CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name: Stillwater State Forest Precommercial Thinning and White Pine Pruning

Proposed Implementation Date: July 2011 to June 2012

Proponent: Department of Natural Resources and Conservation (DNRC), Stillwater Unit

Location: Forested Lands under Stillwater State Forest Management

County: Flathead

I. TYPE AND PURPOSE OF ACTION

DNRC is proposing to precommercially thin, by hand felling with a chainsaw, up to 300 acres of overstocked stands (1,110 - 4,500 trees per acre) of sapling-sized trees. After treatment, these trees would be thinned down to 200-300 trees per acre (approximately 14 foot by 14 foot spacing). Selected western white pine crop trees may also be hand-pruned. The thinning/pruning would occur on classified forestlands that are administered by Stillwater State Forest for the school trust beneficiaries.

Presently, approximately 98 acres have been identified as high-priority thinning/pruning stands. The treatment would reduce stand stocking density for the purpose of increasing stand vigor and growth. The treatment would also reduce or eliminate the infection level of the white pine blister rust disease. Improved stand productivity would increase the trust revenue potential, reduce harvest rotation, and produce a higher quality/value of forest products in the future. The treatment would be designed to maintain stand diversity to complement the landscape and enhance biodiversity.

II. PROJECT DEVELOPMENT

1. **PUBLIC INVOLVEMENT, AGENCIES, GROUPS, OR INDIVIDUALS CONTACTED:** *Provide a brief chronology of the scoping and ongoing involvement for this project.*

   In the past, no comments were received on precommercial thinning proposals on the Stillwater State Forest. These projects were scoped for public comment by posting proposal notices at public locations, such as post offices and local stores in Trego, Olney, and Polebridge. Therefore , due to the project's small size and past public participation no additional scoping was performed.

   A DNRC wildlife biologist would review these proposed thinning/prunings and provide input on the project design and mitigation measures. DNRC biologists interact with other wildlife professionals and incorporate the latest scientific information into their recommendations.

   Related timber sale documents, environmental analyses, and silvicultural prescriptions were reviewed for pertinent information.

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

United States Fish and Wildlife Service: Threatened and Endangered Species

No permits are needed.

3. ALTERNATIVES CONSIDERED:

- ***No-action Alternative:***

  Thinning would not occur in these stands. As stand vigor decreases due to increased competition, risk of mortality and damage due to insect infestations and disease infections would increase, including a probable increase in the occurrence of white pine blister rust. Also, these dense stands would become susceptible to snow and wind damage because of the small tree bole diameter to height ratio. Long-term income potential for the school trust beneficiaries would be compromised by the no-action alternative.

- ***Action Alternative***

  Precommercial thinning/pruning areas were/would be selected because they are overstocked. The thinning/pruning will attempt to significantly reduce the chance of infection of blister rust in the western white pine crop trees. Thinning would also increase the growth and vigor of the remaining leave trees by providing room to grow and reducing competition for water, minerals, and sunlight. Healthy, dominant preferred species would be selected as leave trees. Preferred species include western larch, western white pine free of blister rust, Douglas-fir, Engelmann spruce, and lodgepole pine. Quality trees of other species would occasionally be retained for diversity in these stands. The smaller seedling-sized trees (less than 18 inches in height) and larger residual trees of all species in these stands would be retained.

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.*

No direct or cumulative impacts to soils are expected because of the hand-felling method to be used. Some beneficial nutrient leaching into the soil from decaying foliage of the cut trees would be expected.

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.*

Streams or other bodies of water are not near or within the selected precommercial thinning units. No direct or cumulative impacts to water quality are expected. No fishery streams (Class I and II Streams) are associated with the proposed thinning.

Some submerchantable trees may be thinned in Class III Stream Management Zones (SMZ) if it is determined to be beneficial to the long-term integrity of the SMZ. If cut trees are felled into Class III waters such as ephemeral or intermittent stream channels or other wet areas, they would be removed.

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.*

None

7. VEGETATION COVER, QUANTITY AND QUALITY: *What changes would the action cause to vegetative communities? Consider rare plants or covertypes that would be affected. Identify cumulative effects to vegetation.*

- Trees to be thinned are mixed species that range in age from between 10 to 35 years. Trees selected to leave are between 5 and 35 feet tall.
- Species composition in selected stands would change by decreasing the number of nonpreferred species and leaving preferred species that are healthy and dominant. The present species diversity would be maintained; only the presence of overstocking would be addressed.
- Increasing stand health and vigor would help protect stands from insect and disease problems; by selecting infected trees for cutting, the disease problems would be reduced.
- Seedling trees less than 18 inches in height and trees greater than 5 inches in diameter at breast height (dbh) would be retained.
- Due to slash the first year after thinning, the fire hazard would increase; thereafter, fire hazard would decrease due to the slash deterioration. To comply with the *Hazard Reduction Law*, thinned trees within 33 feet of the unit boundary would be slashed to, at maximum, 18 inches of the ground. Within 33 feet of open roads, slash from thinning would be pulled into the interior of the thinned unit.
- No known rare or endangered plant communities are within or near the proposed thinning units.
- More sunlight would be available on the forest floor to favor sun-tolerant species of grasses, shrubs, and forbs.
- The number of acres of thinned sapling stands would be increased; these would be recorded in the Stillwater Forest's inventory.

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.*

- These areas provide late spring, summer, and fall habitat and browsing opportunities for ungulates.
- Vegetation encroaching on crowns of leave trees would be pruned to reduce competition to leave trees and provide palatable browse when resprouting.
- Identified main game trails would be kept open to provide for traditional movement.
- Hiding cover would be reduced in the short term, but would increase as the crowns of leave trees develop.
- Sawtimber-sized trees and snags in the thinning unit would be retained to maintain bird foraging and nesting opportunities.
- Screening enhancement along open roads will be accomplished by using the current visual barriers left from previous harvest operations.
- Habitats for species that rely on dense, younger stands would be reduced. Meanwhile habitats for species favoring more open stands would improve.
- Additional site-specific information for subsequent thinning activities would be provided by a DNRC wildlife biologist.

No cumulative impacts would be expected.

9. UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES: *Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of Special Concern. Identify cumulative effects to these species and their habitat.*

Grizzly bear, gray wolf, Canada lynx, and bald eagle use has been identified:

- Grizzly bear - Seasonally important areas, motorized human access, use restrictions, and hiding cover would be evaluated for each proposal. For the initial 98 acres proposed, the majority of the areas are split between the Stryker and Lazy Creek subunits of the North Continental Divide Ecosystem. There is a small component in the "occupied habitat" area as defined by grizzly bear researchers and managers as areas that are having increased grizzly bear sightings and encounters. Most of the areas proposed are in spring grizzly bear habitats, and as such, efforts to avoid activities during the spring period would reduce the potential for disturbance to grizzly bears. No changes in open road densities would occur in either subunit; negligible changes, if any, would occur in the "occupied habitat" area. Minor reductions in hiding cover would be anticipated with the proposed thinning; visual screening adjacent to open roads would be retained to screen grizzly bears and other wildlife from sight. Additional site-specific information for subsequent thinning activities would be provided by a DNRC wildlife biologist.
- Gray wolf – The Lazy Creek wolf pack has used southern portions of Stillwater State Forest consistently in the past. Ungulate use, hiding cover, denning sites, and rendezvous sites were evaluated. All of the initial 98 acres proposed are outside of the most recent annual home

range of the Lazy Creek wolf pack and all known den and rendezvous sites are fairly distant from the proposed thinning units. Non-winter use by numerous ungulate species occurs and some winter use by elk and moose also occurs. Some minor reductions in hiding cover for gray wolves and their big game prey species would occur with the proposed thinning. Additional site-specific information for subsequent thinning activities would be provided by a DNRC wildlife biologist. Canada lynx - Foraging habitats, including stems per acre and the height of crop trees, and the relationship on the landscape of thinning units to denning habitat were evaluated. All of the initial 98 acres proposed for thinning are either forested travel/other or temporary non-lynx habitats. No young foraging habitats would be modified with the proposed thinning. Given the existing habitats, stocking levels (500- 4,000 tpa), species present, average height, and the heights of the lowest branches, limited lynx use of the project area would be anticipated. Collectively, all the proposed stands would be considered temporary non-lynx habitats following the proposed treatment. These negligible changes would not appreciably alter use of the area by lynx or their prey. Additional site-specific information for subsequent thinning activities would be provided by a DNRC wildlife biologist.

- Bald Eagles – Numerous bald eagles territories include portions of Stillwater State Forest. Disturbance levels and the availability of large, emergent trees with stout horizontal limbs for nests and perches were evaluated. Many of the initial 98 acres proposed are within the home ranges associated with the Lower Stillwater or Upper Stillwater bald eagle territories. Negligible or no effects would be anticipated from the proposed activities. No changes in the availability of large emergent trees or snags would be anticipated. Additional site-specific information for subsequent thinning activities would be provided by a DNRC wildlife biologist.

Negligible effects are expected for grizzly bears, gray wolves, bald eagles, and Canada lynx. Precommercial thinning would have no effects on fisheries listed as threatened or endangered. Habitats for other sensitive species are either not present and or would not be affected with the proposed activities.

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10. HISTORICAL AND ARCHAEOLOGICAL SITES: *Identify and determine effects to historical, archaeological or paleontological resources.*

The State archaeologist reviewed these stands before they were harvested for their sawtimber under regeneration treatments. No known cultural resources were recorded.

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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.*

- Proposed stands are visible from adjacent closed roads or open roads with visual screening.
- After these stands are thinned, the healthy, dominant leave trees would be retained at a desired spacing, producing a slight difference in stand texture or color when seen from a distance.

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.*

None

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.*

None

15. INDUSTRIAL, COMMERCIAL, AND AGRICULTURE ACTIVITIES AND PRODUCTION: *Identify how the project would add to or alter these activities.*

None

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

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

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

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.*

DNRC manages forested trust lands according to the philosophy and direction given in the *State Forest Land Management Plan*, which states:

> *"Our premise is that the best way to produce long-term income for the trust is to manage intensively for healthy and biologically 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."*

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

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

22. SOCIAL STRUCTURES AND MORES: *Identify potential disruption of native or traditional lifestyles or communities.*

None

23. CULTURAL UNIQUENESS AND DIVERSITY: How would the action affect any unique quality of the area?

None

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.*

None

EA Checklist Prepared By:		Ricky Komenda	**Date:**	April , 2010
	Title:	Forest Improvement Forester		

V. FINDING

25. ALTERNATIVE SELECTED:

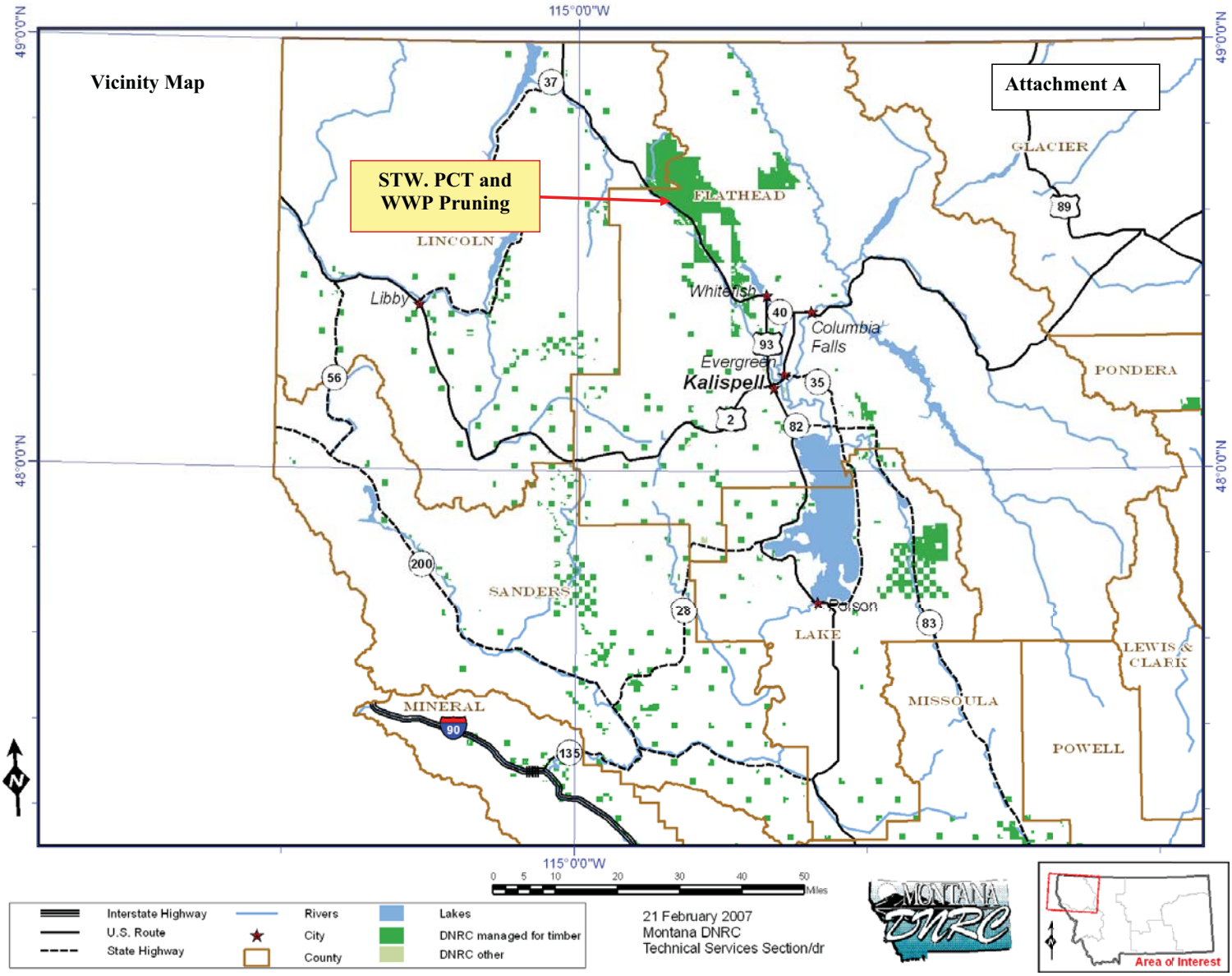
After reviewing this checklist, I find the concerns have been addressed; if needed, mitigation measures will be applied by contract requirements. A more detailed environmental analysis is unwarranted. I have selected the Action-Alternative.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

EA Checklist Approved By:	**Name:**	Dave Ring
	Title:	Forest Management Supervisor, Stillwater Unit
Signature: /s/ David A. Ring	**Date:**	May 10, 2010


Vicinity Map
Attachment A
STW. PCT and WWP Pruning
115°0'0"W
49°0'0"N
48°0'0"N
FLATHEAD
LINCOLN
GLACIER
PONDERA
SANDERS
LAKE
MISSOULA
LEWIS & CLARK
POWELL
MINERAL
Libby
Whitefish
Columbia Falls
Evergreen
Kalispell
Polson
37
40
93
35
2
82
56
200
28
83
135
90
89
Interstate Highway
U.S. Route
State Highway
Rivers
City
County
Lakes
DNRC managed for timber
DNRC other
0 5 10 20 30 40 50 Miles
21 February 2007
Montana DNRC
Technical Services Section/dr
MONTANA DNRC
Area of Interest