

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Homestead Pine PCT and FI projects
Proposed Implementation Date:	July 1, 2020
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 pre-commercial thinning, fuel hazard reduction, and fuel treatment through prescribed pile burning on 145 acres of Common School land.

The pre-commercial thinning would change the stands regeneration to a state much more like the desired future condition. Future stands if this environmental assessment is accepted, would be primarily seral species as opposed to the current stands that are primarily populated with Douglas-fir. This change and associated slash piling can be used to decrease fuel hazards presented within this DNRC parcel and transportation system that is contained within. Portions of this pre-commercial thinning would also be used to make a stand of ponderosa pine less likely to become infested by mountain pine beetle (*Dendroctonus ponderosae*). The objectives of the proposed action would be to: 1) restore the forest to its income-generating potential; 2) prevent future value loss; and 3) reduce slash formed by the project that are along roadsides and ownership boundaries. If selected, activities would begin in the early summer 2020.

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.

DNRC specialists were consulted, including: Garrett Schairer, Wildlife Biologist; Andrea Stanley, Hydrologist / Soil Scientist. Adjacent neighbors were also contacted regarding this project.

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

Slash burning and treatment would be done in compliance with statewide cooperative agreements as well as any local restrictions.

3. ALTERNATIVES CONSIDERED:

No Action

None of the proposed pre-commercial thinning or piling 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, pre-commercial thinning and piling by hand crews would occur.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

The project is located in the lower portion of the Elk Creek watershed at the base of the Garnet Range. The underlying geology is mainly Tertiary sedimentary rocks and sediments and more recent alluvium. Soils include within the project area are Winkler and Bignell gravelly loams. These soil types have relatively poor bearing strength and can erode easily following disturbance. Slopes within the project area are less than 30% and slopes are assumed stable. The existing road infrastructure within the quarter-section containing the project area totals 2.2 miles and were inventoried as meeting Montana forestry best management practice (BMP) standards in 2011.

Past and existing disturbances in the project area include a salvage harvest (2010-2011), a timber sale in 1997, and cattle grazing.

Proposed project activities would have a low risk of physical disturbance to soil resources. The proposed thinning work will be completed with hand crews wheel and track based equipment will not be operated outside of the existing road infrastructure. Due to the low risk of physical disturbance, an increase in erosion risk over the existing condition would also be low.

The thinning activity will remove organic material from the project area by slash piling and burning. The scale of this removal is relatively small and the retention of existing down material and the leaving of some of the newly cut wood (coarse and fine material), will ensure organic material continues to be available for decomposition and microclimates needed to maintain nutrient cycling and soil productivity at the project area.

Independently the project has a low risk of new impacts to soil resources. Impacts to soils from past timber and grazing activities exist, however this project would have low risk of contributing to a cumulative impact.

Soil Mitigations:

- coarse and fine woody debris at the project area to sustain a minimum average coarse woody debris concentration of 9 tons per acre.
- Return to pile burn areas immediately following burning and after ground has cooled and seed ground to ensure ground-stabilizing vegetation returns and reduce risk of noxious weed recruitment to these areas following project implementation.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

The project is located in the lower portion of the Elk Creek watershed, approximately 1 mile south of the confluence of Elk Creek with the Blackfoot River. Slopes within the project area are less than 30%. The existing road infrastructure within the quarter-section containing the project area totals 2.2 miles and were inventoried as meeting Montana forestry best management practice (BMP) standards in 2011. Past and existing disturbances in the project area include a salvage harvest (2010-2011), a timber sale in 1997, and cattle grazing.

Streams and other surface water features do not occur in the project area.

Proposed project activities would have a low risk of impact to water quality and quantity resources due to the limited nature of the proposed work (limited vegetation removal and limited ground disturbance) and the distance of this work from surface water features. The proposed thinning work will be completed with hand crews wheel and track based equipment will not be operated outside of the existing road infrastructure. To determine the potential for Cumulative Watershed Effects for this analysis known management activities in the project area and the scope and extent of proposed activities are considered. Known disturbances in the project area are an existing road network, past timber harvest, and grazing. The proposed activity is pre-

commercial thinning by handcrew. This proposed work would have a low risk of adverse cumulative effect at the project area scale. Cumulative effects analysis was not scaled beyond the project area.

Water Quality & Quantity Mitigations:

- Meet mitigations listed in the soils section of this analysis to minimize erosion.
- Ensure road infrastructure used in the project continue to meet Montana forestry best management practice (BMP) standards.

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.

Pick-up travel could create dust which may affect local air quality. This would be short-term in duration. Thus, direct, indirect, and cumulative effects to air quality due vehicle travel 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: black-backed woodpecker, Coeur d'Alene salamander, Columbian sharp-tailed grouse, common loon, harlequin duck, mountain plover, northern bog lemming, peregrine falcon, Townsend's big-eared bat, and wolverine.

Sensitive

Bald Eagle—The proposed activities would be located roughly 0.8 mi from the Ninemile Prairie Bald Eagle territory. Topographic and vegetative screening exists between the proposed units and the existing nest site. The nature and timing of the proposed activities would not be expected to disturb nesting bald eagles using this territory. Proposed activities would not alter availability of large snags or emergent trees that may be used as nesting or perching sites. 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 trees and reduce overall density at the canopy level. Negligible potential for disturbance to nesting pileated woodpeckers would be anticipated from the proposed activities. Proposed pre-commercial thinning would be expected to have no effect on nesting or foraging habitats for pileated woodpeckers. Future foraging and nesting habitats could develop quicker should the proposed activities occur than if the stand were to continue without the proposed activities. There would likely be low risk of direct, indirect, or cumulative effects to pileated woodpeckers as a result of the proposed action.

Flammulated Owl- The entire project area contains potentially suitable flammulated owl habitats. Past timber management and firewood gathering has likely altered availability of large trees and snags in the project area. Proposed activities associated with the action alternative could disturb flammulated owls while creating more open stands in the project area. The more open stand conditions, the retention of fire adapted tree species, and the maintenance of snags would move the project area toward historical conditions, which is preferred flammulated owl habitat. Given the potential for disturbance and the potential improvement in habitat quality, a minor risk of direct, indirect, or cumulative effects to flammulated owls would be anticipated as a result of the proposed action.

Fisher- The proposed activities would occur immediately adjacent to the well-traveled Highway 200 and numerous open roads exist in the project area. Roughly 26 acres of low-quality upland habitat exists in 2 discontinuous patches in the project area. These patches are separated by unsuitable habitat types and the project area is in a landscape of unsuitable habitat types. Little to no use by fishers would be anticipated. There would likely be low risk of direct, indirect, or cumulative effects to fisher as a result of the proposed action.

Gray Wolf- Although several groups of wolves inhabit the greater area near Greenough, wolves have not been documented in the project area. Given the small area, the availability of other habitats in the area, as well as the proximity to Highway 200 and numerous open roads and residences, extensive wolf use would not be anticipated. Wolves using the area could be disturbed by proposed activities and are most sensitive at den and

rendezvous sites, which are not known to occur in the project area or within 1 mile of the project area. Proposed activities would occur in white-tailed deer winter range, but no appreciable changes in thermal cover or snow intercept capacities would be anticipated. Proposed activities could reduce visual screening, which could temporarily increase wolf vulnerability and cause slight shifts in big game use, which could lead to a shift in wolf use of the project area. There would likely be low risk of direct, indirect, or cumulative effects to gray wolves as a result of the proposed action.

Big Game Species

Elk, White-tailed Deer, & Mule Deer- The project area includes roughly 95 acres of white-tailed deer winter range. Winter range for mule deer, elk, and moose is not present in the project area. No appreciable changes to snow intercept and/or thermal cover capacity would be anticipated in the project area. Proposed activities could reduce visual screening which could reduce big game use and potentially big game mortality. There would likely be low risk of direct, indirect, or cumulative effects to big game 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.

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- The project area is 18 miles south of the Northern Continental Divide Ecosystem grizzly bear recovery area and roughly 0.75 mile southwest of 'occupied' grizzly bear habitat as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones. Extensive use by grizzly bears would not be anticipated given the proximity to Highway 200, other open roads, human residences, and numerous other forms of human disturbance in the area. Individual animals could occasionally use the project area while dispersing or possibly foraging, and they could be displaced by project-related disturbance if they are in the area during proposed activities. Proposed pre-commercial thinning would reduce visual screening in the project area, which would further reduce potential for use by grizzly bears. However, given their large home range sizes, the anticipated use potential, and manner in which grizzly bears use a broad range of forested and non-forested habitats, the proposed activities and alterations of forest vegetation on the project area would have negligible influence on grizzly bears. There would likely be low risk of direct, indirect, or cumulative effects to grizzly bears as a result of the proposed action.

Lynx- No suitable habitats are in the project area. Thus, no direct, indirect, or cumulative effects to Canada lynx would be expected to occur as a result of either alternative.

Yellow-billed Cuckoo- No suitable habitats are in the project area. Thus, no direct, indirect, or cumulative effects to Yellow-billed Cuckoos would be expected to occur as a result of either alternative.

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, the stands will remain overstocked. This could result in increased infestation by insects (spruce budworm, mountain pine beetle, etc.). The stands will reduce in growing potential and the fuel hazard within these stands will increase. Immediately, direct, indirect, and cumulative effects to aesthetics would be minimal.

Action

The projects will be partially visible from Highway 200 in the Greenough area. Large portions of the proposed projects would be blocked from view by topography or by vegetation.

Through the proposed action, slash from the pre-commercial thinning would be either piled or lopped and scattered to below 18” of the ground. It 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.

The general time-period of the pre-commercial thinning work would last up to 3 months given the amount of personnel working on the project. The proposed action would be done during the general “work week”. The following prescribed burning of slash piles would be done by the DNRC and would occur later. 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 the Nelsonville Timber Permit (DNRC TP-15,267, 2010) are recent 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 has adopted the HCP for several terrestrial and aquatic species and continues to use 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: An opportunity for a grazing license on the DNRC parcel could continue. Currently this lease is inactive.

Action: Approximately 145 acres would be pre-commercially thinned as part of this project. Other activities, such as burning, would also be done. The general cost of pre-commercial thinning and piling per acre recently on Clearwater Unit has ranged from \$300.00 to \$500.00 per acre for similar projects. Given an average of \$400.00 / acre, a total cost of the entire project could be as high as \$58,000.00. Estimates of value are difficult to predict given the variability of financial markets, the unpredictable nature of wildland areas (wildland fires, weather, etc.), and the future need of softwood lumber prices. Given past performances, thinning has produced a usable stem much faster and returned money to the landowner much sooner than overstocked stands. The assumed cost should be recovered, by a net increase in growth, thus lessening rotation between harvests by up to thirty years.

Many of the previous pre-commercial thinning projects on the Clearwater Unit have included piling of slash. As part of this road ways and ownership line would be piled. Units that are primarily ponderosa pine, would be required to be piled and burned prior to the likely hatch of *Ips spp.* beetles. The piling along roads or ownership breaks would provide fuel breaks and reduce fuel hazards.

Currently, DNRC qualifies for payment of this pre-commercial thinning and piling portions of this project by another party (Western Bark Beetle Grant). This is different than the usual funding source using Forest Improvement money provided by projects (timber sales, timber permits, etc.).

EA Checklist Prepared By:	Name: Craig V. Nelson	Date: April 8, 2020
	Title: Forest Management Supervisor, Clearwater Unit	

V. FINDING

25. ALTERNATIVE SELECTED:

Following a review of the document as well as the corresponding Department policies and rules, the Action Alternative has been selected because it meets the intent of the project objectives outlined in Section I – Type and Purpose of Action. This includes but is not limited to the requirement that DNRC 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).

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

I find that the Action Alternative will not have significant impacts for the following reasons:

- The Action Alternative is in compliance with the existing laws, rules, policies, and standards applicable to this type of proposed action.
- Appropriate mitigations have been proposed to minimize potential impacts to resources such as soil, water quality, and wildlife.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

No Further Analysis

EA Checklist Approved By:	Name: Kristen Baker-Dickenson
	Title: Unit Manager, Clearwater Unit
Signature: /s/ K. Baker-Dickinson	Date: 04/22/2020