

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Kozy K
Proposed Implementation Date:	12/1/11-12/1/2013
Proponent:	Montana DNRC, Clearwater Unit
Location:	26 T16N R14W
County:	Missoula

I. TYPE AND PURPOSE OF ACTION

The Clearwater Unit is proposing to harvest timber from section 26 T16N R14W. The proposed harvest area is located 5 miles east of Salmon Lake. Under the proposed action, DNRC would harvest lodgepole pine that is dead, dying, and susceptible to mountain pine beetle attack as well as mountain pine beetle infested ponderosa pine. In addition to the harvest, pre-commercial thinning projects may take place in overstocked understory stands. If future beetle outbreaks occur additional entries may be required. This harvest will generate money for the trust and reduce fuels that have the potential to negatively affect homeowners in the Cozy Corner area.

The lands involved in this proposed project are held by the State of Montana in trust for Pine Hills School (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). Specific objectives of the project are to capture value of dead and dying trees, prevent future value loss on DNRC land, pre-commercially thin overstocked understory stands and promote appropriate forest types within the project area.

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; Jeff Collins, Soils & hydrologist; Liz Mullins Land Use Planner.

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

Slash burning will be conducted in accordance with the rules and regulations outlined in statewide cooperative agreements as well as any local restrictions.

3. ALTERNATIVES CONSIDERED:

No Action Alternative: The proposed harvest would not occur at this time. Current land use activities would continue.

Action Alternative: Under this alternative, DNRC would continue current uses, and also harvest dead and dying lodgepole pine and ponderosa pine, as well as lodgepole pine that are highly susceptible to the mountain pine beetle. All other species would be retained. Timber would be harvested using ground based methods. Pre-commercial thinning would be utilized in overstocked understory stands to reduce stand density.

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.

Salvage of dead and dying Lodgepole and Ponderosa Pine from mountain Pine beetle, using existing roads. No unstable slopes or unique geology features are present. Soils are a complex of Wildgen gravelly loams from glacial till and Totelake extremely gravelly loams from deep outwash on 4-30% slopes with some small areas of steeper slopes. Both soils are well drained, and Totelake is more droughty. There are isolated pothole wetlands within the area. Erosion potential is low to moderate and soils are subject to rutting if operated on when wet. Previous selection harvest was mainly on moderate slopes and skid trails have revegetated with no apparent BMP departures or cumulative effects. The planned salvage project is on moderate terrain using existing landings and skid trails where feasible and dispersed skidding. Operations will be limited to dry, frozen or snow covered conditions to minimize soil impacts on moderate slopes. Planned ground skidding operations should have low risk of direct, indirect and cumulative impacts based on implementing BMP's and mitigation measures. Mitigations include season of use limits, and retaining a portion of woody debris for nutrients and prompt re-vegetation as needed to protect soil resources.

There is low risk of harvest impacts to soils from disturbance in the forms of erosion, displacement, and compaction, due to the proposed harvesting and hauling operations limited to winter operations of frozen, or snow covered ground. DNRC soil monitoring on previous projects has confirmed that very low disturbance or erosion occurred with winter harvest operations. Unmerchantable pieces of trees and defect wood and a portion of fine litter would be left in the woods to provide coarse woody debris (CWD) for moisture retention and nutrient recycling. Road use of existing roads would require some blading of the surface to remove snow and ruts with an emphasis on filling with snow/ice. If winter conditions deteriorate, harvest would take place when soils are adequately dry. There is low risk of direct, in-direct or cumulative effects to soil based on BMP implementation and mitigations.

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.

DNRC proposes to harvest lodgepole pine and ponderosa pine that are dead, dying or at high risk of insect mortality from mountain pine beetle infestation. The proposed activities would take place early in 2011, while soils are frozen and snow covered to limit rutting or disturbance. If soil/snow conditions deteriorate and we enter a spring "break-up" condition harvest will commence when soils are adequately dry, based on inspection. The proposed harvest is located on the broad valley footslopes of Cottonwood Creek drainage. There are no stream courses within the immediate area of the unit boundaries. There is an intermittent stream northeast of the proposed harvest, that does not deliver to Cottonwood creek or other streams downslope. The legal SMZ distance from this stream is 50 feet and no harvest is planned in the SMZ.

The proposed haul route would use existing roads. No sediment sources have been identified in the proposed harvest areas or haul route. Minor spur road segments may be constructed by blading off the snow to designated landing sites and hauling operations would be limited to frozen or snow covered conditions to prevent rutting disturbance and sedimentation. If these conditions cannot be met harvesting will take place when soils are adequately dry, based on inspection.

The harvest of mainly dead, dying and beetle infested pine and thinning, is not expected to have a measurable influence on: water quality, the amount or timing of runoff (water yield), or downslope stream stability from the

proposed project area when compared to the effects anticipated under no action. In summary, all BMP's, and requirements for SMZ's and WMZ's would be applied and administered during harvest operations. There would be low risk of disturbance or off-site erosion as a result of the use of existing road for access and log hauling, during the winter. Based on the harvest design, there is low risk of direct, indirect or cumulative effects to water quality or downstream beneficial uses.

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 located within Montana Airshed 3B which encompasses portions of Missoula and Powell Counties. Currently, this Airshed does not contain any impact zones.

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 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. Thus, cumulative effects to air quality due to slash pile burning associated with the proposed action would also be expected to be minimal.

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 the U.S. Forest Service) 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.

Harvesting operations would be short in duration. 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.

No Action Alternative: No harvest would occur at this time. Mountain pine beetle would likely continue to infest and kill lodgepole pine and ponderosa pine within the DRNC ownership and surrounding area. Some of the dead trees would likely be blown down or cut for firewood, creating openings within the stands. Over time, some natural conifer regeneration would probably establish in areas with a seed source and favorable microclimate. Most likely these would be Douglas-fir or other shade tolerant species, not the desired seral species such as western larch or ponderosa pine. It is likely that illegal firewood cutting would continue to take place within the proposed harvest area.

Action Alternative: DNRC would harvest and remove lodgepole pine that are dead, dying, or susceptible to mountain pine beetle attack as well as mountain pine beetle infested ponderosa pine. Changes to the vegetation would include an immediate reduction in numbers of live and dead lodgepole pine as well as beetle hit ponderosa pine on 80 acres. Other species, including western larch, ponderosa pine (non-beetle hit), spruce and Douglas-fir would be retained. The remaining trees would have increased growth as more resources would be available per tree.

DNRC has adopted old-growth definitions based on Green et al. (1992). No trees within the harvest area meet the Green et. al. criteria for old growth.

No rare plants have been identified in the project area. Noxious weeds, principally spotted knapweed, cinquefoil and spots of leafy spurge occur in the area and have a low to moderate potential to increase. To limit the spread of weeds under the proposed action, all equipment would be clean of mud and weed seed to prevent the introduction of noxious weeds, and would be inspected by the DNRC and winter operations have lower potential for disturbance. The project area would be monitored for new weed infestations following the proposed activities, and if new weeds are noted DNRC would prioritize weed treatments.

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.

Fisheries- No Fisheries are within the treatment area.

Terrestrial Wildlife: The project area provides habitat for a variety of wildlife species, including a host of species that require mature forests. Deer and elk likely use the project area much of the year; some elk winter range exists in the project area, but no elk security habitats likely exist due to the proximity to the open roads. Under the action alternative, beetle-hit lodgepole pine and ponderosa pine would be harvested across 80 acres leading to more open areas in portions of the project area. This would alter habitats for wildlife species requiring mature forests, while creating habitats for species needing more open stands. Thus, a low risk of adverse direct, indirect, or cumulative effects to species requiring mature forested stands or big game winter range would be anticipated with the proposed activities. **(The complete wildlife checklist can be found in attachment B)**

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 Fisheries are within the treatment area.

Terrestrial Wildlife: The project area contains limited potential habitats for Canada lynx, grizzly bears, or fisher and little or no use by any of those species would be anticipated. Potential habitat exists in the project area for flammulated owls, gray wolves, and pileated woodpeckers. Proposed activities could cause slight shifts in use by wolves and their prey, however, no key habitat components are known to exist in the project area and long-term use is not expected to appreciably change. Proposed harvesting would open up 80 acres, which could reduce pileated woodpecker habitats, while potentially improving flammulated owl habitats. Thus, no direct,

indirect, or cumulative effects to Canada lynx and a low risk of adverse direct, indirect, or cumulative effects to grizzly bears, fisher, flammulated owls, or gray wolves, or pileated woodpeckers would be expected to occur with the proposed activities. **(The complete wildlife checklist can be found in attachment B)**

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

No information concerning cultural resources is available for the permit area. If historical, archaeological or paleontological resources are discovered operations will cease immediately until an archeologist can examine the site.

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, and future fire activity within the project area. This analysis includes all past and present effects.

No Action Alternative: If the no action alternative is selected, patches created by dead trees and illegal firewood cutting will exist. 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 noticeable when observed close range. 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 Alternative: Portions of the proposed sale would be visible from USFS road number 9976. Following treatment areas will no longer contain areas with red needles. Travelers unfamiliar with the area will most likely not realize a harvest has taken place. The Douglas-fir component in the stand provides a visual screen to most of the area.

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. 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 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.

Minimal 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.

The following timber sales/permits were completed in the Cozy Corner area:

Tippers Timber: Section 34 T16N R14W

Sourfish: Sections 16, 20, 28, 32 and 34 T16N R14W.

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.

Log truck traffic would increase slightly on area roads for the duration of the proposed action. Signs at appropriate locations on access roads would be used to warn motorists and local residents. Harvesting along the open road may cause short traffic delays.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

The proposed action would lead to a small, temporary increase in industrial 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.

A few short time jobs would 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.

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

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.

The DNRC operates under the State Forest Land Management Plan (SFLMP, DNRC 1996) and Administrative Rules for Forest Management (ARM 36.11.401 through 450, DNRC 2003). The SFLMP established the agency's philosophy for management of forested trust lands. The Administrative Rules provide specific guidance for implementing forest management projects

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.

The project area receives use by walk-in recreationists. All current recreation opportunities would continue under the proposed action. Portions of the project area are along an open road that has made it easily accessible for illegal firewood cutting.

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.

Direct implications for density and distribution of population and housing are unlikely.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

No measurable impacts related to social structures and mores would be expected.

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

No measurable impacts related to cultural uniqueness and diversity would be expected under either alternative.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The proposed project should return approximately \$1,200 to the Pine Hills Trust. This estimate uses an estimated stumpage rate of \$4.00 per ton (price based on similar products recently sold). Additionally, the proposed action would contribute approximately \$1,877 to the forest improvement fund.

EA Checklist Prepared By:	Name: Amy Helena	Date: 12/15/2011
	Title: Management Forester	

V. FINDING

25. ALTERNATIVE SELECTED:

Action Alternative

26. SIGNIFICANCE OF POTENTIAL IMPACTS

Given this environmental assessment, I believe that this project will not cause any detrimental effect to the project area or surrounding properties or resources. This project is also consistent with the requirements of Montana State Statute 77-5-207.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

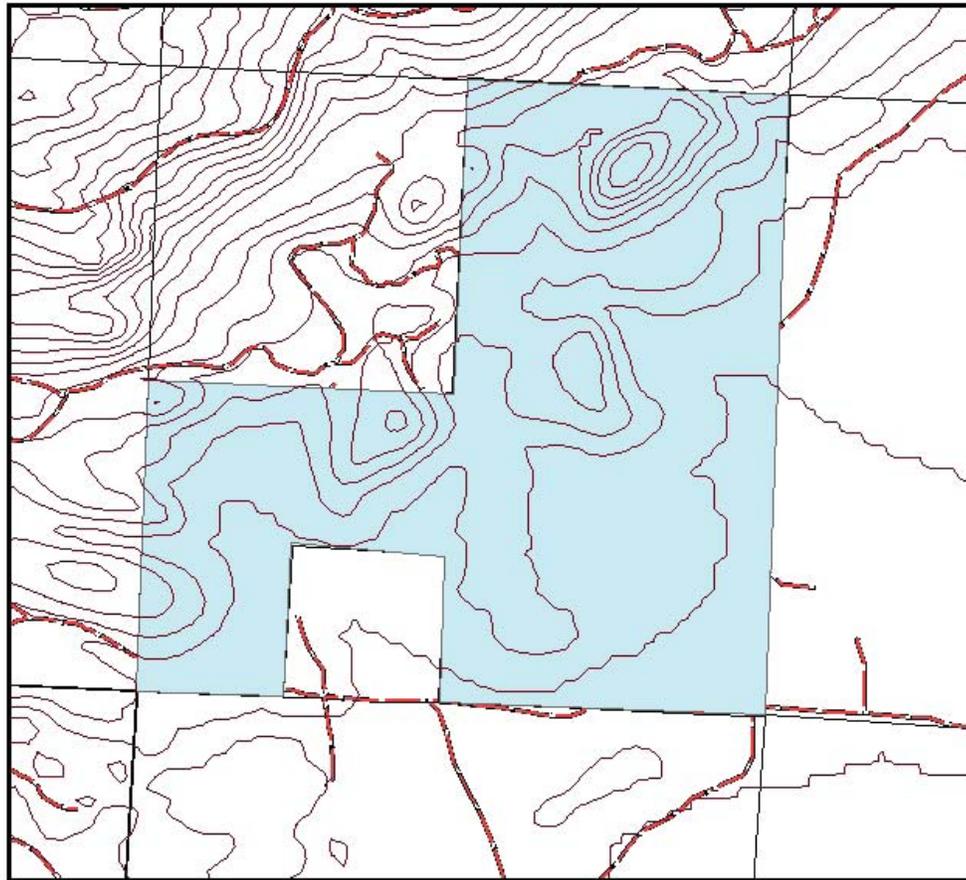
No Further Analysis

EA Checklist Approved By:	Name: Craig V. Nelson
	Title: Supervisory Forester
Signature: /s/ Craig V. Nelson	
Date: 12/15/11	



Kozy K EA Project Area
Sec 26 T16N R14W
DNRC-CLEARWATER UNIT

Attachment A-1



0 0.15 0.3 0.6 0.9 1.2 Miles

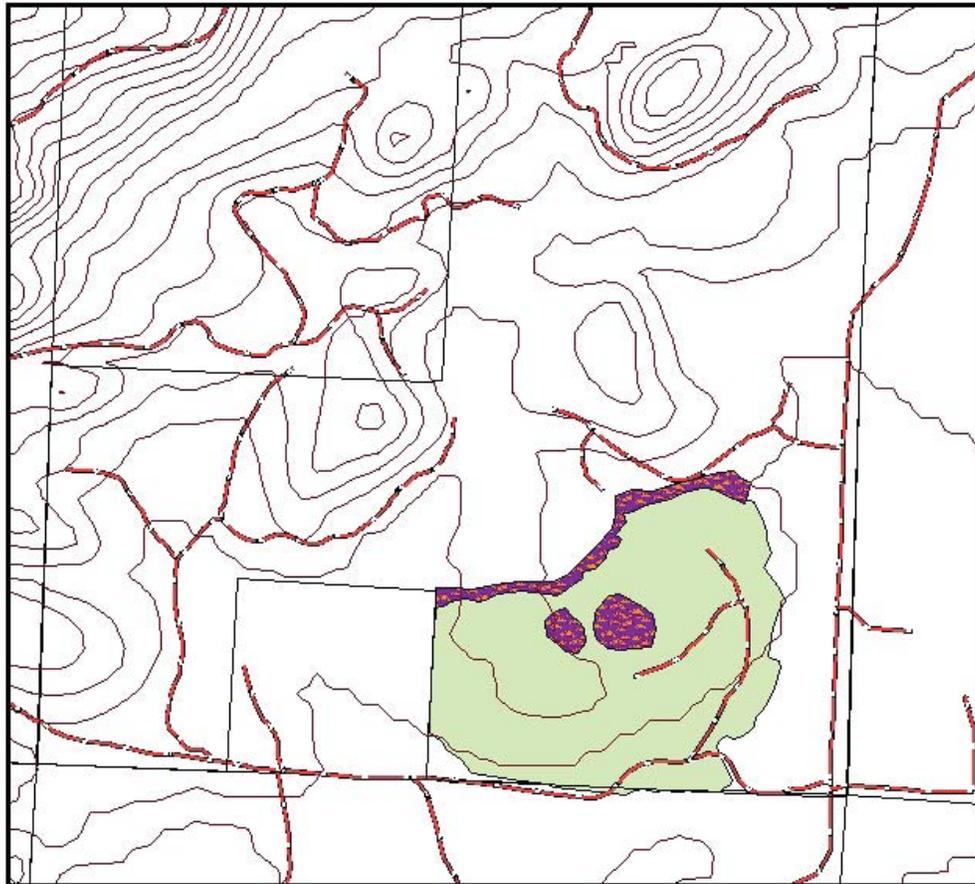


AMH
12/15/11



Kozy K Timber Permit
Sec 26 T16N R14W
DNRC-CLEARWATER UNIT

Attachment A-2



Remove lodgepole pine and beetle hit ponderosa pine. Don't skid on slopes greater than 45%. Use existing landings, old roads and skid trails whenever possible. Protect wildlife trees and snags whenever safety permits.



AMH
12/15/2011

CHECKLIST ENVIRONMENTAL ASSESSMENT

For
Endangered, Threatened and Sensitive Species

Threatened and Endangered Species	[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur L = Low Potential for Effects
Lynx (<i>Felis lynx</i>), Federally threatened.	[L] Although potentially suitable lynx habitats exist in the state parcel, no lynx habitats exist on the portion of the project area where salvage logging is proposed. Thus, no direct, indirect, or cumulative effects to Canada lynx would be expected to occur as a result of either alternative.
Grizzly Bear (<i>Ursus arctos</i>), Federally threatened.	[L] The project area is over 4 miles from the Mor-Dun subunit of the Monture Landers Fork bear management unit of the Northern Continental Divide Ecosystem (NCDE) and is in the “occupied habitat” area as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones (Wittinger 2002). Extensive use of the project area by grizzly bears is not likely given the open roads, habitats present, and lack of large secure areas. The proposed harvesting would occur adjacent to open roads and residential areas where disturbance likely limits usefulness of the area for grizzly bears. In general cover would be reduced through the proposed harvesting, while attempting to maintain visual screening cover along open roads and existing riparian areas, where it exists. Thus, a low risk of adverse direct, indirect, or cumulative effect to grizzly bears would be anticipated with the proposed activities.
DNRC Sensitive Species	[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur L = Low Potential for Effects
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	[N] The project area is more than 3.25 miles outside of the home range associated with the Bandy bald eagle territory. Thus, no direct, indirect, or cumulative effects to bald eagles would be anticipated to occur as a result of either alternative.
Black-backed Woodpecker (<i>Picoides arcticus</i>)	[N] No recently (less than 5 years) burned areas are in the project area. Thus, no direct, indirect, or cumulative effects to black-backed woodpeckers would be anticipated to occur as a result of either alternative.
Coeur d’Alene Salamander (<i>Plethodon idahoensis</i>)	[N] No moist talus or streamside talus habitat occurs in the project area. Thus, no direct, indirect, or cumulative effects to Coeur d’Alene salamanders would be anticipated to occur as a result of either alternative.
Columbian Sharp-tailed Grouse (<i>Tympanuchus phasianellus columbianus</i>)	[N] No suitable grassland communities occur in the project area. Thus, no direct, indirect, or cumulative effects to Columbian sharp-tailed grouse would be anticipated to occur as a result of either alternative.
Common Loon (<i>Gavia immer</i>)	[N] No suitable lakes occur in the project area. Thus, no direct, indirect, or cumulative effects to common loons would be anticipated to occur as a result of either alternative.

Fisher (<i>Martes pennanti</i>)	[L] Roughly 82 acres of low-quality, upland habitats exist in the proposed project area, however given the species composition and the relatively dry nature of the area, little or no use by fisher would be anticipated. The proposed action would harvest beetle-hit lodgepole pine and ponderosa pine within much of the 82 acres of low quality fisher habitats. Existing habitats and the elevated human disturbance levels in the vicinity likely limits fisher use of the proposed project area. Thus, a low risk of adverse direct, indirect, or cumulative effects to fisher would be anticipated with the proposed activities.
Flammulated Owl (<i>Otus flammeolus</i>)	[L] The proposed project area is presently a mix of ponderosa pine, western larch, and Douglas-fir in a reasonably densely stocked state, which does not lend itself to typical flammulated owl habitat. The proposed action would open the affected stands, allowing for regeneration in pockets. Thus, in 15 to 20 years, flammulated owl habitat could improve with the proposed harvesting. Thus, a low risk of adverse direct, indirect, or cumulative effects to flammulated owls would be anticipated with the proposed activities.
Gray Wolf (<i>Canis lupus</i>)	[L] The suspected Morrel Mountain pack could be in the vicinity (<i>Sime et al. 2011</i>). Given the nature of the proposed activities and the ongoing reductions associated with the tree mortality, negligible to no changes in winter range capacity could occur, but no appreciable changes in either big game or gray wolf use of the area would be anticipated. Additionally, if den or rendezvous sites are discovered near the project area, operations would cease until additional mitigations could be implemented to stay compliant with ARM 36.11.430. Thus, a low risk of adverse direct, indirect, or cumulative effects to gray wolves would be expected to occur as a result of either alternative.
Harlequin Duck (<i>Histrionicus histrionicus</i>)	[N] No suitable high-gradient stream or river habitats occur in the project area. Thus, no direct, indirect, or cumulative effects to harlequin ducks would be anticipated to occur as a result of either alternative.
Mountain Plover (<i>Charadrius montanus</i>)	[N] No prairie dog colonies or other shortgrass prairie habitats occur in the project area. Thus, no direct, indirect, or cumulative effects to mountain plovers would be anticipated to occur as a result of either alternative.
Northern Bog Lemming (<i>Synaptomys borealis</i>)	[N] No suitable sphagnum bogs or fens occur in the project area. Thus, no direct, indirect, or cumulative effects to northern bog lemmings would be anticipated to occur as a result of either alternative.
Peregrine Falcon (<i>Falco peregrinus</i>)	[N] No suitable cliffs/rock outcrops occur in the project area or within 1 mile of the project area. Thus, no direct, indirect, or cumulative effects to peregrine falcons would be anticipated to occur as a result of either alternative.
Pileated Woodpecker (<i>Dryocopus pileatus</i>)	[Y] The proposed project area is presently a mix of mature ponderosa pine, western larch, and Douglas-fir in a reasonably densely stocked state, which is likely suitable for pileated woodpeckers. The proposed harvesting of beetle-hit lodgepole pine and ponderosa pine could reduce foraging and, to a lesser degree, potentially suitable nesting structures. Based on the limited area involved, proposed activities would only affect a few individuals, and activities would largely be conducted during the non-nesting period. Thus, a low risk of adverse direct, indirect, or cumulative effects to pileated woodpeckers would be anticipated with the proposed activities.

Townsend's Big-eared Bat (<i>Corynorhinus townsendii</i>)	[N] No suitable caves or mine tunnels are known to occur in the project area. Thus, no direct, indirect, or cumulative effects to Townsend's big-eared bats would be anticipated to occur as a result of either alternative.
Big Game Species	[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur L = Low Potential for Effects
Elk (<i>Cervus elaphus</i>)	[L] Elk may use the affected area as part of their summer range; additionally, elk winter range exists in a portion of the project area. However, the proposed project area is close to human developments and open roads, and receives abundant recreational use. No elk security habitat exists in the proposed project area due to the proximity to open roads. Proposed harvesting would not appreciably alter winter range attributes due to the nature of the ongoing mortality. The proposed salvaging could increase elk vulnerability to hunting pressure through slightly increased sight distances, but elk use is likely deterred by the other identified factors. Thus, a negligible risk of adverse direct, indirect, or cumulative effects to elk would be anticipated with the proposed activities.
White-tailed Deer (<i>Odocoileus virginianus</i>)	[L] White-tailed deer use the proposed project area as part of their summer range; no white-tailed deer winter range exists in the project area. However, the proposed project area is close to human developments and open roads, and receives abundant recreational use. The proposed salvaging could slightly increase deer vulnerability to hunting pressure due to the slightly increased sight distances, but deer use of the project area is likely already altered by the other disturbance vectors in the project area. Thus, a negligible risk of adverse direct, indirect, or cumulative effects to white-tailed deer would be anticipated with the proposed activities.
Mule Deer (<i>Odocoileus hemimonus</i>)	[L] Mule deer use the proposed project area as part of their summer range; no mule deer winter range exists in the project area. However, the proposed project area is close to human developments and open roads, and receives abundant recreational use. The proposed salvaging could slightly increase deer vulnerability to hunting pressure due to the slightly increased sight distances, but deer use of the project area is likely already altered by the other disturbance vectors in the project area. Thus, a negligible risk of adverse direct, indirect, or cumulative effects to mule deer would be anticipated with the proposed activities.