

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Stonewall Timber Permit
Proposed Implementation Date:	February, 2011
Proponent:	Lincoln Station, Clearwater Unit, Southwestern Land Office, Montana DNRC
Location:	Section 2 T. 14 N., R. 9 W., P.M.M.
Counties:	Lewis and Clark

I. TYPE AND PURPOSE OF ACTION

The Montana Department of Natural Resources and Conservation (DNRC) is proposing to salvage trees killed by the mountain pine beetle on approximately 75 acres in Section 2 T. 14 N., R. 9 W. The proposed project would harvest approximately 150 MBF of ponderosa pine trees killed by the mountain pine (*Dendroctonus ponderosae*). The proposed harvest would salvage the value of dead trees, and reduce bark beetle populations.

The project objectives are to:

- 1) Maximize revenue over the long-term for the School Trust accounts from the timber resources and salvage timber on state forests that is dead, dying or is threatened by insects, disease, fire, or windthrow as mandated by State Statute 77-5-207, MCA,
- 2) Manage the identified parcel intensively for healthy and biologically diverse forests to provide long-term income for the Trust.
- 3) Improve timber stand health and vigor.

The lands involved in this proposed project are held by the State of Montana in trust for the Public Building Trust (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). The DNRC would manage lands involved in this project in accordance with the State Forest Land Management Plan (DNRC 1996) and the Administrative Rules for Forest Management (ARM 36.11.401 through 450) as well as other applicable state and federal laws.

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 DNRC wildlife biologist, soils scientist/hydrologist, and service forester were consulted to help determine if any special circumstances existed.

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

Montana Department of Environmental Quality, burning restrictions.

3. ALTERNATIVES CONSIDERED:

Alternative A – No Action

Under this alternative no salvage harvesting would occur within a timeframe that would capture the value of trees that have been attacked by the mountain pine beetle. The DNRC would continue project development of a large scale timber sale which was scoped in March 2007 as the Beaver-Liver Timber Management Project.

Alternative B – Timber Harvest (Action)

Approximately, 150 MBF of beetle killed timber would be salvage harvested from approximately 75 acres. This salvage harvesting would take place as soon as possible under the HB612 timber permit process. Current uses, including the development of a large scale timber management project would continue.

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.

NONE: Skidding will be limited to periods when soils are dry, frozen, or snow covered.

No unstable slopes or unique geology features are present in the proposed harvest area. Glacial outwash and alluvial deposits form a broad gently sloping terrace. Stonewall Creek has wetlands adjacent to the stream channel. Soils are deep Yourame stony loams on the footslopes of 0-20%. These are well drained soils that have a long season of use and supports Lodgepole Pine, Ponderosa Pine and Douglas fir. Soils in the project area have low risk of erosion. There is potential for soil displacement if operated on when wet. This limitation can be overcome by limiting operations to snow covered, frozen or dry conditions.

Operations are planned for winter conditions when soils are protected by snow or frozen ground. No new roads will be built. Slash will be placed upon the skid trails and well distributed for soil productivity as directed. Planned ground skidding operations present low risk of direct, in-direct and cumulative impacts based on winter harvest and implementing BMP's.

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.

NONE: The project is in the general vicinity of Stonewall and Park Creeks however no harvest is proposed within 500 feet of any streams. The USGS topographical maps show an intermittent tributary to Stonewall Creek in the west ½ of the sw ¼ of section 12. A site visit with DNRC service forester, Norman Fortunate, determined there is no creek in this location and there is very low potential for downslope effects to water quality. The minor extent of harvest of dead and dying trees would not affect water yield and has low risk of direct, indirect or cumulative effects to water quality.

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 in Airshed 6 which includes all of Lewis and Clark County. The project area is located approximately 3 miles north of the town of Lincoln. Year-round homes and vacation homes do exist adjacent to and within a few miles of the project area. The Bob Marshall Wilderness area is approximately 7 miles north of the project area. This wilderness area exceeds 5,000 acres and as such, is considered a Federal Class I Area that ultimately receives protection under the Federal Clean Air Act of 1977.

Alternative A - 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 Airsheds 3B.

Alternative B – Timber Harvest (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 favor 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 effects to the local airshed and the Class I Areas. The United States Forest Service and large scale industrial forestry operations in the area participate as airshed cooperators and operate under the same Airshed Group guidelines as the DNRC. Non-industrial timberland operators are regulated by the Montana Department of Environmental Quality and burning is only allowed during seasons that provide good ventilation and smoke dispersion. Thus, cumulative effects to air quality due to slash pile burning associated with the proposed action would also be expected to be minimal.

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

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.

YES. The current stand is comprised primarily of approximately 60 percent Douglas fir, and 35 percent ponderosa pine. Other tree species, such as lodgepole pine, exist but only on favorable microsites. Species distribution is clumpy, and ponderosa pine is best represented in the southern portions of the proposed harvest area. Approximately 60 percent of the ponderosa pine trees and 95 percent of the lodgepole pine trees have been killed by the mountain pine beetle. Overall the stand would be more open following harvest and openings would be created where there are currently clumps of dead pine trees.

There are no known rare plants or cover types within the project area.

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

Due to the relatively small size of the proposed harvest, and the scattered nature of the trees that would be harvested, there would be minimal risk of direct, indirect, or cumulative effects as a result of the proposed action.

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.

Grizzly Bear— The proposed project area is within the Northern Continental Divide Ecosystem grizzly bear recovery area, and locals report frequent use of the area in the spring and early summer by grizzly bears.

The proposed action would remove trees adjacent to ownership lines and in areas visible from open roads. Thus, reducing visual screening cover for grizzly bears within the areas treated. However due to the limited area of the proposed harvest units, low amount of trees per acre to be harvested, and utilization of topographical features, most visual screening cover would be maintained within the proposed harvest units. As a result, the risk of direct, indirect, and cumulative effects to grizzly bears would likely be low.

Gray Wolf—The home range of the nearest known wolf pack is located approximately 7 miles east of the project area. However, there are unconfirmed reports of wolves using the project area. Because the proposed action would, to the extent practicable, retain visual screening cover along open roads, there would likely be low risk of direct, indirect, or cumulative effects to wolves as a result of the proposed action. However, should a wolf den or rendezvous site occur within 1 mile of the affected parcel, a DNRC wildlife biologist would be consulted to develop further mitigation measures (as per ARM 36.11.430).

Lynx—Based on habitat type, and existing lynx habitat definitions under the Forest Management ARMs, there currently is no lynx habitat within the project area (Stand Level Inventory data). As a result, there would likely be low risk of direct, indirect, or cumulative effects to lynx from the proposed action.

Flammulated owls—The stand proposed for harvest was likely a more open ponderosa pine stand prior to fire exclusion. However, it is currently a closed canopy stand dominated by Douglas-fir. The mountain pine beetle infestation will exacerbate this species shift. The mountain pine beetle infestation will also reduce canopy closure, create legacy snags, and likely spur forest regeneration through the openings in the overstory that they create. Depending on the extent of the overstory mortality, the effects for flammulated owls could be variable under this alternative. Under the proposed timber harvest alternative recruitment of snags that could be used for potential nest sites would greatly be reduced. As a result there would likely be a low to moderate risk of direct, indirect, or cumulative effects above what would be expected under the no action alternative.

Fisheries—No harvest is proposed within 500 feet of any fish bearing streams.

Wetlands—two wetlands less than ¼ acre occur within the general harvest area. These wetlands will be delineated as Wetland Management Zones. Within these WMZ's ground based equipment operation would be avoided where possible. If ground based operations cannot be avoided within a WMZ operations would be limited to periods of low soil moisture, frozen soil, or snow covered ground conditions (ARM 36.11.426). Based on the harvest design there is low risk of this project impacting wetlands.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

An old irrigation ditch exists adjacent to the project area. This ditch is no longer in use and is presumed to be older than 50 years. This ditch will be recorded by a DNRC archeologist when time and weather permit. Proposed project harvest units will be designed to avoid damaging this ditch. Thus, no impacts to cultural resources would be expected.

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.

YES. The proposed harvest would change the aesthetics from within and looking into the stands. While the harvest would be light, most slash would be treated, but some would be expected to remain after treatment. This slash would turn red and would be very noticeable for a few years. The use of heavy equipment to perform the logging could be quite audible, however it is not "out of place" in this area.

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 negative direct, indirect or cumulative effects are expected to occur as a result of the proposed project.

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.

State Forest Land Management Plan EIS, DNRC 1996, set the strategy that guides DNRC management decisions statewide.

Beaver Lodge Timber Sale EA, DNRC 2009, salvage harvest 3.0 MMBF on Section 16 T14N R10W and section 4 and 16 T14N R9W.

Cool Flat 4X4 EA, DNRC 2005, harvest 1.5 MMBF on section 8, 16, 19, and 22 T14N, R8W.

IV. IMPACTS ON THE HUMAN POPULATION
<ul style="list-style-type: none">• <i>RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.</i>• <i>Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.</i>• <i>Enter "NONE" if no impacts are identified or the resource is not present.</i>

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

Human health would not be impacted by the proposed timber sale or associated activity. Safety considerations and temporary risks would increase for the professional contractors working within the sale area. Log truck traffic would increase but safety concerns would be minimized by posting signs and imposing a speed limit, if necessary. There are no unusual safety considerations with the proposed timber sale. The general public and local residents would not face increased health or long term safety hazards because of the proposed timber sale

No additional negative effects would be expected as a result of the proposed action

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

Two grazing leases currently exist within the proposed timber sale. These leases produce approximately \$280.00 per year. Under the no action alternative no short term changes would be expected. As trees die and expose the forest floor to more sunlight an increase in forage production would be expected, eventually these trees would fall over possibly impeding livestock's ability to use these areas. Under the proposed action alternative a similar increase in forage production would be expected, additionally slash from harvest activities could impede livestock's ability to use the areas, much like in the no action alternative.

People are currently employed in the wood products industry in the region. Due to the relatively small size of the timber sale, there would be no measurable direct, indirect, or cumulative effects from this proposed action on industrial, commercial and agricultural activities and production.

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-term jobs in the local area may 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 collection.

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 there would be minimal impacts related to demand for government services due to the relatively small size of the timber sale the short-term impacts to traffic, and the small possibility of a few people temporarily relocating to the area.

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 State Forest Land Management Plan (SFLMP) is the plan under which DNRC manages forested state trust lands. DNRC developed the SFLMP in 1996 to provide field personnel with consistent policy and direction for the management of forested state trust lands. The SFLMP provides the philosophical basis, technical rationale, and direction for DNRC's forest management program. The SFLMP is premised on the philosophy that the best way to produce long-term income for the trust is to manage intensively for healthy and biologically diverse forests. In the foreseeable future, timber management will continue to be the primary source of revenue and primary tool for achieving biodiversity objectives on forested state trust lands.

The DNRC Administrative Rules for Forest Management (*ARM 36.11.401 through 456*) are the specific legal resource management standards and measures under which DNRC implements the SFLMP and subsequently its forest management program. The Rules were adopted in March 2003 and provide the legal framework for DNRC project-level decisions and provide field personnel with consistent policy and direction for managing forested state trust lands. All forest management projects administered by DNRC on forested state trust lands must comply with the Rules.

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 is used by the public primarily for hunting and cutting firewood. The open roads that go through the parcel are used by people accessing National Forest land to the north of the project area. The National Forest Land Includes the Scapegoat Wilderness Area, which is approximately 7 miles north.

No direct, indirect, or cumulative effects to this recreational access or to the Wilderness Areas would be expected as a result of the proposed project.

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.

There would be no measurable direct, indirect, or cumulative impacts related to population and housing due to relatively small size of the timber sale proposed project.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

No negative direct, indirect, or cumulative effects would be expected under either alternative.

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

No negative direct, indirect, or cumulative effects 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.

Alternative A - No Action

A grazing lease on the parcels would continue to generate approximately \$280.00 annually. The timber that is currently infested by the mountain pine beetle would continue to lose economic value.

Alternative B – Timber Harvest (Action)

Revenue from grazing would continue. The timber harvest would generate approximately \$6,300.00 for the Public Buildings trust. This is based on a stumpage rate of \$7.00 per ton, multiplied by the estimated volume of tons. This stumpage rate was derived by comparing attributes of the proposed timber sale with attributes and results of other DNRC timber sales recently advertised for bid. Costs related to the administration of the timber sale program are only tracked at the Land Office and Statewide level. DNRC doesn't track project-level costs for individual timber sales. An annual cash flow analysis is conducted on the DNRC forest product sales program. Revenue and costs are calculated by land office and statewide. The most recent revenue-to-cost ratio of the Southwestern Land Office was 1.16. This means that, on average, for every \$1.00 spent in costs, \$1.16 in revenue was generated. Costs, revenues, and estimates of return are estimates intended for relative comparison of alternatives. They are not intended to be used as absolute estimates of return.

EA Checklist Prepared By:	Names: Neil Simpson	Date: 1/27/2010
	Titles: Management Forester	

V. FINDING

25. ALTERNATIVE SELECTED:

Alternative B- Action Alternative.

26. SIGNIFICANCE OF POTENTIAL IMPACTS: Given this environmental assessment, I believe that this project will not cause any detrimental effect to the project area or surrounding properties or resources. This project is also consistent with the requirements of the Montana State Statute 77-5-207.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

No Further Analysis

EA Checklist Approved By:	Name: Craig V. Nelson
	Title: Supervisory Forester, Clearwater Unit, Montana DNRC
Signature: /s/ Craig V. Nelson	
Date: January 27, 2011	