CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Alder Creek/Evans Alternative Practice
Proposed Implementation Date:	March 2010
Proponent:	James Evans
Location:	Section 24-T1N-R12W
County:	Beaverhead
Land Owner:	Martin Seymour
HRA#:	01-B-40179

I. TYPE AND PURPOSE OF ACTION

The type of action the Proponent is requesting is a SMZ Alternative Practice to Rule 4: (36.11.304), *Equipment Operation in the SMZ*, Rule 5: (36.11.305), *Retention of Trees in the SMZ/Clearcutting* and Rule 9: (36.11.309), *Depositing Slash in the SMZ*. Proponent proposes to harvest the majority (~98%) of the merchantable lodgepole pine on approximately 2.5 acres of ground within the Alder Creek SMZ. Approximately 400 feet of the main creek channel, an additional 550 feet of intermittent, secondary channel and associated wetlands would be involved. Operation of a feller/buncher and skidder would be allowed within the SMZ to harvest dead/dying/at-risk trees. The feller/buncher would be allowed to cross an intermittent, secondary channel to harvest and carry trees back to a designated landing area outside of the SMZ. Harvesting of dead/dying/at-risk trees below required minimum retention would be allowed. The falling of ≤5 oversize trees across live stream channels, including the deposition of slash into the channels, would be allowed. All activities would occur on frozen, snow covered conditions.

The purpose of the action would be to salvage dead, dying and at-risk lodgepole pine affected by Mountain Pine Beetle and dead aspen trees to provide a "safety zone" around existing structures, improve forest health and recover timber values before they are lost.

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 on February 3, 2010 by proponent J. Evans and DNRC forester C. Barone.

Other contacts:

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. The Proponent would be responsible for contacting appropriate agencies to obtain necessary permits.

3. ALTERNATIVES CONSIDERED:

No Action Alternative: Not approve the Alternative Practice.

Action Alternative: Implementation of Alternative Practice as proposed with additional mitigation measures.

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 harvest activities would occur on frozen, snow covered conditions and implement Best Management Practices (BMP's) and any recommended mitigations measures. No impacts to soils 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.

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 structure.
5. Promotes floodplain stability.

1. Harvest operations would take place during snow-covered/frozen ground conditions to prevent soil rutting. If soil displacement should happen, disturbed areas would be grass seeded immediately after harvest to reestablish vegetation. Lodgepole pine is the target species. All other species, non-merchantable trees, sub-merchantable trees and shrubs would be protected and retained where available and practical. Lodgepole pine trees that are rooted on the stream bank would be removed to avoid excessive bank degradation from root wad dislodgement. Encouraging growth of riparian plant species by removing conifers should lead to more deep-rooted riparian species, which would promote stream bank stabilization and offer continued sediment filtration and bank stability in the future. Impacts to act as an effective sediment filter are not expected.

2. Shade would continue to be provided by the remaining trees and shrubs, and the establishment of new riparian species and would provide enough shade to regulate stream temperature. Impacts to provide shade to regulate stream temperature are not expected.

3. All operations would occur during frozen, snow covered conditions. Where it is necessary to fall a tree across the stream, adequate directional falling would be used and tree would be whole tree yarded only where damage to channel and banks can be prevented. Adverse impacts to stream channel and banks are not expected.

4. Harvesting dead trees would drop tree retention to below the salvage minimum on ~400 lineal feet of the main Alder Creek. This would have minimal affect to Alder Creek as a whole. Some existing snags, ~ one per 100 lineal feet of the main stream channel, would be left for eventual recruitment where available, practical and safe. Species other than lodgepole pine would be retained and would eventually be recruited into the stream for large woody debris. Impacts to provide large, woody debris for eventual recruitment into the stream are not expected.

5. Harvest system, the establishment of new riparian species and grass seeding disturbed soil locations would provide adequate floodplain stability. Impacts to floodplain stability are not expected.

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 proposed project includes burning of logging slash piles. 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.

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.

Harvesting the majority of the merchantable lodgepole pine would change the cover type within the immediate project area temporarily. The removal of overcrowded conifers should encourage the establishment of a more diverse riparian plant community. Over time, lodgepole pine would reestablish and begin to dominate the forest overstory.

No rare plants or cover types are present within the proposed project area.

Due to the size of the proposed project and additional mitigation measures, the implementation of this alternative practice 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?

The removal of over crowded conifers along Alder Creek should encourage the reestablishment of a more diverse riparian plant community and consequently support more and diverse productive aquatic and terrestrial habitats. No impacts are expected to 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.

The proposed project is located approximately one-half of a mile from the Big Hole River on Alder Creek. Alder Creek is a tributary of the Big Hole River. Artic Grayling are found in the Big Hole River. A 68% genetically pure strain of Westslope cutthroat trout has been documented in Alder Creek above the proposed project area.

The proposed project area is located in potential Gray Wolf, Wolverine and Canada Lynx habitats. Occasional or transient use within the project area could occur.

No plant species of concern have been identified within the proposed project area.

Due to the size and location of the proposed project, no adverse impacts to the fisheries, threatened or endangered species or other species of concern within this watershed are expected from the proposed action.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine effects to historical, archaeological or paleontological resources.

None are known to occur within the proposed project area.

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.

Similar projects are occurring on many of the private properties within the Alder Creek drainage. Adverse impacts to aesthetics within the Alder Creek drainage are not expected.

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:**	Chuck Barone	**Date:**	March 1, 2010
	Title:	Dillon Unit Forester		

V. FINDING

25. ALTERNATIVE SELECTED:

Action Alternative: Implementation of Alternative Practice as proposed, with additional mitigation measures.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

MEASURES RECOMMENDED TO MITIGATE POTENTIAL IMPACTS:

1) All operations/activities would occur on frozen, snow covered conditions.
2) Removal of dead, dying and at-risk merchantable lodgepole pine affected by Mountain Pine Beetle, and dead aspen trees within the SMZ. All other tree species, sub-merchantable trees, non-merchantable trees and shrubs would be protected and retained where available and practical.
3) Retain one dead/dying tree per 100 lineal feet along bank edge of the main Alder Creek channel where available, practical and safe.
4) Only a feller/buncher and a skidder would be allowed to operate within the SMZ.
5) Up to five oversized dead trees would be allowed to be directionally felled across the main Alder Creek and secondary stream channels. The main tree bole spanning the channel would be removed only if damage to the channel and banks is prevented. All slash and debris deposited in the channel would be removed by hand by the end of the day of activity.
6) A crossing on the intermittent, secondary channel would be designated for the feller/buncher only. Logs would be placed in the channel to protect the banks and would be removed at the end of the project. Trees would be harvested and carried back to a designated landing area outside of the SMZ. All slash and debris deposited in the channel would be removed by hand by the end of the day of activity.
7) A crossing on the main Alder Creek would be designated for the feller/buncher only. Logs would be placed in the channel to protect the banks if needed and would be removed at the end of the project. Trees would be harvested and carried back to a designated landing area outside of the SMZ. All slash and debris deposited in the channel would be removed by hand by the end of the day of activity.
8) Landing areas and slash piles would be located outside of the SMZ.
9) Should a “310” permit be required, Proponent would comply with all the requirements of the permit. Adherence to mitigation measures stated in the Alternative Practice. Compliance with all other Forestry Best Management Practices (BMP’s) and Streamside Management Zone (SMZ) laws.
10) If damage occurs to stream channels, banks or ground within the SMZ, all activities would cease until a DNRC Forest Practices representative is notified and can assess the situation.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

[ ]	EIS	[ ]	More Detailed EA	[X]	No Further Analysis

EA Checklist Approved By:	**Name:**	Tim Egan
	Title:	Dillon Unit Manager
Signature:	/S/ Timothy Egan	**Date**: 3/1/2010

ATTACHMENTS

Alternative Practice Request
Site Map – Attachment A

ATTACHMENT A
Alder Creek/Evans Alternative Practice Request
Sec. 24-T1N-R12W, Beaverhead County