

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Nelsonville Timber Permit
Proposed Implementation Date:	October 2010
Proponent:	Clearwater Unit, Montana DNRC
Location:	Elk Creek drainage, SW ¼ Section 36 T14N R15W
County:	Missoula

I. TYPE AND PURPOSE OF ACTION

This project is a combination of a fuel hazard reduction, road maintenance tree removal, and a timber sale permit. This timber permit would be used to salvage ponderosa pine, lodgepole pine, and harvest Douglas-fir. The lodgepole and ponderosa pine are either infested with mountain pine beetle (*Dendroctonus ponderosae*) or are likely to be attacked. There is also a large patch of smaller stemmed ponderosa pine that have been hit and killed by this pine beetle. The roads within the sale area were built without future knowledge of maintenance. Trees growing out of the cut and fill slopes are common. This makes the ability to maintain (blading fines back onto the road bed) nearly impossible. This project will treat the slash produced in many places by piling, and will provide a further fuel breaks within a stand that was treated in the 1990's.

The Montana DNRC is proposing to harvest approximately 80 mbf of trees from approximately 30 acres. Harvesting would primarily include lodgepole pine trees. Harvesting of pulp sized material would also take place, given a market for the material. In some places it would be piled. The objectives of the proposed action would be to: 1) restore the forest to its income-generating potential; 2) capture value of dead and dying trees and prevent future value loss 3) reduce trees that are along roadsides and inhibiting proper road maintenance; and 4) generate revenue for the trust beneficiary. An estimated \$1,363.20 in revenue to the Common School Grant Trust would be generated through the implementation of the proposed action. If selected, activities would begin in the early fall of 2010.

The lands involved in this proposed project are held by the State of Montana in trust for the Common Schools (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.

This project was a 612 permit. DNRC specialists were consulted, including: Mike McGrath, Wildlife Biologist; Jeff Collins, Hydrologist. Adjacent neighbors were also contacted regarding this project.

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

Slash burning would be done in compliance with statewide cooperative agreements as well as any local restrictions. All harvested volume will be hauled across DNRC land.

3. ALTERNATIVES CONSIDERED:

No Action

None of the proposed harvest or roadwork would occur at this time. Other current land use activities and the recreational use would continue.

Action Alternative

Under the Action Alternative, the DNRC would continue current land use activities, road work proposed in this EA, and also harvest approximately 80 MBF of mountain pine beetle infested timber and overstocked Douglas-fir from 30 acres in Section 36 (Attachment A, Project Area Maps). DNRC would require that trees alongside roadways would be harvested to help future road maintenance. DNRC would continue to assess rehabilitation needs following harvest activities.

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.

Soils within the project area are a complex of either Winkler gravelly loams or Bignell gravelly loams. No unstable slopes or unique geology features are present. Soils are moderately deep gravelly loams on 5-30% slopes. Erosion is moderate and increases on short steep slopes. Equipment restraints during wetter conditions will reduce erosivity and prevent operations on soil with poor bearing strength. The primary risks to soil productivity are rutting, compaction, and displacement by surface equipment. Soil rutting and compaction occur when equipment operates on wet soils or repetitive trips over the same trails.

Previous selection harvest was mainly on moderate slopes and skid trails have revegetated with less than 10% of impacted area based on distribution of skid trails. The proposed harvest of approximately 30 acres would be completed primarily in the late fall or winter and result in minimal ground effects given contract standards. Planned ground skidding operations should have low risk of direct, in-direct and cumulative impacts based on implementing BMP's and mitigation measures. Mitigations include season of use limits, general skidding plans, use of old trails and landings, and retaining woody debris for nutrients and prompt revegetation of disturbed sites on roads to protect soil resources. Use of these mitigations and contract specifications should produce low risk of direct and indirect effects

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.

The project area is located within the Elk Creek drainage on gentle footslopes of relatively dry forest sites just above the sagebrush range. The project itself is located to the west of Highway 200 and is south of Elk Creek approximately 0.3 miles. There are no streams on the haul route or sites of sediment delivery to streams and all harvest areas are located well away from surface waters. Elk creek is a sediment impaired waterbody, but would not be affected by this project since no road or harvest areas are within 1/3 mile of Elk Creek and there are no surface features that could potentially deliver sediment to Elk Creek or other surface waters. The proposed salvage would use existing roads and improve all road areas that currently have some potholes and ruts, but do not deliver sediment to surface waters or streams. The small scale of this harvest will not support road grading, but the limited road use is not expected to further degrade road conditions from current conditions. The existing access road maintenance is deferred and will be planned for completion (deeper drain dips etc.) with future projects. Salvage harvest would occur on a minor area of about 30 acres and primarily during the winter, when ground effects will be minimal. Skid trails and temporary roads would be stabilized by slashing and possibly by installing drainage where needed to prevent erosion. All roads and landings would be stabilized and may be grass seeded as part of the harvest project to control erosion. The small scale of this project would not affect water yield or sediments. Based on implementation of BMP's, Forest Management Rules and mitigation measures, there is very low risk of direct, in-direct or cumulative effects to water quality or water 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.

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 3b which encompasses much of eastern Missoula County. Currently, this airshed does not contain any impact zones. This project is located approximately 1 mile west of Greenough, Montana. Numerous residential properties are found interspersed throughout the project area. The Bob Marshall Wilderness area lies approximately 15 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.

No Action: Under the No Action Alternative, slash piles would not 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 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 which 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.

NONE

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. Newly disturbed roads and landings will be seeded to grass to reduce the spread of weeds. Noxious weed spread would not be greatly increased by this action or cause cumulative impacts to vegetation based on the mitigation measures.

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.

No streams supporting fish or stream segments with connectivity to down slope fisheries occur within the proposed harvest area. The project access road enters Highway 200 and does not cross or parallel any fish supporting streams either. The likelihood of sediment delivery is very unlikely. There is very low risk of direct, in-direct or cumulative effects to fish habitat or aquatic life with the proposed action.

The following species were considered but eliminated from detailed study due to lack of habitat present: Peregrine Falcon, Common Loon, Harlequin Duck, Townsend's Big-eared Bat, Coeur d'Alene Salamander, Northern Bog Lemming, Mountain Plover, and Columbian Sharp-tailed Grouse.

Bald Eagle—The proposed action and associated hauling route would be located >2.25 mile from the nearest active bald eagle nest, with topographic relief between the known nest site and project area. As a result, there would likely be low risk of direct, indirect, or cumulative effects to bald eagles as a result of the proposed action.

Pileated Woodpecker- The proposed action would remove smaller overstory trees and stems up to 18 inches in diameter. The existing stand is the result of a commercial thin harvest ten years ago. Currently the stand is very open with little regeneration over the height of 6-8 feet tall. The small amount of harvest area proposed, and the existing stand levels, there would likely be low risk of direct, indirect, or cumulative effects to pileated woodpeckers as a result of the proposed action.

Black-backed Woodpecker- Within an approximately 30 mile radius, approximately 76,684 acres of forest burned in 2007 on four large fires. Due to the abundance of recently burned habitat, and this species' affinity for burned areas, the proposed harvest would likely have low risk of direct, indirect, or cumulative effects to black-backed woodpeckers.

Elk , White-tailed Deer, & Mule Deer- The proposed action would treat lodgepole and ponderosa pine that have been affected by mountain pine beetles. As such, under baseline conditions the snow intercept cover that these tree species provide would be lost due to the effects of the mountain pine beetle infestation. Given the previous timber sale, snow intercept is minimal. Removal of these small pockets is very minimal in size. As such, there would likely be only a minimal increase in direct, indirect, or cumulative effects to big game winter range beyond what would be expected under the no action alternative.

Flammulated Owl- The proposed action would remove affected lodgepole and ponderosa pine and smaller patches of Douglas-fir within the proposed harvest units and affect approximately 30 acres of habitat types preferred by this species. Through the proposed harvest, group selections would likely occur, creating small openings in the forest that would be conducive to regenerating small pockets of forest. Such conditions could create suitable habitat for this species in approximately 20 years. As a result, there would likely be low risk of direct, indirect, or cumulative effects as a result of the proposed action.

Fisher- The proposed harvest unit would occur immediately adjacent to a 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.

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 streams supporting fish or stream segments with connectivity to down slope fisheries occur within the proposed harvest area. The project access road enters Highway 200 and does not cross or parallel any fish supporting streams either. The likelihood of sediment delivery is very unlikely. 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. There is very low risk of direct, in-direct or cumulative effects to fish habitat or aquatic life with the proposed action.

Grizzly Bear- Due to the close proximity to human habitations, Highway 200, previously mentioned timber sales, and industrial timber harvesting within the cumulative effects analysis area, the temporary (15 to 20 years) loss of visual screening cover in portions of the project area may have a minor cumulative negative effect on grizzly bears. In conjunction with the aforementioned timber harvests on nearby State, private, industrial, and University lands, there is a slightly increased potential for negative interactions with the surrounding human population. Due to the proximity of the project area to the Greenough area and the adjoining highway, human use of the area is of sufficient intensity that vegetative screens are valuable as buffers to bears from human habitations and use within the project and cumulative effects analysis areas.

Given previous timber sales, the smaller stems have been greatly reduced. This condition and the proposed harvest would greatly reduce vegetative screening. Grizzly bear use of habitats near human habitations would be deterred through these habitat alterations. Topography could be used as screening by grizzly bears, but given the adjacent highway and private property, any grizzly in the area would likely be travelling through. The risk of direct, indirect, and cumulative effects to grizzly bears is assumed to be low.

Gray Wolf- Two groups of wolves inhabit the area near Greenough: the 10-member Belmont Creek pack north of the project area and five wolves that have appeared in the Douglas Creek area (within the area where the Elevation pack that was lethally removed). The proposed action would further reduce screening cover, which could temporarily increase wolf vulnerability in the old harvest units within this parcel. The proposed action 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

Lynx- Currently, the DNRC uses the Forest Management Administrative Rules (MCA 36.11.104 and MCA 36.11.435) to manage lynx. This parcel is part of the federally designated critical lynx habitat although it does not contain lynx habitat as part of the DNRC SLI database. Due to the fact that stands on this site are not likely to be lynx habitat (ponderosa pine overstory with a sagebrush understory) it is believed that the federal habitat determination is incorrect. Since the DNRC will not require federal action (ROW, easements, funding, etc.) for this project, the federal restrictions do not apply. There would likely be low risk of direct, indirect, or cumulative effects from the proposed action.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

NONE

No historical or Archaeological sites are known to exist within the general area of this timber permit.

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, road building, vegetation management (grazing, pre-commercial thinning, etc.) 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 will exist. Potentially these openings will likely be more given the currently seen mountain pine beetle outbreak timeline. 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 easily seen within the middleground viewshed. The color would be lighter than the current view after the attacked trees die. Thus, direct, indirect, and cumulative effects to aesthetics would be minimal.

Action

The proposed sale would be partially visible from Highway 200 in the Greenough area. Only portions of the harvest units would be visible from any of these locations, and in many instances, the openings created would be minimal. Large portions of the proposed harvest units would be blocked from view by topography or by vegetation. The removal of bark beetle attacked trees could change the middleground view from Highway 200. Over the long term, these areas would be noticed by the absence of tree crowns, occurrence of regeneration, and potential change in species present.

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 and could be done during the winter. 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 a month 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.

NONE

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.

West Lubrecht Timber Sale (DNRC TS-1400, 1998) and Haywire Wallace Timber Sale (DNRC TS-1535, 2009) and the Temporary Road Use Permit (SWLO-CLS-10-03) are recent or current agreements on this parcel. No effects (cumulative or immediate) are expected from this permit regarding the Action or No-Action and past uses. No other uses are planned for this section currently.

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.

YES

Log truck traffic would increase slightly on area roads for the duration of the proposed action. Signs at the highway access would be used to warn motorists and local residents.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

NONE

The proposed action would lead to a temporary increase in 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.

NONE

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.

NONE

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

NONE

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.

NONE

The DNRC is currently working on an HCP for several terrestrial and aquatic species. Currently, the DNRC uses the State Forest Land Management 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.

NONE The project area receives use by walk-in recreationists. Recreation opportunities would continue under the proposed action

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.

NONE

The proposed action has no direct implications for social structures and mores.

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

NONE

The proposed project has no direct implications for cultural uniqueness and diversity.

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.

No Action: A grazing license on the DNRC parcel could continue. Currently this lease is inactive.

Action: This project should return to the common school trust approximately \$1,363.20. This is calculated by multiplying the expected sawlog volume of 454 tons or 80 mbf. (5.68 tons per thousand), and the amount paid to the DNRC (including forest improvement fees and stumpage for non sawlog material). In this case, work done for the DNRC (removal of "eyesore" smaller patches of smaller stems and road work) is included in the stumpage paid for the sawlog volume. For sawlog, an estimated price of \$3.00/ ton (\$17.04 / mbf.) will be paid

and the money collected for forest improvement projects will be \$5.51 / ton (\$31.31 / mbf.). Stumpage payments for non-sawlog material will be \$100.00 paid lump sum.

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. These revenue-to-cost ratios are a measure of economic efficiency. The most recent revenue-to-cost ratio of the Southwestern Land Office was 2.43. This means that, on average, for every \$1.00 spent in costs, \$2.43 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:	Name: Craig V. Nelson Title: Supervisory Forester, Clearwater Unit	Date: October 26, 2010
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V. FINDING

25. ALTERNATIVE SELECTED:

Action Alternative

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

NONE

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

No Further Analysis

EA Checklist Approved By:	Name: Dave Poukish Title: Unit Manager, Clearwater Unit
Signature: /s/ Dave M. Poukish	Date: October 27, 2010