SITE SPECIFIC ALTERNATIVE PRACTICE CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Great Divide Ski Area Salvage
Proposed Implementation Date:	July 02, 2009
Proponent:	Great Divide Ski Area
Location:	Section 35, T12N, R6W & Section 2, T11N, R6W
County:	Lewis & Clark
Land Owner:	Thompson, Anthony & Cindy ~ Marysville Gold Mining Co.
HRA #:	25-B-36639

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 & Rule 5:(36.11.305) Retention of Trees in the SMZ/Clearcutting.*

Great Divide Ski Area is currently harvesting MPB infested trees along various trails to reduce impacts to users of this winter recreational facility located near Marysville . Property belonging to Great Divide Ski Co. as well as Marysville Gold Mining Co. (2111 North PL, Billings, MT 59102) and Anthony & Cindy Thompson (109 Black Bear LN, Anaconda, MT 59711) are involved in this project.

Proponent would like to operate machinery in the SMZ to cut and remove MPB infested lodgepole pine trees using a feller buncher. In addition, when adjacent to ski runs proponent would like to drop tree retention below the minimum to prevent possible injury to public users and increase safety.

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 improve forest health and vigor as well as salvaging lodgepole pine infested with MPB the proponent would like to:

[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

1. Operate wheeled or tracked equipment in the SMZ.
2. Equipment would come no closer than 15' from the ordinary high water mark (OHWM) of creek.
3. Operations would take place during dry ground conditions with wood being decked outside the SMZ.
4. If soil disturbance occurs, a slash-filter windrow may be constructed in locations where the topography slopes toward the stream channel. This should prevent surface runoff/sediment from reaching the stream. Exposed soil would be grass seeded following use to re-establish vegetation.
5. When directly adjacent to ski runs, tree retention would drop below the salvage minimum for a class one stream to reduce impacts to users and increase safety.

B. **Purpose of Action: Timber Harvest**

Proponent has put forth a salvage timber harvest to mitigate impacts to private property and increase public safety 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. Great Divide Ski Co. would be responsible for contacting appropriate agencies to obtain necessary permits.

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

Other required permits are the responsibility of Great Divide Ski Co..

3. ALTERNATIVES CONSIDERED:

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

Proposed SMZ Alternative Practice would not be approved. Current MPB conditions would most likely increase, resulting in significant damage to the remaining non-infested lodgepole pine. 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: To improve forest health/vigor and salvage lodgepole pine infested with MPB ***an Alternative Practice*** to operate wheeled or tracked equipment in the SMZ would be allowed under the following conditions:

Equipment Operation:

1. Equipment would come no closer than 15' from the OHWM of the Rawhide Creek.

2. Operations would take place during dry ground conditions to prevent rutting with rough forest products being decked outside the SMZ.

3. If soil disturbance occurs, a slash-filter windrow may be constructed in locations where the topography slopes toward the stream channel or pond. This should prevent surface runoff/sediment from reaching the stream.

4. Exposed soil would be grass seeded to re-establish vegetation.

Retention of Trees in the SMZ: To improve public safety ***an Alternative Practice*** to drop tree retention below the salvage minimum for a class one stream segment would be necessary.

Tree Retention:

1. This would apply to areas directly adjacent to ski runs only to reduce potential impacts to users.

2. When applicable, proponent should try to meet the minimum tree retention requirements by leaving Douglas-fir, which is not susceptible to MPB. This would help to protect the stream channel and banks, provide shade, and offer future woody debris to maintain riffles, pools, and other elements of channel structure.

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 and constructing slash-filter windrows should reduce the potential of sediment runoff into the stream.

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 to reestablish vegetation.

2. Tree retention may drop below the salvage minimum in the SMZ in areas directly adjacent to ski runs only. Maintaining Douglas-fir numbers close to the salvage minimum for a class one stream should provide enough shade to regulate stream temperatures.

3. Equipment operation would not be allowed to come any close than 15' of the OHWM of creek. Impacts to the stream channel and/or banks are not anticipated.

4. Ample tree volume shall be maintained in the SMZ to provide future recruitment into stream channel which maintains riffles, pools, and other element of channel structure. When possible Douglas-fir would be left to try and meet the minimum tree retention requirement for salvage along a class one stream.

5. Grass seeding disturbed soil locations and maintaining minimum tree retention requirements 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 alternatives 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 lodgepole pine found throughout this ownership and the surrounding landscape. The declining forested stand should give way to a flush of new pine regeneration as well as enhanced Douglas-fir growth after harvest. 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:	07/01/09
	Title:	Helena Unit Forester		

V. FINDING

25. ALTERNATIVE SELECTED:

ALTERNATIVE AS MITIGATED: Approve alternative practice to allow equipment operation in the SMZ and dropping tree retention below the minimum along a class one stream directly adjacent to ski runs.

The following mitigation measures shall be implemented:

Equipment Operation:

1. Equipment would come no closer than 15' from the OHWM of the Rawhide Creek.
2. Operations would take place during dry ground conditions to prevent rutting with rough forest products being decked outside the SMZ.
3. If soil disturbance occurs, a slash-filter windrow may be constructed in locations where the topography slopes toward the stream channel or pond. This should prevent surface runoff/sediment from reaching the stream.
4. Exposed soil would be grass seeded to re-establish vegetation.

Tree Retention:

3. This would apply to areas directly adjacent to ski runs only to reduce potential impacts to users.
4. When applicable, proponent should try to meet the minimum tree retention requirements by leaving Douglas-fir, which is not susceptible to MPB. This would help to protect the stream channel and banks, provide shade, and offer future woody debris to maintain riffles, pools, and other elements of channel structure.

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.

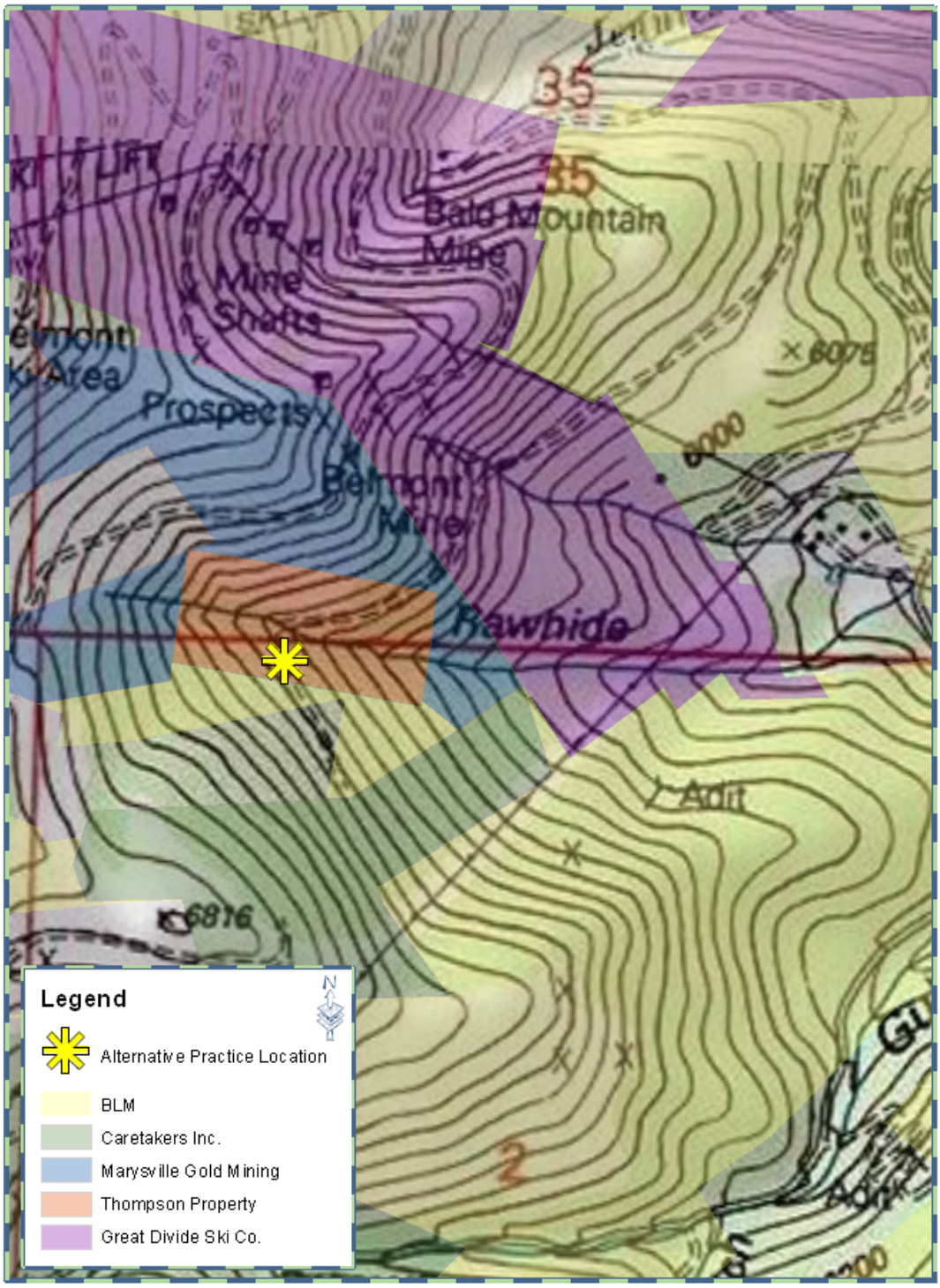
27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:						
		EIS		More Detailed EA	X	No Further Analysis

EA Checklist Approved By:	Name:	D.J. Bakken		
	Title:	DNRC, Helena Unit Manager		
Signature:	/S/ Darrel J. Bakken		Date:	7/2/2009

ATTACHMENTS

SMZ Alternative Practice Map

Great Divide Ski Area
HRA # 25-B-36639
AP-CLO-06-2009



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