CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	HALL-E-WOOD
Proposed Implementation Date:	6/14/10-9/1/10
Proponent:	Montana DNRC, Clearwater Unit
Location:	E1/2 NW1/4 Section 10 T16N R15W
County:	Missoula

I. TYPE AND PURPOSE OF ACTION

The Clearwater Unit is proposing to harvest an estimated 62 thousand board feet of timber from approximately 12 acres. The proposed harvest area is located in Dogtown approximately 1/2 mile south of Seeley Lake. Under the proposed action, DNRC would harvest lodgepole pine that is dead, dying, and susceptible to mountain pine beetle attack. This harvest will generate money for the trust and reduce fuels that have the potential to negatively affect homeowners in the Dogtown area.

The lands involved in this proposed project are held by the State of Montana in trust for Montana State University (Enabling Act of February 22, 1889; 1972 Montana Constitution, Article X, Section 11). The Board of Land Commissioners and the DNRC are required by law to administer these trust lands to produce the largest measure of reasonable and legitimate return over the long run for the beneficiary institutions (Section 77-1-202, MCA). Specific objectives of the project are to capture value of dead and dying trees, prevent future value loss, and promote appropriate forest types within the project area.

II. PROJECT DEVELOPMENT

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

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

DNRC specialists were consulted, including: Mike McGrath, Wildlife Biologist; Jeff Collins, Hydrologist; Dave Poukish, Clearwater Unit Manager (cabin lease information)

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

NA

3. ALTERNATIVES CONSIDERED:

Alternative A: No Action: The proposed harvest would not occur at this time. Current land use activities would continue.

Alternative B: The Action Alternative: Under this alternative, DNRC would continue current uses, and also harvest dead and dying lodgepole pine, as well as those highly susceptible to the mountain pine beetle. All other species would be retained. Approximately 62 thousand board feet would be harvested from approximately 12 acres (Attachment A, Proposed Harvest Map). Timber would be harvested using ground based methods. Western larch seedlings and/or ponderosa pine seedlings will be inter-planted among the residual stand as needed.

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.

Geology is moderate to deep glacial outwash and alluvium. No unstable or unique geology occurs within the project area. Soils on forest sites are Winfall gravelly loams on mainly gentle 4-30% slopes. These are moderate erosion hazard soils, with moderate risk of compaction and displacement associated with equipment operations. Previous effects are minimal from past harvests. The proposed salvage harvest would use existing roads and skid trails during dry or frozen conditions to reduce soil impacts. Course woody debris retention would be on the low end of 5 tons/ acre due to the need to reduce fire hazard near open roads and along the Dogtown urban interface, but would not be a substantial impact on the small area involved. The small scale of the harvest and combination of mitigation design and implementation of BMP's presents low risk of direct, in-direct and cumulative soil impacts.

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.

No sediment sources were noted on the project haul roads. The proposed minor salvage harvest of dead and dying lodgepole and overstocked trees would have no measurable water yield increase compared to the current conditions based on retaining mixed conifer species canopy and the small harvest area. Planned harvest operations and roads present a low risk of direct, in-direct and cumulative impacts to water quality or beneficial uses based on the harvest design and implementing BMP's.

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 DNRC is a member of the Montana/Idaho Airshed Group which was formed to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction (Montana/Idaho Airshed Group 2006). The Group determines the delineation of airsheds and impact zones throughout Idaho and Montana. Airsheds describe those geographical areas that have similar atmospheric conditions, while impact zones describe any area in Montana or Idaho that the Group deems smoke sensitive and/or having an existing air quality problem (Montana/Idaho Airshed Group 2006).

The project area is located within Montana Airshed 3B which encompasses portions of Missoula and Powell Counties. Currently, this Airshed does not contain any impact zones.

No Action

Under the No Action Alternative, no slash piles would be burned within the project areas. Thus, there would be no effects to air quality within the local vicinity and throughout Airshed 3B.

Action

Under the Action Alternative, slash piles consisting of tree limbs and tops and other vegetative debris would be created throughout the project area during harvesting. These slash piles would ultimately be burned after harvesting operations have been completed. Burning would introduce particulate matter into the local airshed, temporarily affecting local air quality. Over 70% of emissions emitted from prescribed burning is less than 2.5 microns (National Ambient Air Quality PM 2.5). High, short-term levels of PM 2.5 may be hazardous. Within the

typical column of biomass burning, the chemical toxics are: Formaldehyde, Acrolein, Acetaldehyde, 1,4 Butadiene, and Polycyclic Organic Matter.

Burning within the project area would be short in duration and would be conducted when conditions favored good to excellent ventilation and smoke dispersion as determined by the Montana Department of Environmental Quality and the Montana/Idaho Airshed Group. Prior to burning a "Prescribed Fire Burn Plan" would be done for the area. The DNRC, as a member of the Montana/Idaho Airshed Group, would burn only on approved days. Thus, direct and indirect effects to air quality due to slash pile burning associated with the proposed action would be minimal.

Burning that may occur on adjacent properties in combination with the proposed action could potentially increase cumulative affects to the local airshed and the Class I Areas. Thus, cumulative effects to air quality due to slash pile burning associated with the proposed action would also be expected to be minimal.

Cumulative effects to air quality would not exceed the levels defined by State of Montana Cooperative Smoke Management Plan (1988) and managed by the Montana Airshed Group. Prescribed burning by other nearby airshed cooperators (for example Plum Creek Timber Company) would have potential to affect air quality. All cooperators currently operate under the same Airshed Group guidelines. The State, as a member, would burn only on approved days. This should decrease the likelihood of additive cumulative effects.

Harvesting and log hauling could create dust which may affect local air quality. Harvesting operations would be short in duration. Thus, direct, indirect, and cumulative effects to air quality due to harvesting and hauling associated with the proposed action would be minimal.

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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.

No Action: No harvest would occur at this time. Mountain pine beetle would likely continue to infest and kill lodgepole pine and ponderosa pine within the DRNC ownership and surrounding area. Some of the dead trees would likely be blown down or cut for firewood, creating openings within the stands. Over time, some natural conifer regeneration would probably establish in areas with a seed source and favorable microclimate. It is likely that illegal firewood cutting would take place within the proposed harvest area.

Action Alternative: DNRC would harvest and remove lodgepole pine that are dead, dying, or susceptible to mountain pine beetle attack. Changes to the vegetation would include an immediate reduction in numbers of live and dead lodgepole pine on 12 acres. Other species, including western larch, ponderosa pine, spuce and Douglas-fir would be retained. The remaining trees would have increased growth as more resources would be available per tree. While regeneration is not a goal of the prescription, some lodgepole and Douglas-fir would likely become established through natural regeneration in newly created openings. This species selection would result in most areas resembling a very open seed tree harvest. Western larch and/or ponderosa pine would be inter-planted among the residual stand as needed.

No rare plants have been identified in the project area. To prevent introduction of new weeds, off-road equipment will be cleaned and inspected prior to entry into harvest areas.

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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.

Fisheries- No streams occur within the proposed harvest area and no fish bearing streams would be affected. No direct, in-direct or cumulative effects to fish habitat or aquatic life with the proposed action.

Elk (*Cervus elaphus*), White-tailed Deer (*Odocoileus virginianus*) & Mule Deer (*Odocoileus hemimonus*): The proposed action would treat approximately 12 acres that are adjacent to open roads, a recent salvage harvest, and surrounded by human development. The adjacent open roads are frequently traveled, and thus,

effect big game use of the adjacent area. As a result there would likely be low risk of direct, indirect, or cumulative effects to this species from the proposed action.

(See attachment C-2 for Mike McGrath's categorical exclusion

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.

Fisheries: No Federally listed threatened and endangered fish species or critical habitat for threatened and endangered fish species as designated by the USFWS would be affected by this project.

Lynx (Felis lynx): The proposed action would only affect habitat currently classified as mature foraging. The harvest unit was evaluated for habitat suitability and retention at the project level (ARM 36.11.436 8.b.) and the following information was determined. The location of the stand, as well as the stand characteristics does not lend itself to desirable mature foraging habitat. The harvest unit exists on lands currently delineated as cabin site leases. Roads and structures completely surround the proposed harvest unit. Two homes are within 20-40 feet from the lease lot. Dogs from those homes as well as other homes in the surrounding Dogtown area freely wander around the harvest unit as well. As a result, there would be low risk of direct, indirect, or cumulative effects to lynx from the proposed action.

Gray Wolf (Canis lupus): Two groups of wolves inhabit the area near Seeley Lake: the 10-member Vaughn Creek pack south of Placid Lake, and a pair of wolves in the Deer Creek/Mt. Henry area NW of Seeley Lake. The proposed action would retain the current understory creating screening cover which will improve following the harvest activities (More sunlight and nutrients to the residual stand), and the proposed harvest would make use of topographic features, non-lodgepole pine species, and existing regeneration for screening cover post-harvest. As a result, there would likely be low potential for direct, indirect, and cumulative effects to wolves from the proposed action.

Grizzly Bear (*Ursus arctos*): Approximately 12 acres of lodgepole pine are proposed for harvest under the proposed action. All other species will be retained. The proposed action would retain the current understory creating screening cover which will improve following the harvest activities (More sunlight and nutrients to the residual stand), and the proposed harvest would make use of topographic features, non-lodgepole pine species, and existing regeneration for screening cover post-harvest. As a result, there would likely be low risk of direct, indirect, and cumulative effects to grizzly bears from the proposed action.

Bald Eagle (*Haliaeetus leucocephalus*): The nearest bald eagle nest is located approximately 3 miles north of the proposed harvest unit. Because of the distance involved, there would likely be low risk of direct, indirect, or cumulative effects to bald eagles from the proposed action.

Fisher (*Martes pennanti*): The proposed harvest unit would occur immediately adjacent to a heavily traveled open road. Because of the pre-existing disturbance, there would likely be low risk of direct, indirect, or cumulative effects to fishers from the proposed action.

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

If any archaeological sites are found, they would be protected. No direct, indirect, or cumulative effects to cultural resources are expected as a result of the proposed action.

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.

Any change to the scenery in the area from these alternatives would be in addition to past timber harvests and road building, and future fire activity within the project area. This analysis includes all past and present effects.

No Action

If the no action alternative is selected, patches created by dead trees and illegal firewood cutting will exist. The trees that would be killed by the beetle attack would lose all foliage, and eventually branches (over several years). Although the tree bole would still be in existence, this would not be very apparent in the distance, but would be more noticeable when observed close range. The color would be lighter than the current view after the attacked trees die. Thus, direct, indirect, and cumulative effects to aesthetics would be.

Action

The proposed sale would be visible from Grizzly Drive, Claw Lane and Cub Lane. Following treatment these areas would resemble a seed tree or clearcut harvest. Both treatment designations were used in all areas directly adjacent to the harvest areas. Over the long term, these areas would be noticed by the absence of tree crowns, occurrence of regeneration, and potential change in species composition.

Through the proposed sale area, slash from the harvest would be noticeable yet temporary. Generally slash disappears from the site within five years, and is often covered by other vegetation within three years. Again, sites would be generally lighter in color than can be seen currently.

Harvest systems and activities would be ground-based. The skidding equipment and log trucks may cause temporary dust clouds that will quickly disperse and would only occur during harvest. Harvest activities would be quite audible, and, depending upon air conditions, equipment could be heard many miles from their location. The proposed harvest of this volume would most likely be done within several months and would occur during the general "work week". Direct, indirect, and cumulative effects to aesthetics due to harvesting and hauling associated with the proposed action would be minimal.

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.

No impacts are likely to occur under either alternative.

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.

The following timber sale was completed in this area:

Seeley Lake Salvage I & II: Sections 4,9,10 & 15 T16N R15W.
Ponderpseudo Timber Permit Sections 9,10,15 & 16 T16N R15W.
Dogtown timber permit: Section 9 T16N R15W.

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.

Log truck traffic would increase slightly on area roads for the duration of the proposed action. Signs at appropriate locations on access roads would be used to warn motorists and local residents. Harvesting along the open road may cause short traffic delays.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:
Identify how the project would add to or alter these activities.

The proposed action would lead to a small, temporary increase in industrial activity during implementation. The proposed action would include timber harvesting and log hauling.

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.

A few short time jobs would be created for the duration of the proposed action.

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.

The proposed action has only indirect, limited implications for tax collections.

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

Aside from contract administration, the impact on government services should be minimal due to the temporary nature of the proposed action.

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.

The DNRC operates under the State Forest Land Management Plan (SFLMP, DNRC 1996) and Administrative Rules for Forest Management (ARM 36.11.401 through 450, DNRC 2003). The SFLMP established the agency's philosophy for management of forested trust lands. The Administrative Rules provide specific guidance for implementing forest management projects

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.

The project area receives use by walk-in recreationists and ATV users. Recreation opportunities would continue under the proposed action. Portions of the project area are along an open county road which has made it easily accessible for illegal firewood cutting.

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: The project has no direct implications for density and distribution of population and housing

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

No measurable impacts related to social structures and mores would be expected.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

No measurable impacts related to cultural uniqueness and diversity would be expected under either alternative.

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 proposed project should return approximately $2,035.69 to the Montana State University Trust. This estimate uses an estimated stumpage rate of $7.44 per ton. Additionally, the proposed action would contribute approximately $1,934.96 to the forest improvement fund.

EA Checklist Prepared By:	**Name:** Amy Helena	**Date:** 6/2/10
	Title: Management Forester	

V. FINDING

25. ALTERNATIVE SELECTED:

Action Alternative

26. SIGNIFICANCE OF POTENTIAL IMPACTS

NONE

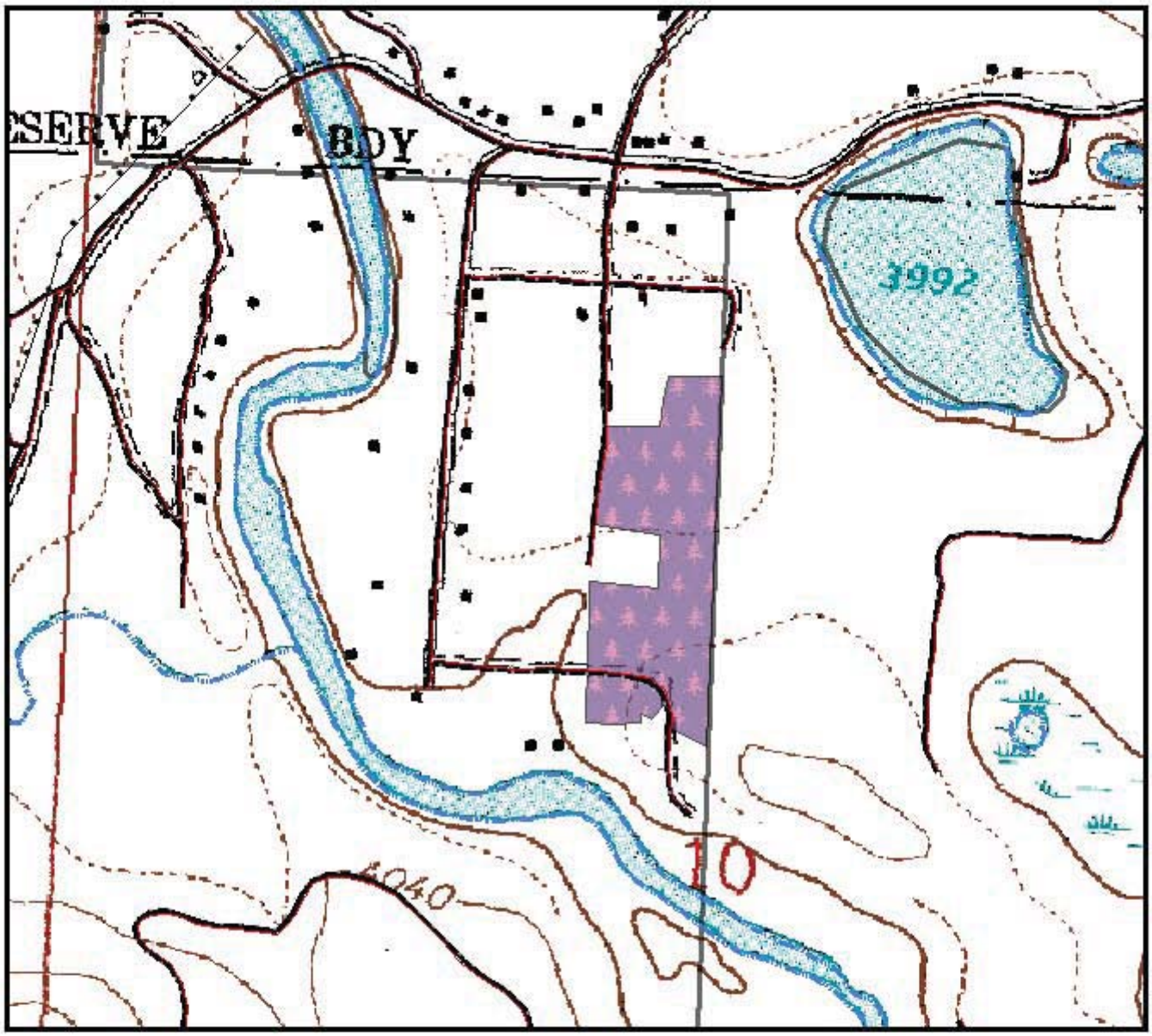
27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

	EIS		More Detailed EA	X	No Further Analysis

EA Checklist Approved By:	**Name:** Neil Simpson	
	Title: Management Forester	
Signature: /s/ Neil Simpson		**Date**: 6/2/10

HALL-E-WOOD
Sec 10 T16N R15W
DNRC-CLEARWATER UNIT

Attachment A



0 0.1 0.2 0.4 0.6 0.8 Miles

Remove all merchantable lodgepole pine. Retain all other species. Protect the residual stand as well as the advanced regeneration during harvest operations. Use existing skid trails and landings whenever possible. Protect wildlife trees and snags during harvest operations. There are lot corners within the harvest area; a metal fence post is present next to each corner. These metal posts as well as the corners need to be protected during all harvest operations.

N

Roads

streams

Harvest Unit

Unit Boundary: Blue Flags
Property line: Red Flags
Harvest Unit : 12 acres

AMH
6/1/10