

DNRC - Trust Land Management Division

**CHECKLIST ENVIRONMENTAL
ASSESSMENT**

FOR THE

EAST SARPY SALVAGE TIMBER SALE

RECEIVED

APR 28 2006

LEGISLATIVE ENVIRONMENTAL
POLICY OFFICE

Prepared by Chris Pileski
Eastern Land Office-DNRC
APRIL 2006

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CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	East Sarpy Salvage Timber Sale
Proposed Implementation Date:	May-August 2006
Proponent:	Southern Land Office of the Department of Natural Resources and Conservation
Location:	All Section 36 Township 2N Range 37E in the Sarpy Creek Drainage of the Yellowstone River in Southeastern Montana.
County:	Big Horn

I. TYPE AND PURPOSE OF ACTION

The Southern Land Office (SLO) of the Montana Department of Natural Resources and Conservation (DNRC) is proposing commercial timber harvest of salvable burned and live green ponderosa pine from a harvest area which includes approximately 297 acres of timber land with approximately 4283 tons being considered for harvest. Approximately 2910 tons would be considered salvage volume and the remaining volume would be live green timber. The purpose of the action is to capture the loss in value of the burned timber as well as generate revenue for the common schools trust. The proposed harvest area is located in all of Section 36 Township 2N Range 37E Southeastern Montana (Attachment 2, Vicinity Map). Approximately 3-4 miles of existing road on both state and private land may be used as designated haul routes. Approximately 1-2 miles of temporary spur roads may be constructed to further accommodate log hauling. Temporary spur roads would be reclaimed through moving the berm back onto the road surface, mechanical surface scarification and surface broadcast seeding of native grass species. An estimated \$27,000 in revenue to the Common Schools Trust is predicted through the implementation of the Action Alternative.

II. PROJECT DEVELOPMENT

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

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

Resource professionals from DNRC and Montana FWP were contacted through personal contact and email seeking comments. The lessee of the state land, as well as an adjacent landowner were also contacted through personal contact. Due to the emergency nature of the salvage opportunity and the need for immediate action additional public involvement was not sought.

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

No permits required and no other agencies with jurisdiction.

3. ALTERNATIVES CONSIDERED:

NO ACTION: Current land use activities of grazing would continue without change. Increased fire hazard may occur as the fire killed trees rot and fall adding to the 1000 hour fuel load on the site. The value of the burned trees would not be captured through the no action alternative.

TIMBER HARVEST ALTERNATIVE: This alternative would continue the current land use of grazing and would also incorporate a salvage timber harvest on the burned area and a selective timber harvest on the remaining unburned acres. Approximately 2910 tons could be salvaged from approximately 200 burned acres and 1373 tons of unburned timber could be selectively harvested from 96 acres of unburned area. (Attachment 2, vicinity and project maps). The salvage timber harvest would remove merchantable sized burned trees while leaving any trees that had less than 50% of their crown scorched. The harvest in the unburned area would be an individual tree selection harvest attempting to reduce stocking levels to a more historic, pre-fire suppression stand density, while maintaining the stand size and age class structure. The harvest would attempt to emulate a low intensity high frequency or Non Lethal fire regime that would historically have been expected on this site. A target Basal Area per acre for these stands would range from 20-25 sqft depending on existing stocking levels and stand structure. The remaining stand would consist of trees of all size classes favoring trees with good form, crown, and vigor. The harvest activity may require the construction of approximately 1-2 miles of temporary spur roads and the use of approximately 3-4 miles of existing road on both state and private land as designated haul routes. All temporary spur roads would be closed and reclaimed upon completion of the sale.

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 of the area is Fort Union Formation, siltstones, sandstones, clay shale and scoria (porcellinite) which are exposed on ridges. There are several badland bluffs in the area that have natural high rates of erosion, but no unusual geologic features occur on the state tracts and slope stability is not expected to be affected by this project. Soils on forest sites are shallow to moderate deep sandy to clayey in texture with moderate to high erosion risk. Soils disturbance would occur on new temporary roads and to a lesser extent in the skid trail locations. Impacts from skidding activities would be mitigated mostly by the scattered nature of the timber, dispersing the skidding activity over a large area. Planned ground skidding operations should have to low risk of direct, in-direct and cumulative impacts based on the implementing BMP's and mitigation measures. Mitigations include temporary use roads, season of use restrictions, general skid trail planning for selected draw crossing and avoiding steep slopes, protecting isolated wetlands and prompt re-vegetation of roads and landings to protect soil resources.

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.

Due to the low precipitation, the lack of perennial streams, temporary road construction, closure and seeding of the temporary roads after use, and the selective nature of the harvest, there would be a low risk of direct or indirect impacts to water quality, and cumulative impacts are not likely. BMPs and site specific mitigations, to control erosion and protect water quality would be implemented. Planned harvest operations and temporary roads present low risk of direct, in-direct and cumulative impacts based on the implementing BMP's and mitigation measures. Mitigations include temporary use roads, season of use restrictions, protecting isolated wetlands and prompt re-vegetation of roads and landings to protect soil resources.

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.

Particulate would be released into the atmosphere when the Slash piles are burned. Slash would only be ignited when ambient air conditions are suitable and air dispersal flows are adequate to lift the smoke into the winds aloft for rapid and thorough dispersal. Environmental conditions required prior to ignition must include adequate snow cover on the ground surface with a long-term forecast of continued low temperatures during daylight hours. There would likely be no cumulative impacts on air quality as a result of the proposed action.

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.

Approximately 2/3 of the project area has been burned with fire intensity and tree mortality ranging from mostly mixed severity with some areas of stand replacement fire. The current stocking level in the burned stands of trees greater than 8 inches DBH is approximately 35 sqft of basal area (BA) with approximately 30 Trees per Acre (TPA). Of the 35 sqft BA approximately 5 sqft and 4 TPA are live green trees that would be left and the remaining 30 sqft BA or 25 TPA is fire killed salvage that would be harvested. The remaining 1/3 of the project area consists of mixed grass and Ponderosa Pine types with smaller amounts of Rocky Mountain Juniper interspersed throughout. The Ponderosa Pine generally occurs along the upland areas and in the swale and draw features associated with the uplands. Stocking levels in the unburned stands are approximately 40 sqft BA with 40 TPA. Tree ages were sampled from a range of size classes and it was determined that there are no stands within the project area that meet the definition of old growth. DNRC has adopted the old-growth definitions proposed by Green et al (Old Growth Forest Types of the Northern Region, R-1 SES 4/92, USDA Forest Service, Northern Region, Missoula, MT) None of the proposed harvest units are in stands meeting the definition of old growth based on Green et al. A representation of old age trees would be retained in unburned harvest units where they occur. The silvicultural prescription in the unburned area calls for Individual Tree Selection harvest of trees from all size classes in an attempt to emulate a low intensity high frequency or Non-Lethal fire regime that would have historically occurred on this site prior to intensive fire suppression efforts that the stand has evolved in. The prescription calls for lowering stocking levels to 20-25 square feet of basal area per acre, depending on current stocking levels while maintaining the stands size and age structure by leaving trees from all size and age classes. The long-term plan for this stand is to maintain the multi-aged structure while maintaining the decreased stocking levels through periodic re-entry. The Montana Natural Heritage Program was contacted and their search found no recorded threatened, endangered, or sensitive plant or animal species within their analysis area. Noxious weeds were limited to spot infestations of Canada thistle and henbane. To prevent introduction of new weeds, off-road equipment would be cleaned and inspected prior to entry into harvest areas. Please refer to Attachment 1, Soils, Hydrology, and Fisheries Report for additional detail about weed management. Due to the selective nature of the proposed harvest and contract mitigation measures, no cumulative impacts to vegetative communities are likely to occur as a result of the proposed activity.

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.

This section holds the potential for a wide variety of wildlife species. The primary species that inhabit the area are mule deer, whitetail deer, elk, Merriams turkey, toads, cottontail rabbits, raptors, migratory prairie birds and others. The timber harvest operations should produce only minor environmental impacts to wildlife species because of the operational season of use and the layout/location of the harvest units. A biologist with Montana Fish, Wildlife and Parks was contacted via email and no comments were received. Due to the lack of forage associated with the burn most wildlife species have moved to other surrounding unburned areas. The limited duration of the salvage harvest should have little or no effect on wildlife species. There will be no cumulative impacts on terrestrial, avian, and aquatic habitats as a result of the proposed action. The harvest plan in the unburned area calls for selective harvest of commercial size ponderosa pine. This should result in a very healthy remaining stand of ponderosa pine. Consequently, reduction of canopy cover would not be extensive in any one locale. All existing snags in both the burned area and the unburned that do not pose a safety risk would be left in place as potential nesting and rest sites. Edge effect within the proposed timber sale should be increased due to the irregular harvest unit boundary layout. Elk, Mule deer and to a lesser extent, whitetail deer may be temporarily displaced during harvest activities but their inherent mobility coupled with surrounding un-harvested areas should provide security and biological needs during the displacement period. No harvest activities are proposed adjacent to any known fish-bearing streams. Due to the selective nature of this harvest, the selective nature of harvest on surrounding ownership, and the surrounding large un-harvested areas, no cumulative impacts on terrestrial, avian, and aquatic habitats are likely to occur 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.

The Montana Natural Heritage Program (MNHP) was contacted and a search of their data base identified the occurrence of the Western Hognose Snake within the analysis area. The Western Hognose Snake is listed as a sensitive species with both the Bureau of Land Mgmt and the US Forest Service. Little is known concerning the habitat requirements of this species. Several specialists were contacted concerning this species and their recommendations are contained in the project file. The MNHP specialist also raised the possibility of another sensitive species the milk snake occurring within the analysis area of this project. Comments associated with this species are also contained in the project file.

There are no known threatened and endangered species in this general area. There are no documented studies suggesting the existence of T&E species in this area. There are no limited environmental resources within this area. The small size and selective nature of the sale and the existing surrounding habitat would create no cumulative impacts as a result of the proposed activity.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

Cultural and paleontologic resources are not documented in the proposed project area. The DNRC staff archaeologist will inspect the area of potential effect prior to commencement of ground disturbing activities and any Antiquities identified at that time will be given appropriate consideration.

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.

The proposed harvest would produce temporary visual impacts. This effect would be mitigated over time as the disturbed sites recover and the Slash piles are burned. The surrounding region is lightly populated which would result in the temporary visual impact distributed over a limited population size. For these reasons, along with the scattered nature of the timber and grasslands no cumulative impacts are anticipated as a result of the proposed activity.

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.

The project would not use resources that are limited in the area. The selective harvest on adjacent ownership and vast un-harvested areas would have no cumulative effects on limited resources.

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.

This section is leased for livestock grazing and is a classified grazing tract. The lessee was contacted in person requesting comments and concerns. No concerns were received from the lessee. No cumulative impacts are likely to occur as there are no other current private, state or federal actions occurring. No other state actions are under MEPA scoping that pertain to this analysis area.

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.

Human health should 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, and possibly for public vehicle traffic on the highway and the county road while log trucks are hauling. There are no unusual safety considerations associated with the proposed timber sale. The general public or local residents should not face increased health or long term safety hazards because of the proposed timber sale.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

The section involved with the proposed timber sale is classified grazing land. The primary grazing period or season of use is late May through late summer. Currently there is no available livestock forage in the burned area. In the unburned areas current levels of livestock may be temporarily be reduced. Over a short period of time the disturbed and re-seeded sites would recover and forage levels should return to their present levels or beyond.

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.

People are currently employed in the wood products industry in the region. Due to the relatively small size of the timber sale program, there would be no measurable cumulative impact from this proposed action on employment.

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.

People are currently paying taxes from the wood products industry in the region. Due to the relatively small size of the timber sale program, there would be no measurable cumulative impact from this proposed action on tax revenues.

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

There would be no measurable cumulative impacts related to demand for government services due to the relatively small size of the timber sale program, the short-term impacts to traffic, the small possibility of a few people temporarily relocating to the area, and the lack of other timber sales in the adjacent 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.

On June 17, 1996, the Land Board approved the State Forest Land Management Plan (SFLMP). The SFLMP provides the philosophy adopted by DNRC through programmatic review (DNRC, 1996). The DNRC will manage the lands in this project according to this philosophy, which states:

Our premise is that the best way to produce long-term income for the trust is to manage intensively for healthy and biological diverse forests. Our understanding is that a diverse forest is a stable forest that will produce the most reliable and highest long-term revenue stream... In the foreseeable future, timber management will continue to be our primary source of revenue and our primary tool for achieving biodiversity objectives.

On March 13, 2003, the DNRC adopted Administrative Rules for Forest Management (Rules) (Administrative Rules of Montana [ARM] 36.11.401 through 450). The Rules provide DNRC personnel with consistent policy, direction, and guidance for the management of forested trust lands. Together, the SFLMP and Rules define the programmatic framework for this project.

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.

This parcel is completely land locked and there is no public access.

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 cumulative impacts related to population and housing due to relatively small size of the timber sale program, and the fact that people are already employed in this occupation in the region

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

No impacts would be expected with either alternative.

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

No impacts would be expected with 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 economic return to the trust for this sale would be approximately \$27,000, which was calculated by taking the estimated 4283 tons multiplied by the estimated minimum bid rate. The estimated minimum bid rate was estimated by using comparable sales analysis.

Costs, revenues, and estimates of return are estimates intended for relative comparison of alternatives. They are not to be used as absolute estimates of return.

For FY 03, SLO had revenue to cost ratio of 2.03:1 and statewide DNRC had a ratio of 1.75:1.

EA Checklist Prepared By:	Name: Chris Pileski Title: Forester	Date: March 30, 2006
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V. FINDING

25. ALTERNATIVE SELECTED:

The timber harvest alternative is the selected Alternative.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

The proposed salvage harvest of approximately 2910 Tons of fire killed ponderosa pine and the commercial harvest of an additional 1373 tons of commercial size ponderosa pine on 297 acres of state land would not result in nor cause significant environmental impacts. The predicted environmental impacts would be adequately mitigated through the proposed timber sale plan, harvest prescription, operating period, unit boundaries, road layout, and contract stipulations. For these reasons, an environmental assessment checklist is the appropriate level of analysis for the proposed action. The lessee of record was contacted and their comments and or concerns were also incorporated into the proposed timber sale. Agency specialists were contacted and appropriate comments and concerns were incorporated into the proposed timber sale. The sale meets the intent, standards, and guidance of the SFLMP and administrative rules. The proposed harvest would satisfy the trust fiduciary mandate and treat the natural resources to increase long term production.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

No Further Analysis

EA Checklist Approved By:	Name: Sharon Moore Title: Area Manager
Signature: Sharon Moore	Date: 4/5/06

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BIG HORN CO
TREASURE CO

3500

Bar

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Attachment 1
Proposed Harvest Units and Roads
East Sarpy Salvage Timber Sale
Sec 36 TwN 2N Rng 37E

-  Temporary Spur Roads
-  Existing Roads
-  Unburned Acres **96 Acres Unburned**
-  Burned Acres **201 Acres Burned**



Map Scale: 6 inches = 1 mile