or snow to a depth of eight inches. Live flowing streams or adjacent wetland will not be crossed with equipment.

- Mitigation measures would include placement of woody slash filter windrows over disturbed ground and applying grass seed to disturbed soils to prevent run-off and sediment from reaching the stream course and live water.
- Felled trees would be placed outside of the 50 foot SMZ boundary for skidding. The Feller-buncher will “pack” the trees to locations outside the 50 foot boundary for skidding to landing.
- Non-merchantable lodgepole pine, in addition to other species of hardwood and conifer trees such as Douglas-fir, Engelmann spruce, quaking aspen, alder, willow and all brush species, would be retained and protected to the greatest extent possible. Larger standing un-merchantable trees will be retained for snag habitat and larger woody recruitment debris for the stream course.
- Trees that have fallen across the stream course naturally will be left in place.
- Should any of the six functions of the SMZ be significantly diminished, all activities will cease until a DNRC Forest Practices representative is notified and can assess the situation.

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 occurred on July 15 2013 by DNRC Forester Mike Atwood to review the site.

Other Contacts for input and review:

DNRC Forest Practices Program Manager , Roger Ziesak
 Todd Holland, owner of the lands involved
 FWP Fisheries Biologist (Dillon), Matt Jaeger
 FWP Wildlife Biologist (Dillon), Craig Fager
 Montana Natural Heritage Program/NRIS
 Montana Fisheries Information System

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

The Montana DEQ and Beaverhead County Conservation District have jurisdiction within the stream prism. A 310 permit has been approved for the installation of a culvert at an existing stream crossing. Sun Mountain Lumber is performing the installation. Beaverhead County oversees burning permits for future slash burning to take place outside the SMZ.

3. ALTERNATIVES CONSIDERED:

Alternative A –No Action.

Beetle-killed trees may be harvested within the SMZ (hand felled and yarded with cable) according to requirements outlined in the law. Cable skidding each tree out of the SMZ would likely create more soil disturbance than accomplishing the practice with an efficient feller-buncher machine carrying multiple trees out of the SMZ for processing. In addition, trees may be removed by the private landowner in a non-commercial manner without DNRC oversight or jurisdiction over operations. Excessive disturbance to the stream course or increased risks to safety may occur.

Alternative B – Action.

Please see *Type and Purpose of Action* for a full description of this alternative. Implementation of the Alternative Practice is recommended as it is proposed with additional mitigation measures to protect resources.

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.

Alternative A - No Action

Personal use firewood removal may take place in the context of "non-commercial" activity within the SMZ in order to meet landowner's management objectives for grazing use. This activity would likely create more soil disturbance within the SMZ than the proposed commercial mechanical feller-buncher with experienced operator "packing" multiple trees out of the SMZ for skidding and commercial removal.

Alternative B – Action

Equipment operation would be limited to soils that are described as "moderately or well suited" for timber harvest in the Web Soil Survey. Equipment operation would be limited to areas where slope is less than 20%. Mitigation measures would include operating season restrictions that require frozen ground with snow pack or dry soil conditions with less than 20% moisture. In addition, grass-seeding and installation of erosion control measures such as a slash-filter windrow on any disturbed area upon completion of activity would be required. Minimal direct, indirect or cumulative impacts to soil stability and compaction are anticipated due to the soil rating restrictions, operation restrictions and mitigation measures.

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.

Alternative A - No Action

Continued deterioration of the lodgpole stands are expected to result in heavy fuels loading and increased risk of wildfire and associated impacts to this drainage. Personal use firewood removal may take place within the context of non-commercial activity within the SMZ in order to meet landowner's management objectives. This activity would likely create more soil disturbance within the SMZ than a mechanical feller-buncher with experienced operator "packing" multiple trees out of the SMZ for skidding and commercial removal.

Alternative B – Action

A 25 foot equipment exclusion zone is required to provide adequate filtration for any displaced soils or increased runoff due to compacted soils in the 25 to 50 foot AP zone. Increases in sedimentation would be expected to be minimal and temporary due to operations only occurring on slopes less than 20% and application of mitigation measures (retention of all non-merchantable trees and scrubs). Mitigation measures include imposing seasonal operating restrictions that require frozen ground to a depth of four inches and/or snow depth of eight inches; or dry soil conditions (less than 20% moisture), and requiring grass seeding and installation of erosion control measures such as a slash-filter windrow on any disturbed area upon completion of operations. DNRC representatives may monitor AP sites to verify effectiveness. Minimal direct, indirect, and cumulative impacts to water quality and quantity are expected due to operation restrictions and mitigation measures.

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.

N/A

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.

Alternative A - No Action

If no action is taken the dead trees will fall over, potentially causing additional safety risks to people and livestock and increase risk of wildfire. Trees may be hand-felled to minimum retention standards by contractor, but it would be expected that as retention trees fell the landowner would remove them anyway. Hand-felling and skidding hand-felled trees have the potential to be more damaging to the residual stand than the directional felling of a feller buncher. This is due to trees being pulled through the residual stand with less maneuverability, potentially removing bark, damage to residual trees and associated soil disturbance.

Alternative B – Action

Vegetative communities would be affected to the extent that mature lodgepole pine trees would be reduced to below minimum retention standards as outlined in Rule 5 of the *Montana Guide to the Streamside Management Zone Law and Rules* handbook. Other species of trees such as Douglas-fir, Engelmann spruce and aspen would be retained where present and likely release and respond to this treatment. Understory vegetation present would be protected to the greatest extent possible. Natural regeneration of lodgepole pine is expected in addition to regeneration of riparian scrubs as a result of opening up the canopy assisting in stabilizing the stream course.

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.

Alternative A – No Action

A variety of big game, small mammals, raptors and songbirds potentially use this area. This un-named stream course generally does not support fish. This stream segment generally dries-up in the later summer and fall months. Minimum retention standards would be adhered to as well as equipment restrictions. The suitability of this mature and decadent lodgepole stand would continue to be marginal at best for terrestrial, avian and/or aquatic habitat. Dead lodgepole pine overstory will continue to fall over increasing fuel loading and increase the risk of a large scale fire.

Alternative B – Action

The removal of overcrowded, diseased, and dead conifers along this stream course should encourage the re-establishment of a more diverse riparian plant community and consequently support more diverse productive aquatic and terrestrial habitats. Operating restrictions and mitigation measures would minimize sedimentation impacts to fish habitat where present. The AP includes a partial retention of larger non-commercial trees for snag recruitment and nesting birds. Removing majority of the mature overstory would reduce recruitable woody debris in this stream course. In areas of pure lodgepole pine stands, stream shading would be partially reduced and peak seasonal stream temperatures may see an increase in July and August until shrub species (willow, alder and tall grasses) establish along the stream banks. All other species of trees and brush would be retained and protected to the greatest extent possible. Cumulative impacts would be expected to be short term due to operating restrictions and specific mitigation measures.

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.

Alternative A – No Action

A query of the Montana Natural Heritage Program identifies the area as being possible habitat for Gray Wolf, Canada lynx, Northern Goshawk, and Wolverine. Minimum retention standards would be adhered to as well as equipment restrictions. Dead lodgepole pine would eventually fall over or may be removed by the landowner in a non-commercial manner.

Alternative B - Action

Public motor vehicle access and heavy recreational activities on adjacent BLM and Forest Service lands may impact the use of this area as habitat for Gray Wolf, Canada lynx, or Wolverine. If a sighting of any of the listed species of concern (or evidence such as nests, dens etc...) occurs, operations would be halted, or not allowed, until further assessment can take place.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

Although no cultural or paleontologic resources are known to exist in the project APE, a systematic inventory of such resources has not occurred. Because the project is not located on state land, the DNRC has no jurisdiction to require private landholders to conduct professional level inventories to identify, or develop treatment plans for, privately owned National Register eligible properties.

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.

Alternative A – No Action

Adverse impacts to aesthetics associated with this proposal are expected to be minimal in this remote private setting significantly impacted by beetle infestations and dead lodgepole forest landscapes. Aesthetics will continue to be degraded as existing forested stands of green trees transition to red/grey from beetle infestations and eventually fall over. This area has experienced heavy downfall of diseased and dead timber and shows minimal understory vegetation and grasses for a diverse vegetative settling.

Alternative B – Action

The removal of beetle killed lodgepole pine will have a short-term aesthetic impact. Lodgepole pine will likely regenerate quickly (within 5 years) in addition, a growth response with early succession species of shrubs, grasses and forbs re-establishing within this riparian zone is expected. This diverse regeneration would eventually soften and replace aesthetic quality damaged by Mountain Pine Beetle infestation.

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.

N/A

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.

N/A

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.

Alternative A – No Action

The primary use of this land is agricultural grazing and occasional recreational hunting by the owners. Currently cattle do not use this area due to the heavy downfall and lack of grass in the understory. Grazing use of these lands for the producer will continue to be non-productive.

Alternative B – Action

The removal of beetle killed trees would improve safety to the landowner and livestock, grazing potential, and safety for those that use the area for recreation while improving the vegetative community expected to regenerate within the SMZ.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

Alternative A – No Action

The primary use of this land is agricultural grazing and occasional recreational hunting by the owners. Currently cattle do not use this area due to the heavy downfall and lack of grass in the understory. Grazing use of these lands for the producer will continue to be non-productive.

Alternative B – Action

The removal of beetle killed trees would improve livestock movement and grazing potential of these lands while improving the diversity of the vegetative community present.

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.

Alternative A – No Action

Timber harvest will continue on this property under the No Action Alternative. Harvest allowed within the SMZ will be minimal and occur within the context and provisions of the SMZ law. The amount of commercial timber volume proposed for removal within the SMZ is generally not considered a significant impact to employment.

Alternative B – Action

Timber harvest is currently on-going within adjacent timber stands. Harvest plans under the Action Alternative are expected to take place during the summer months of 2013. Harvest of trees may generate 20 mbf from the SMZ site with minimal support (1-2 days) for employment of the 5 person crew working in the area. This project would provide raw material for local mill operations.

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.

Negligible amounts.

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

N/A

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.

N/A

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.

N/A

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.

N/A

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

N/A

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

N/A

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.

N/A

EA Checklist Prepared By:	Name: Mike Atwood	Date: July 19, 2013
	Title: Trust Land Forester – Dillon Unit	

V. FINDING

25. ALTERNATIVE SELECTED:

Alternative B - Action

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

Significant impacts to the primary functions of the SMZ are not anticipated under the Action Alternative with the implementation of operating restrictions and mitigation measures outlined in this Alternative Practice.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

No Further Analysis

EA Checklist Approved By:	Name: Timothy Egan Title: Dillon Unit Manager
Signature: /Timothy Egan/	Date: July 22 2013