

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Clearwater Flats Pre-commercial Thinning
Proposed Implementation Date:	Summer 2010 – Fall 2015
Proponent:	Clearwater Unit – MT DNRC
Location:	Sections 18,19, 20, 29, 30 and 31 T 15N, R 14W M.P.M. and section 36 T15N R15W
County:	Missoula

I. TYPE AND PURPOSE OF ACTION

This project is a multi year, multi contract pre-commercial thinning project. Work would be completed utilizing contract labor and, possibly, district fire crews. This project would cut sub-merchantable trees to promote seral species, and increase annual growth of crop trees. The severing of these stems increases the amount of usable sunlight, water, and nutrients for the remaining stems. This project may require slash treatment in the form of hand piling and burning, or lopping and scattering.

The total project area covers over 400 acres. A majority of these acres have been commercially treated in the past ten years. The Timber Sales associated with these treatments were Clearwater River Numbers 1,2, and 3. This undertaking may consist of several smaller thinning projects. These would take place over the next five-year period depending on time. These would be accomplished given availability of fire crew assistance, volunteer help, and budget constraints that would affect funding for pre-commercial thinnings.

II. PROJECT DEVELOPMENT

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

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

Mike McGrath, DNRC Wildlife Biologist, Jeff Collins, DNRC Soils Scientist / Hydrologist were the specialist contacted. Jon Hayes, DNRC Area Silviculturist, provided approval of the idea of the pre-commercial thinning, and various other DNRC employees that gave advice regarding wildland fuel concerns within this area.

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

None

3. ALTERNATIVES CONSIDERED:

Alternative A: No Action

Alternative B: Pre-commercial Thinning (action)

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. Soils in these areas are mainly Totelake gravelly loams. No high erosion sites were identified and no soil disturbance expected with hand crew labor. Pre-commercial thinning does not use motorized vehicles off of established roads. The only use of vehicles is to access thinning units. No roads will be constructed and there is very low risk of soil disturbance, direct, in-direct or cumulative effects with the proposed action.

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.

This project covers a radius of over 2 miles. It will include 11 units ranging in size from 6 acres to 84 acres that are not located in riparian areas except for portions of a 10 acre thinning unit near Lost Horse Creek and 6 acre thinning unit near Lost Prairie Creek. Lost Horse Creek and Lost Prairie Creek are Class 1 streams that flow through a portion of the DNRC project area and support fish habitat. Both streams support all beneficial uses and are not listed as a water quality limited streams. A primary objective for the riparian thinning units are to decrease potential wildland fuels (conifer regeneration) adjacent to the open Lost Horse road. This unit would involve thinning overstocked conifers to a spacing of 8 to 10 feet and piling of the slash outside of the marked SMZ and would retain a higher tree per acre count than other thinning units after treatment. This would be done to increase shade on the stream after the thinning, and would achieve the higher amount of stems that are expected on the natural un-thinned site. A high proportion of the stream channel vegetation is deciduous hardwood and willows / shrubs, and this portion of the vegetative layer would not be treated. No bank edge trees or overstory trees would be affected and only minor thinning would occur in the small SMZ portions of the treatment area.

No high erosion risk soils were identified in the proposed project sites. These soils are excessively drained and have minor slopes. No ground disturbance in the thinning units is expected from hand labor except for small spot burning of hand piled slash. The thinning crews would use existing roads and there is low risk of soil erosion or sedimentation during this project. not affect sedimentation. Given these conditions the proposed action would show minimal risk of direct, indirect, or cumulative effects on water quality, quantity, and distribution as a result of the proposed action.

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 7 miles south of Seeley Lake, Montana. The Bob Marshall Wilderness area lies approximately 13 miles north northeast 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, no slash piles would be burned within the project areas. Thus, there would be no effects to air quality within the local vicinity and throughout Airshed 3b.

Action: Under the Action Alternative, slash piles consisting of tree limbs and tops and other vegetative debris would be created throughout the project area during harvesting. These slash piles would ultimately be burned after harvesting operations have been completed. Burning would introduce particulate matter into the local airshed, temporarily affecting local air quality. Over 70% of emissions emitted from prescribed burning is less than 2.5 microns (National Ambient Air Quality PM 2.5). High, short-term levels of PM 2.5 may be hazardous. Within the typical column of biomass burning, the chemical toxics are: Formaldehyde, Acrolein, Acetaldehyde, 1,4 Butadiene, and Polycyclic Organic Matter.

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

Burning that may occur on adjacent properties in combination with the proposed action could potentially increase cumulative 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.

Prior to burning be used, a "Prescribed Fire Burn Plan" will be been done for the area.

Given these conditions the proposed action would show minimal risk of direct and indirect effects on air quality.

Cumulative Effects

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

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.

Decreasing their current stocking levels would change existing stands. The changes to these stands should provide increased sunlight, and reduce competition for limited water, and nutrients for the remaining trees. This will provide the necessary factors to increase tree growth. The post thinning stands would show an increased percentage of seral species. No rare plant communities would be impacted. Wildland fuel concerns will be reduced by hand piling of created slash, lopping to a height of 18" or less, and the development of fuel breaks placed through units (removal of slash by dragging into the thinning unit).

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.

Peregrine Falcon – The nearest known peregrine falcon nest is located approximately 20 miles SW of the project area. Thus, there would be minimal risk of direct, indirect, or cumulative effects as a result of the proposed action.

Pileated Woodpecker – The proposed action would thin within stands of seedlings and saplings, habitat that is not considered suitable for this species. Thus, there would be minimal risk of direct, indirect, or cumulative effects as a result of the proposed action.

Black-backed woodpecker - The proposed action would thin within stands of seedlings and saplings, habitat that is not considered suitable for this species. Thus, there would be minimal risk of direct, indirect, or cumulative effects as a result of the proposed action.

Flammulated Owl - The proposed action would thin within stands of seedlings and saplings beneath a recently reduced canopy of ponderosa pine and Douglas-fir, habitat that may be considered suitable for this species. Preferred habitat for the flammulated owl is primarily an overstory of open canopied (30 to 50% canopy closure) ponderosa pine or Douglas-fir, with dense clumps of seedlings and saplings in the understory. The recently completed Clearwater River timber sales created such conditions within the project area. While the effects of pre-commercial thinning on flammulated owl nesting habitat suitability may not be understood, such thinning may reduce the abundance of insects upon which this species feeds. Thus, there may be low to moderate risk of direct and indirect effects, and minimal risk of cumulative effects to flammulated owls as a result of the proposed action.

Fisher - The proposed action would thin within stands of seedlings and saplings, habitat that is not considered suitable for this species. Additionally, fisher habitat is uncommon in the project area, any riparian areas would be avoided, and downed material would be left intact when possible. Thus, there would be minimal risk of direct, indirect, or cumulative effects as a result of the proposed action.

Townsend's Big-eared Bat – N/A

Coeur d'Alene Salamander - N/A

Columbian Sharp-tailed Grouse - N/A

Common Loon – While loons are known to use nearby Elbow Lake and portions of the Clearwater River, the proposed action would not be expected to increase background noise levels or create water quality issues that might affect this species. Thus, there would be low risk of direct, indirect, or cumulative effects to loons as a result of the proposed action.

Harlequin Duck – Habitat for this species generally consists of fast flowing mountain streams with high water quality, aquatic invertebrates for food, escape cover, some slack water, and relative isolation or solitude. Nests may be on the ground in thick vegetation, in rocky outcrops, in piles of woody debris, hollow trees or snags in adjacent forests, and in a variety of other habitats. The proposed action is not expected to affect the water quality of the Clearwater River or Blanchard Creek, or alter riparian habitat along the river. As a result, the proposed action is not expected to affect harlequin ducks or their habitat.

Northern Bog Lemming - N/A

Mountain Plover - N/A

Big Game – The proposed action would not reduce snow-intercept cover or degrade big game winter range. However, the proposed action would reduce hiding cover that is currently provided by seedlings and saplings. This may slightly increase big game vulnerability during the hunting season. In recent years, many acres of timber have been harvested throughout the project area, which effectively increases sight distance, and reduces hiding cover for big game species. The proposed action would likely only affect deer during the hunting season; thus, there would likely only be minor direct and indirect effects to big game as a result of the proposed action. However, given the recent timber harvest activities on surrounding lands, there have been cumulative losses in snow-intercept cover and hiding cover. During Harvest on DNRC lands islands of hiding cover were left scattered throughout harvest areas and adjacent to roads. These mitigation measures would continue in the layout of pre-commercial thinning units. Considering these mitigation measures the project would likely add only minor cumulative impacts.

Fisheries and Aquatics Lost Horse Creek and Lost Prairie Creek are Class 1 streams that flow through a portion of the DNRC project area and support fish habitat. MTFWP MFISH waterbody report identifies Lost Horse Creek as common abundance of westslope cutthroat trout and minor species in the lower reaches. Lost Prairie Creek has rare abundance of westslope cutthroat trout and minor species in the lower reaches. The proposed thinning in portions of the stream riparian zones would remove some overstocked submerchantable conifers, but maintain all other submerchantable trees and shrubs as noted in the hydrology section. No overstory trees would be removed and stream shading would be maintained and likely enhanced by promoting deciduous shrubs over small conifers within the SMZ. There is low risk of effects to stream shading, water temperature, sedimentation, or fish habitat components of large woody debris, nutrients or channel stability associated with the proposed action. No changes in road conditions would occur and no sediment sources from existing roads were identified along the access route. There is very low risk of direct, in-direct or cumulative effects to fish habitat or aquatic life with 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.

Bald Eagle – There is a Bald Eagle nesting site in section 29, adjacent to the project area. There are several units that are proposed along the Lost Horse Road. None of these units are within a half mile (nest restrictions between February 1 – August 15) of the eagle nest. All other units have suitable distance and topographic relief between them and the known nest site. 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.

Grizzly Bear – The proposed project area is located approximately nine miles south of the NCDE grizzly bear recovery zone and is located within occupied grizzly bear habitat. The proposed action would thin adjacent to roads that are open to motorized activity. The project area currently has a mixture of topography, and vegetation to provide visual screening. Post-thinning, topography and much of the overstory would continue to provide visual screening. In areas where this will provide insufficient cover, patches of regeneration would be left in their current dense state. Given current conditions and the proposed vegetative changes, the proposed action would likely have low risk of direct, indirect, or cumulative effects to grizzly bears.

Gray Wolf – Much like the grizzly bear, wolves are susceptible to illegal killing from open roads that have good sight distances into the surrounding landscape. The proposed thinning may improve conditions for wolves through reducing hiding cover for big game and subsequently increasing prey vulnerability. However, increased sight distances may leave wolves more vulnerable to illegal killing. The recent Blackfoot Valley wolf-tracking project did show wolves in the greater area, Tracks of three to five wolves were found in the Belmont Creek area (approximately 9 miles west of the project area). Three wolf tracks were found on the Blackfoot Clearwater Wildlife Management Area. This may have been individuals that split from other known packs. Two DNRC individuals also found tracks and beds in the Blanchard Creek area last fall, but this was not part of the track survey described above. Because the presence of wolves in the area is unknown but potentially likely, there would still likely be low risk of direct, indirect, and cumulative effects to wolves as a result of the proposed action.

Lynx – Current Stand Level Inventory data (September 8, 2008) indicates that lynx habitat does not occur within the affected parcels. Because habitat does not currently exist within the affected parcels, there would likely be low risk of direct, indirect, or cumulative effects to lynx from the proposed action.

Westslope Cutthroat trout is a sensitive fish species that inhabits Lost Horse Creek and Lost Prairie Creek. Bull trout have not been found and these streams are not part of bull trout core or nodal areas. Minimal thinning operations are planned in a small portion of the SMZ and no road activities are planned. All overstory trees, sub merchantable shrubs and well stocked sub merchantable conifers would be retained in the SMZ. There would be no measurable project related impacts to stream channel stability, sedimentation or habitat fish components of connectivity, large woody debris or water temperature. There is very low risk of direct, in-direct or cumulative effects to threatened or sensitive fish or aquatic life with the proposed action as outlined in the hydrology and aquatic life sections.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

None.

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. Many areas to be thinned are adjacent to roads open to public use. The forest will appear more open, and the viewer will be able to see “through” the forest. This is considered by many to be a positive change in aesthetics; however, in the short-term, red slash and the occasional hand pile constructed for prescribed burning, would look out of place. A secondary benefit of the pre-commercial thinning is that it will “clean up” harvested areas. The use of chainsaws to perform the thinning may initially disturb the local population, however, it is not “out of place” in this area. This project would likely have low direct, indirect, and cumulative effects.

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.

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.

Clearwater River Timber Sale Environmental Assessment (for Clearwater I, II, and III T.S., EA 1999), Bugchuck Salvage TS (EA 2008), Lakewood PCT (EA 2008), Woodchuck Pre-commercial thin (EA 2008), and Clearwater River Pre-commercial thin (EA 2009).

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.

None.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

It is conceivable that this pre-commercial thinning would increase the current rate of growth. This would make rotation age, or time needed to make trees large enough to be harvested, arrive sooner. The ability to harvest these trees would effect future DNRC decisions regarding timber harvest and location.

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 administration of the project (done by DNRC personnel), 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.

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 extensive use by motorized recreationists and walk-in use off roads open to public use. 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.

Direct Costs associated with this project are estimated to be \$44,000.00. This figure is achieved by multiplying the estimated number of acres 400 by estimated cost per acre \$110.00. This cost estimate is assumed from previous projects. The most recent pre-commercial thinning contract yielded a cost per of \$149.00 and required a higher amount of piling. Given the work done by the Clearwater Unit fire crew and volunteer crews, the estimate for the thinning should increase on units that will be open for bid. The assumed cost should be recovered, by a net increase in growth, thus lessening rotation between harvests by up to thirty years.

EA Checklist Prepared By:	Name: Craig V. Nelson	Date: July 27, 2010
	Title: Supervisory Forester, Clearwater Unit	

V. FINDING

25. ALTERNATIVE SELECTED:

Alternative B Pre-Commercial thin. The Action Alternative will promote tree growth on DNRC managed lands, perform pre-commercial thinning to increase growth in natural stands, decrease the fuel hazard adjacent to area roads, and fulfills our responsibility to manage trust lands over the long-term.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

NONE

All potential impacts are mitigated as part of the project.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS More Detailed EA No Further Analysis

EA Checklist Approved By:	Name: David Poukish
	Title: Unit Manager, Clearwater State Forest
Signature: /s/ Dave M. Poukish	Date: July 28, 2010

Clearwater Flats PCT
Secs. 18, 19, 29, 30, 31 and 32 T15N R14W
Sec. 36 T15N R15W

