

**SITE SPECIFIC ALTERNATIVE PRACTICE
CHECKLIST ENVIRONMENTAL ASSESSMENT**

Project Name:	Langsather ~ Marias River Land & Livestock, Gordon Family Trust
Proposed Implementation Date:	August 29, 2011
Proponent:	Brad Langsather, Missouri River Forestry, LLP
Location:	Sections 26 & 34, T16N, R1E
County:	Cascade
Land Owner:	Marias River Land & Livestock, Gordon Family Trust
HRA #:	Pending

I. TYPE AND PURPOSE OF ACTION

A. Type of Action: SMZ Alternative Practice:

Proponent is requesting an SMZ Alternative Practice to Rule 4:(36.11.304), *Operation of Equipment in the SMZ*.

Missouri River Forestry, LLP is currently planning a hazard tree removal project near Squaw Creek in Cascade County. Mountain pine beetle has drastically impacted ponderosa pine, resulting in tree mortality. Proponent would like to ford dry creek channel in four locations and operate equipment to within 15' of the ordinary high water mark to remove infested trees.

Indicators – Mountain Pine Beetle:

Field evaluations verified increased mountain pine beetle activity. Indications of bark beetle activity include:

- Popcorn-shaped masses of resin, called "pitch tubes," on the trunk where beetle tunneling begins. Pitch tubes may be brown, pink or white.
- Boring dust in bark crevices and on the ground immediately adjacent to the tree base.
- Evidence of woodpecker feeding on trunk. Patches of bark are removed and bark flakes lie on the ground or snow below tree.
- Foliage turning yellowish to reddish throughout the entire tree crown. This usually occurs eight to 10 months after a successful Mountain Pine Beetle attack.
- Presence of live MPB (eggs, larvae, pupae and/or adults) as well as galleries under bark. This is the most certain indicator of infestation. A hatchet for removal of bark is needed to check trees correctly.
- Blue-stained sapwood. Check at more than one point around the tree's circumference.¹

To reduce fire hazards, increase forest health and vigor, and recover economic value, the proponent would like to:

1. Cross a dry, class-2 stream channel at four locations to access ponderosa pine severely damaged by MPB. Impacts to the bed and banks should be minimal due to the amount of rock in the streambed and the use of a temporary log bundle (if needed to protect the banks).

¹ D.A. Leatherman, "Mountain Pine Beetle", # 5.528, Colorado State University Cooperative Extension. Available at: <http://www.ext.colostate.edu/pubs/insect/05528.html>

Log bundle would be removed prior to break-up, or immediately after use to prevent obstruction of flow during spring runoff.

2. Slash-filter windrow would be constructed at these crossings upon completion of harvesting operations to reduce sediment discharge.
3. Harvesting operations would take place during dry ground conditions. If soil displacement would happen, the area in question would be grass seeded immediately following the harvest to reestablish vegetation.
4. Equipment operation in the SMZ would be permitted to within 15' of the ordinary high water mark (OHWM) for the purpose of cutting wood with a mechanical harvester. Equipment activity in the SMZ should be limited by entering at right angles to the stream channel to minimize disturbance. Forest products would be severed from the stump by the harvester then placed outside the SMZ to be skidded.

B. Purpose of Action: Timber Harvest

Proponent has put forth a salvage timber harvest to mitigate impacts to property as a result of damage caused by the MPB. This action should also increase forest health and vigor as well as provide a source of income to the landowner.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

No other agencies, groups or individuals have been contacted by the DNRC as part of this proposed Alternative Practice. Proponent would be responsible for contacting appropriate agencies to obtain other necessary permits.

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

Other required permits are the responsibility of the proponent.

3. ALTERNATIVES CONSIDERED:

3.1 Alternative "A": Not approve Alternative Practice (No Action)

Proposed SMZ Alternative Practice would not be approved. Current stand conditions would most likely diminish, resulting in lost revenue and potential public safety issues. The proposed forest management and harvesting actions would be abandoned.

3.2 Alternative "B": Alternative as Proposed

Allow SMZ Alternative Practices as proposed with additional mitigation measures.

Equipment Operation: Implementation of this alternative would allow timber harvesting of rough forest products from private lands in Cascade County, Montana.

The Alternative Practice would allow equipment operation in the SMZ to within 15' of the ordinary high water mark (OHWM) for the purpose of cutting wood with a mechanical harvester. Equipment activity in the SMZ should be limited by entering at right angles to the stream channel to minimize disturbance.

Forest products would be severed from the stump by the harvester then placed outside the SMZ to be skidded.

In addition, a dry creek channel would be crossed at four locations to facilitate harvesting operations. Minimal impacts are expected due to the rocky streambed. If needed a log bundle would be placed in the stream channel to protect the banks.

Slash-filter windrow would be constructed at these crossings upon completion of harvesting operations to reduce sediment discharge. Any exposed soil will be grass seeded immediately after harvest to reduce potential surface runoff.

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.

Harvest operations would be done during dry-ground conditions to prevent rutting. Degradation to the soil should be minimal due to the relatively small amount of forest products being harvested in the SMZ. Mitigation measures such as grass seeding exposed soil areas if necessary should reduce the potential of sediment runoff into nearby streams.

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.

Is it possible that implementing this Alternative Practice would impact the integrity of the SMZ and these specific functions?

1. Ability to act as an effective sediment filter.
2. Ability to provide shade to regulate stream temperature.
3. Protection of stream channel and banks.
4. Ability to provide large woody debris for eventual recruitment into the stream to maintain riffles, pools and other elements of channel stability.
5. Promotes floodplain stability.

The proposed project would be implemented during dry-ground conditions and should not adversely impact the six functions of a SMZ, as identified in the SMZ law (77-5-301[1] MCA).

1. Harvest operation would take place during dry-ground conditions to prevent soil rutting. Because of this and the small amount of wood being harvested, minimal disturbance to the soil is expected. If soil displacement would happen, the area in question would be grass seeded immediately following the harvest in the spring to reestablish vegetation.
2. Tree retention should not drop below the salvage minimum in the SMZ.

3. Equipment operation in the SMZ would be permitted to within 15' of the ordinary high water mark (OHWM) for the purpose of cutting wood with a mechanical harvester. Equipment activity in the SMZ should be limited by entering at right angles to the creek to minimize disturbance. Forest products would be severed from the stump by the harvester then placed outside the SMZ to be skidded. Stream channel would be crossed during non-flow conditions with the use of a log bundle to protect the banks if needed.
4. Ample tree volume shall be maintained in the SMZ as a whole along other portions of the creek to provide future woody recruitment into the stream.
5. Grass seeding disturbed soil locations should provide ample floodplain stability.

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.

None.

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.

Implementation of these alternative practices with proposed mitigation measures should not dramatically impact any vegetative communities within the SMZ.

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.

Would implementing this Alternative Practice impact the ability of the SMZ to support diverse and productive aquatic and terrestrial habitats?

Mountain pine beetle is prevalent in mature ponderosa pine found throughout this landscape. The declining forested stand should give way to a flush of new pine regeneration after harvest, changing terrestrial habitats. Implementation of this alternative practice in and of itself should not dramatically impact aquatic and terrestrial habitats.

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.

None.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

None.

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.

None.

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.

None.

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.

None.

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.

None.

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.

None.

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.

None.

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.

None.

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.

None.

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.

None.

EA Checklist Prepared By:	Name:	Shawn P. Morgan	Date:	08/28/2011
	Title:	Helena Unit Forester		

V. FINDING

25. ALTERNATIVE SELECTED:

ALTERNATIVE AS MITIGATED: Approve alternative practice to allow equipment operation in the SMZ. The following mitigation measures shall be implemented:

1. Cross a dry, class-2 stream channel at four locations to access ponderosa pine severely damaged by MPB. Impacts to the bed and banks should be minimal due to the amount of rock in the streambed and the use of a temporary log bundle (if needed to protect the banks). Log bundle would be removed prior to break-up, or immediately after use to prevent obstruction of flow during spring runoff.
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26. SIGNIFICANCE OF POTENTIAL IMPACTS:

As proposed, with mitigations, I do not anticipate any significant direct, indirect or cumulative effects from the implementation of the selected alternative.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

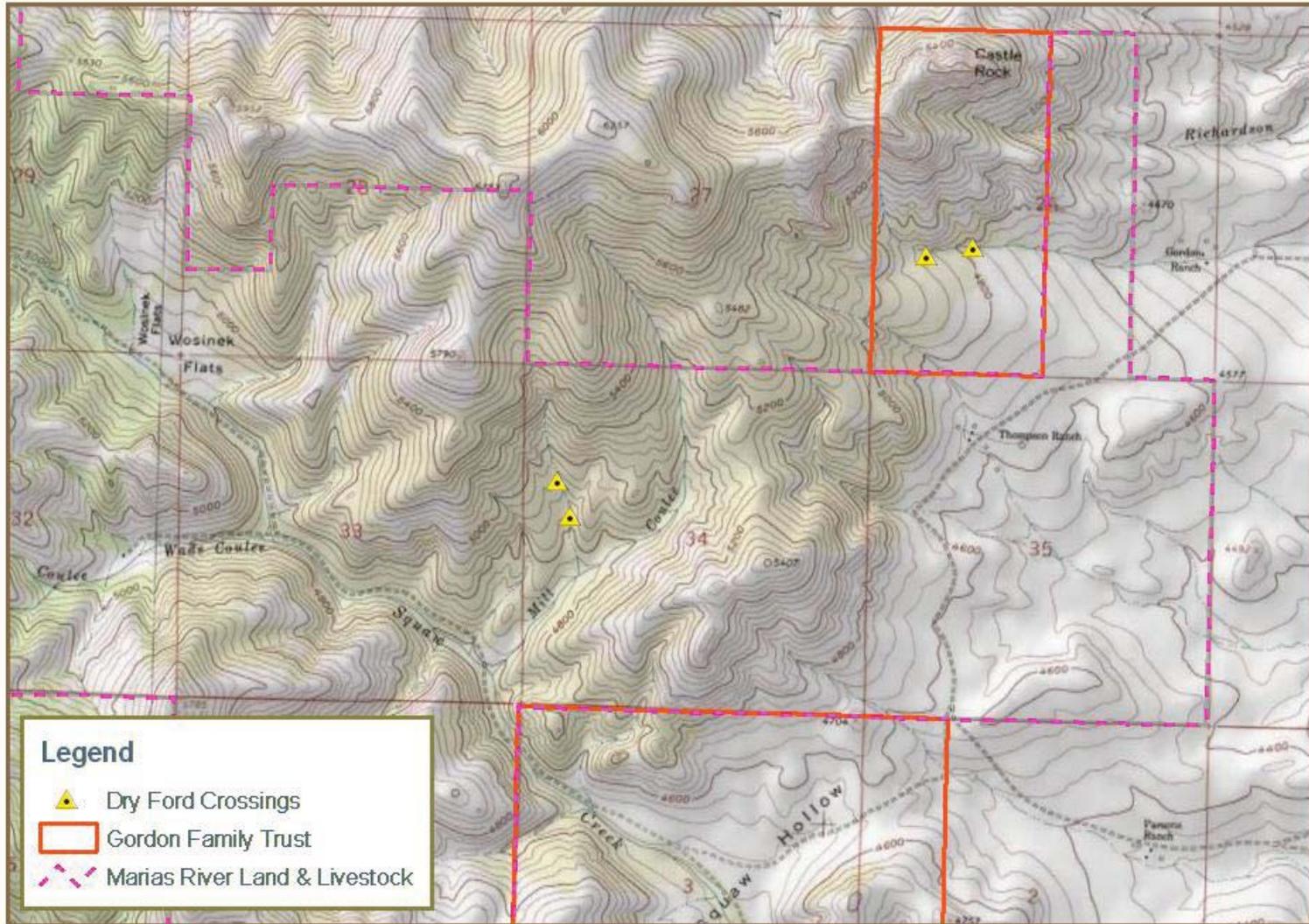
	<input type="checkbox"/>	EIS	<input type="checkbox"/>	More Detailed EA	<input checked="" type="checkbox"/>	No Further Analysis
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EA Checklist Approved By:	Name:	D.J. Bakken			
	Title:	DNRC, Helena Unit Manager			
Signature:				Date:	8/29/2011

ATTACHMENTS
SMZ Alternative Practice Map



Langsather ~ Marias River, Gordon - Ownerships
T16N, R1E, Sections 26 & 34
Cascade County, Montana
AP-CLO-05-2011



Mapped By: Shawn Morgan, August 29, 2010

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