CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Tin Robbin Timber Permit
Proposed Implementation Date:	Summer 2013
Proponent:	Montana DNRC, Hamilton Unit
Location:	Section 16, T2N, R20W and section 16, T3N, R21W
County:	Ravalli

I. TYPE AND PURPOSE OF ACTION

The Hamilton Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing a timber harvest to meet the needs of:

-Forest health,
-Forest productivity, and
-Revenue generation for the Common Schools (CS) Trust

The proposed harvest area is located in section 16, T2N, R20W within the Robbins Gulch drainage near Connor, Montana, and section 16, T3N, R21W within the Tin Cup drainage near Darby, Montana. Under the proposed action, DNRC would harvest up to 85 thousand board feet (MBF) of timber from approximately 27 acres.

The Robbins Gulch unit is currently showing effects of mountain pine beetle (MPB), including ponderosa pine mortality. To reduce further effect from the MPB, the DNRC would commercially thin approximately 55 MBF from 18 acres in Robbins Gulch.

In the Tin Cup unit, dead lodgepole pine and dense Douglas-fir saplings and poles occupy most of the area. To facilitate forest health and productivity in the unit, the DNRC would harvest approximately 30 MBF of dead lodgepole pine and green Douglas-fir from nine acres in the Tin Cup area.

In addition to timber harvest, obliteration of existing road would occur. Under the proposed action, DNRC would eliminate approximately 540 feet of existing road in the Tin Cup unit and install a gate to reduce resource damage from unauthorized vehicle use.

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.

On April 30, 2013, Montana DNRC sent scoping letters to adjacent land owners and parties that requested to be on the DNRC scoping list. DNRC specialists were consulted, including:

-Jeff Collins, Southwest Land Office (SWLO) Hydrologist/Soil Scientist
-Garrett Schairer, SWLO Wildlife Biologist

-Paul Moore, Hamilton Unit Manager
-Patrick Rennie, DNRC Archeologist

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

DNRC is classified as a major open burner by the Montana Department of Environmental Quality (DEQ), and is issued a permit from the DEQ to conduct burning activities on State lands managed by the DNRC. As a major open burning permit holder, DNRC agrees to comply with all of the limitations and conditions of the permit.

DNRC is a member of the Montana/Idaho Airshed Group, which regulates prescribed burning related to forest management activities. DNRC receives an air-quality permit for burning slash through participation in this group. As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Airshed Group.

DNRC is managing the habitats of threatened and endangered species on this project by implementing the Montana DNRC Forested Trust Lands Habitat Conservation Plan (HCP) and the associated Incidental Take Permit (Permit) that was issued by the United States Fish & Wildlife Service (USFWS) in February of 2012 under Section 10 of the Endangered Species Act. The HCP identifies specific conservation strategies for managing the habitats of grizzly bear, Canada lynx, and three fish species: bull trout, westslope cutthroat trout, and Columbia redband trout. This project complies with the HCP. The HCP can be found at www.dnrc.mt.gov/HCP.

Two temporary road use permits would be acquired from the USFS. A permit is needed in both the Tin Cup unit and Robbins Gulch unit.

3. ALTERNATIVES CONSIDERED:

No Action Alternative:
The proposed harvest and road obliteration would not occur at this time. Current land use activities, such as illegal firewood cutting and unauthorized vehicle use, would continue. Tree mortality due to MPB and overcrowding would continue, negatively affecting forest health and value of the timber.

Action Alternative:
Under this alternative, the DNRC would be satisfying the needs of forest health, forest productivity, and revenue generation for the CS Trust.

The treatment proposed in the Robbins Gulch unit would aim to reduce the current effects of MPB seen in the ponderosa pine. The proposed commercial thin would eliminate the infected trees and allow the remaining trees to be healthy and resilient against future MPB attack. The sooner the beetle-infected timber is harvested, the higher its value and more revenue is generated for the CS Trust. The commercial thin would produce approximately 55 MBF of timber.

The treatment proposed in the Tin Cup unit would assist in forest health and increase forest productivity. The proposed treatment would salvage dead lodgepole pine and harvest green Douglas-fir that inhibits good tree growth in the unit. The proposed harvest would produce approximately 30 MBF.

This alternative would produce a total of 85 MBF of timber which will produce revenue for the CS Trust.

Also under this alternative, approximately 540 feet of existing road would be eliminated from the Tin Cup area.

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.

Geology is bouldery granitics. No unstable slopes or unique geology features are present. Soils are Lick series loams and stony loams on moderate to steep slopes. Erosion risk is high where soils are disturbed, mainly on steeper slope. All operations would be ground based and operations would not occur on slopes greater than 45% or when soils are conducive to erosion or rutting. Erosion will decline as broken branches, litter and revegetation increase and provide surface soil protection.

Planned ground skidding operations would have low risk of direct, indirect and cumulative impacts based on implementing BMP's and mitigation measures. Mitigations would include skidding plans, retention of woody debris for nutrients, and prompt revegetation of disturbed sites on roads to protect soil resources. Harvest would use segments of existing road and be limited to suitable skid trails on slopes up to 45% to prevent excessive disturbance.

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.

No Action Alternative:
The proposed unit within the Tin Cup drainage is adjacent to a class 1 stream. Under this alternative, no existing road elimination would occur within the Tin Cup unit. Without the road closure, sediment delivery to the stream from traffic would continue to be a risk.

The proposed unit within the Robbins Gulch drainage contains no water resources. Neither the action, or no action alternatives would cause any effects to water resources within the proposed harvest unit.

Action Alternative:
The proposed unit within the Robbins Gulch drainage contains no water resources. The action alternative would not cause any effects to water resources within this unit.

The proposed project in the Tin Cup unit has very low risk of direct, indirect or cumulative effects to water quality based on the following considerations:

- The salvage and thinning harvest is a small scale project of about 9 acres mainly on gentle to moderate slopes and well drained soils.
- 540 feet of low grade road would be obliterated to limit motorized access along the stream.
- A gate would be installed to prevent motorized use and vandalism along the stream.
- BMPs and SMZs would be followed during project implementation. SMZ harvest would take place to remove 5-10 trees that are currently threatening a $70,000 dollar fish diversion owned by the Tin Cup Water and Sewer District.
- Skid trails would be stabilized by slashing and installing drainage where needed to prevent erosion.
- All disturbed roads and landings would be stabilized and grass seeded where needed to control erosion.

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

proposed project area when compared to the effects anticipated under no action. In summary, the proposed harvest operations presents low risk of direct, in-direct and cumulative impacts based on implementing BMP's, Forest Management Rules and mitigation measures.

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 2007). 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 2007).

The project area is located within Montana Airshed 4, encompassing all of Ravalli County. Currently, this airshed does not contain any impact zones.

No Action Alternative:
Under this alternative, no slash piles would be burned and no additional dust would be created within the project area. Air quality in the project area and Montana Airshed 4 would not change.

Action Alternative:
Under the proposed action, slash piles consisting of tree limbs, tops, and other vegetative debris would be created throughout the project area during harvesting. In order to reduce future risk of wildfire in the area posed by the accumulation of such piles, the piles would be burned after harvesting operations have been completed. Burning would introduce particulate matter into the local airshed, temporarily affecting the air quality of nearby residential areas.

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. The DNRC, as a member of the Montana/Idaho Airshed Group, would burn only on days approved by the Montana/Idaho Airshed Group so that the direct and indirect effects to air quality due to slash pile burning associated with the proposed action would 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 but would likely occur during the summer months. To mitigate the creation of dust by log hauling, the maximum speed of a log truck would be reduced to under the posted speed. The reduced speed will lessen the dust dispersion from the log trucks in residential property near the project area. Any effects from dust will be short in duration and will not create long-term effects.

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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
Under this alternative, no timber harvest would occur on both the Tin Cup and Robbins Gulch units. With no treatment, the MPB infestation in Robbins Gulch is likely to spread. In the past couple years, with no DNRC action, the area has seen the number of infected ponderosa pines increase significantly. The tightly-spaced trees will be competing against each other for sunlight and nutrients instead of defending themselves against

the MPB. The overstory is likely to become dominated by MPB-killed ponderosa pine. Douglas-fir mistletoe has also been seen in the unit and would likely spread to other Douglas-fir in the unit. As a result, Robbins Gulch would likely become a dead or dying stand with little potential for producing valuable timber.

In the Tin Cup unit, no action would likely result in poor overall forest health and productivity. A thick Douglas-fir understory would continue to take nutrients and water away from the desired overstory of healthy ponderosa pine and Douglas-fir. Standing dead lodgepole pine would crowd the desired overstory and inhibit good growth needed for valuable timber and future forest health.

Under the no action alternative, the resulting impacts in vegetation cover would not meet the needs of forest health, forest productivity, or production of revenue for the CS Trust.

Action Alternative

Under this alternative, the DNRC's proposed treatment in the Tin Cup unit would salvage dead lodgepole pine and harvest green Douglas-fir from nine acres for a total of 30 MBF. This treatment would remove much of the dead lodgepole pine from the overstory and much of the sapling and pole-sized Douglas-fir from the understory. This treatment would leave the healthiest ponderosa pine and Douglas-fir in the overstory. A reduction of Douglas-fir in the understory will allow shade-intolerant species such as ponderosa pine to emerge. A sparse understory will also allow the desired overstory to better obtain nutrients and water needed for good growth. Removing much of the dead lodgepole pine will create holes in the canopy, which will allow for good growth in the desired overstory and provide light to the understory.

The overstory in the Robbins Gulch unit is showing the effects of MPB, including ponderosa pine mortality. Implementing the proposed commercial thinning treatment will remove the MPB-killed and infected trees. Removing the dead and dying trees from the stand will decrease the number of potential hosts for MPB. Mistletoe-infected Douglas-fir would also be removed to keep the remaining Douglas-fir in the stand healthy. The commercial thin would also remove Douglas-fir, lodgepole pine, and ponderosa pine from the densest areas of the overstory. This method would facilitate growth of the overstory by reducing competition for resources. Thinning the overstory also provides sunlight to the understory species, like ponderosa pine. A commercial thin of the unit would reduce total vegetative cover, but this reduction facilitates future stand health.

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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.

Terrestrial Wildlife:

The project area provides habitat for a variety of wildlife species. Deer and elk likely use the project area much of the non-winter periods; deer, elk, and moose winter range exists in the project area. No elk security habitats exist in the project area. Under the action alternative, proposed harvesting would lead to more open areas in portions of the project area. This would alter habitats for wildlife species requiring mature forested conditions, while creating habitats for species needing more open stands; however portions of the trees being harvested have recently died from insects and diseases, minimizing the effect of the proposed harvesting. Additionally habitats for species that utilize snags could be reduced. Thus, a low risk of adverse direct, indirect, or cumulative effects to species requiring mature forested stands, big game, or snags would be anticipated with the proposed activities. ***(The complete wildlife checklist can be found in attachment B)***

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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.

Threatened & Endangered or Sensitive Fish:

Tin Cup Creek has been identified as having a small population of bull trout, (Leslie Nyce, Fish Technician, Missoula Fish Wildlife & Parks). Sampling has identified limited populations of bull trout downstream from the proposed project area. A new fish diversion owned by the Tin Cup Water and Sewer District has recently been constructed within the project area. The diversion prevents fish from entering the irrigation system ditches, approximately 1800 – 2200+ fish are being kept out of the ditch each year. Dead and dying tree are currently threatening this $70,000 structure.

Terrestrial Wildlife:
The project area contains potential habitats for bald eagles, gray wolves, flammulated owls, peregrine falcons, and pileated woodpeckers. Negligible potential for disturbance of bald eagles or their habitats would be anticipated. 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. Some improvements in habitats for flammulated owls could occur. Conversely, some reductions in pileated woodpecker habitats would be anticipated with the proposed harvesting. Negligible effects to peregrine falcons or wolverine would be anticipated. Thus, a low risk of adverse direct, indirect, or cumulative effects to bald eagles, gray wolves, flammulated owls, peregrine falcons, or pileated woodpeckers would be expected to occur with the proposed activities. ***(The complete wildlife checklist can be found in attachment B)***

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10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

An archeological review was conducted by the State Archeologist, Patrick Rennie on this parcel for the Tin Cup Fire Salvage Timber Sale in 2007. No known historical, archeological, or paleontological sites are present in the area.

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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.

No Action Alternative
Under the no action alternative, MPB-killed trees will persist on the landscape in the Robbins Gulch unit. The amount of MPB-killed trees will increase over time as trees become weaker. The dead/dying trees could become fuel for a future wildfire. A fire would have long-lasting effects on the aesthetics of the unit as well as the surrounding area.

Taking the no action alternative in the Tin Cup unit would leave dead lodgepole pine in the overstory, which would look bad aesthetically and affect the growth and health of surrounding trees. As the understory grows denser, the health of the overstory trees would decrease, giving the area a diseased look. Illegal firewood cutting has left stumps and slash strewn over the unit and conditions could become worse under this alternative.

The aesthetic effects from taking the no action alternative have the potential to be long lasting. The MPB-killed trees in Robbins Gulch could last on the landscape 5-10 years before falling over. Declining forest health would be seen in both units for decades.

Action Alternative
Under the action alternative, the treatment in the Robins Gulch unit would be visible from one adjacent landowner's property. The treatment would include removal of dead and dying ponderosa pine and the thinning of denser areas of the overstory. Mistletoe-infected Douglas-fir, which have poor aesthetics, would also be removed. The initial removal of the dead trees would immediately improve the aesthetics of the unit while the effects of the commercial thin would improve long term forest health and aesthetics. The 18-acre treatment is too small to have any immediate or future effects on the aesthetics on a landscape level. Concern about noise and dust produced from log hauling operations and early morning hauling was expressed by one adjacent

landowner. This landowner will be contacted prior to conducting forest activities and hauling will not occur prior to 7:00 a.m.

The treatment in the Tin Cup unit is visible from Tin Cup Road. The treatment would leave the healthiest ponderosa pine and Douglas-fir and reduce the understory density. 540 feet of road in the unit that may be visible post-harvest will be eliminated from the landscape. The small nine-acre treatment is only visible from a small stretch of Tin Cup road so aesthetic effects 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.

Under the action and no action alternative, there would be no change to the demand on environmental resources of land, water, air or energy.

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 sale was completed in the general area recently:
Tin Cup Timber Sale: W1/2, NW1/4, SW1/4 Section 16 T3N, R21W

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.

Under the action alternative, 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.

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

Under the action alternative, there would be a small, temporary increase in industrial activity related to logging and log hauling during implementation.

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.

Under the action alternative, 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.

Under the action alternative, there will be only limited and indirect implications for tax collections because of the small size (85 MBF in 27 acres) of the project.

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

Under the action alternative, log hauling would temporarily increase local traffic. However, due to the small size and the short duration of the proposed action, there would likely be no effect to traffic.

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.

There are no locally-adopted environmental plans or goals that are applicable and would affect the action alternative.

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.

Under the action alternative, access to recreational and wilderness activities in both units of the project area will not change. Due to the short duration of the project, any access issues associated with logging and log truck traffic will be temporary. There will likely be no effect to access in the Robbins Gulch unit as it is nearly surrounded by private property. The total project area of 27 acres will not change recreational access on a landscape level.

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.

Under both the no action and action alternatives, there would be no effect to the density and distribution of population and housing.

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

Under both the no action and action alternatives, there would be no change to any native or traditional lifestyles or communities.

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

Under both the no action and action alternatives, there would be no effect to any culturally-unique quality in the area.

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.

This project should return to the Common Schools Trust approximately $5,525.00 in stumpage ($10.00/ton as minimum bid) and $1,936.00 ($3.5/ton) in forest improvements.

Costs related to the administration of the timber sale program are only tracked at the Land Office and Statewide level. DNRC doesn't track project-level costs for individual timber sales. An annual cash flow analysis is conducted on the DNRC forest product sales program. Revenue and costs are calculated by land office and statewide. These revenue-to-cost ratios are a measure of economic efficiency. In FY 12, revenue-to-cost ratio of the Southwestern Land Office was 2.10. This means that, on average, for every $1.00 spent in costs, $2.10 in revenue was generated. Costs, revenues, and estimates of return are estimates intended for relative comparison of alternatives. They are not intended to be used as absolute estimates of return.

EA Checklist Prepared By:	**Name:**	Chris Shank	**Date:**	05/28/2013
	Title:	Forest Planning Intern		

V. FINDING

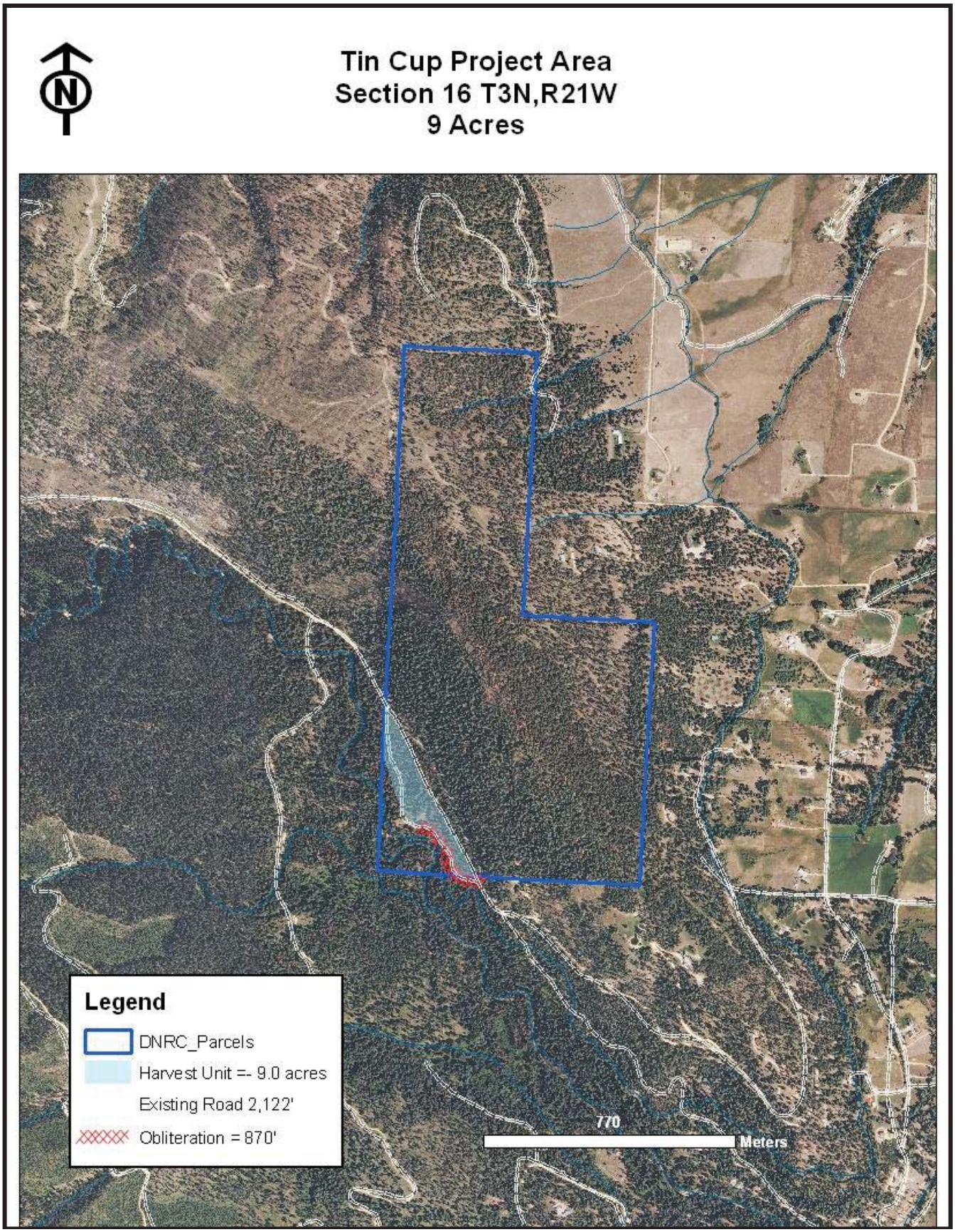
25. ALTERNATIVE SELECTED: In my opinion, the action alternative as proposed by the project leader best meets the purpose of action. It complies with all pertinent environmental laws, DNRC Forest Management and the Habitat Conservation Plan (HCP). The no action alternative does not meet any of the project objectives and provides no income to the Common School Trust. It provides no income to the Common School Trust. It does nothing to address the salvage/forest health issue. For these reasons, I have decided to select the action alternative for implementation on this project.

After thorough review of the project file and scoping documents, I find that all identified resource management concerns have been fully addressed in this environmental assessment.

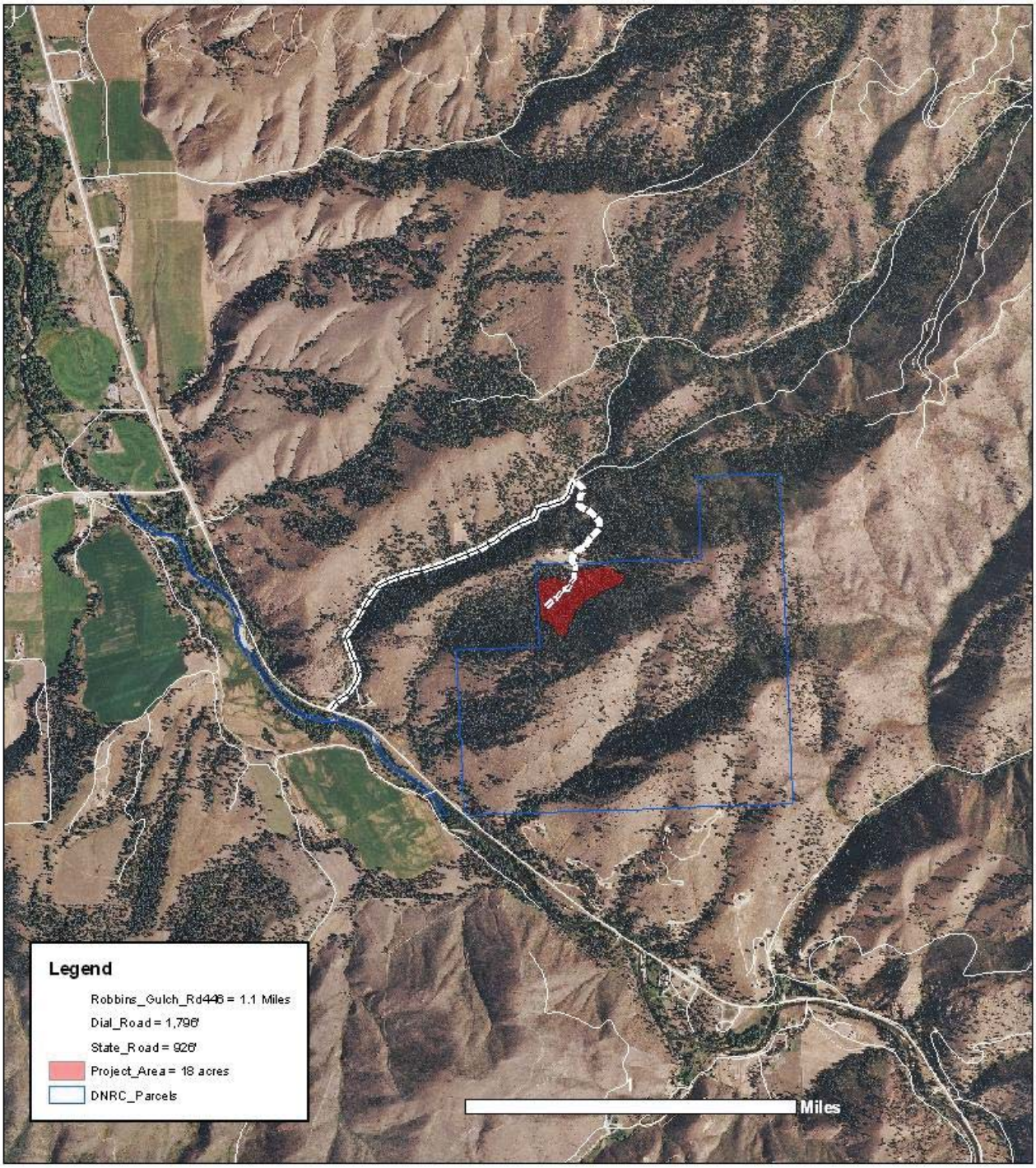
27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

	EIS		More Detailed EA	X	No Further Analysis

EA Checklist Approved By:	**Name:**	Paul A. Moore		
	Title:	Hamilton Unit Manager		
Signature:	/s/ Paul A. Moore		**Date:**	06/20/2013


Tin Cup Project Area
Section 16 T3N,R21W
9 Acres
N
Legend
DNRC_Parcels
Harvest Unit =- 9.0 acres
Existing Road 2,122'
Obliteration = 870'
770
Meters

Robbins Gulch Project Area
Section 16 T2N,R20W
18 Acres



TIN ROBBIN

Checklist for Endangered, Threatened and Sensitive Wildlife Species

SPECIES/HABITAT	DETERMINATION – BASIS
THREATENED AND ENDANGERED SPECIES	
Grizzly bear (*Ursus arctos*) Habitat: Recovery areas, security from human activity	The project area is outside of any grizzly bear recovery zone or "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). Proximity to human residences and other human developments likely limits habitat quality in the project area; use of the project area by grizzly bears is not likely. Thus no direct, indirect, or cumulative effect to grizzly bears would be anticipated.
Canada lynx (*Felis lynx*) Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone	No lynx habitats occur in the project area. Thus, no direct, indirect, or cumulative effects would be anticipated to lynx.
SENSITIVE SPECIES	
Bald eagle (*Haliaeetus leucocephalus*) Habitat: Late-successional forest more than 1 mile from open water	Parts of the project area are in the home range associated with the Conner bald eagle territory. This territory is near Highway 93 and numerous other human disturbance vectors. Extensive use of the project area is not likely. Activities would largely occur in the latter portion of the nesting season or after the nesting season, which would minimize the effects to the nesting pair. Given the distance from the nest, habitats present, timing of the proposed activities, and proximity to human developments, negligible direct, indirect, or cumulative effects to bald eagles would be anticipated.
Black-backed woodpecker (*Picoides arcticus*) Habitat: Mature to old burned or beetle-infested forest	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 expected to occur as a result of either alternative.
Coeur d'Alene salamander (*Plethodon idahoensis*) Habitat: Waterfall spray zones, talus near cascading streams	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 expected to occur as a result of either alternative.
Columbian sharp-tailed grouse (*Tympanuchus Phasianellus columbianus*) Habitat: Grassland, shrubland, riparian, agriculture	No suitable grassland communities occur in the project area. Thus, no direct, indirect, or cumulative effects to Columbian sharp-tailed grouse would be expected to occur as a result of either alternative.
Common loon (*Gavia immer*) Habitat: Cold mountain lakes, nest in emergent vegetation	No suitable lakes occur in the project area. Thus no direct, indirect, or cumulative effects to common loons would be expected under either alternative.
Fisher (*Martes pennanti*) Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian	No suitable fisher covertypes exist in the project area. Given the lack of habitat, the limited area, the proximity to human developments, and the surrounding landscape, no direct, indirect, or cumulative effects to fisher would be anticipated.
Flammulated owl (*Otus flammeolus*) Habitat: Late-successional ponderosa pine and Douglas-fir forest	Potential flammulated owl habitats exist in the project area. Proposed activities would open the stands up, which could improve flammulated owl foraging habitats and prescriptions would improve future quality by favoring those species used by flammulated owls for nesting and roosting. Retention of large ponderosa pine and large snags could facilitate flammulated owl use into the future. Thus, a low risk of adverse direct, indirect, or cumulative effects to flammulated owls would be anticipated with the proposed activities.

Gray Wolf (*Canis lupus*) Habitat: Ample big game populations, security from human activities	The Trapper Peak and Divide Creek wolf packs may be in the vicinity of the project area. Some use of the project area could occur, but proximity to residences and other human developments likely limits habitat quality for wolves. Negligible changes to big game use of the project area and minor changes to big game habitats would be anticipated with the proposed activities. No wolf den or rendezvous sites are known to occur in the vicinity; standard contract stipulations would address the potential of these habitat attributes occurring in the vicinity. Additionally, activities would largely occur outside of the time periods when these habitat attributes are used b y wolves. Due to the minor changes to big game, lack of known habitat attributes, and inclusion of mitigation clauses in the contract, a low risk of adverse direct, indirect, or cumulative effects to wolves would be anticipated.
Harlequin duck (*Histrionicus histrionicus*) Habitat: White-water streams, boulder and cobble substrates	No suitable high-gradient stream or river habitats occur in the project area. No direct, indirect or cumulative effects to harlequin ducks would be expected to occur as a result of either alternative.
Mountain Plover (*Charadrius montanus*) Habitat: Short-grass prairie, alkaline flats, and prairie dog towns	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 (*Synaptomys borealis*) Habitat: Sphagnum meadows, bogs, fens with thick moss mats	No suitable sphagnum bogs or fens occur in the project area. Thus, no direct, indirect, or cumulative effects to northern bog lemmings would be expected to occur as a result of either alternative.
Peregrine falcon (*Falco peregrinus*) Habitat: Cliff features near open foraging areas and/or wetlands	A peregrine falcon eyrie that has been active in the past exists roughly 1.5 miles from the project area. Peregrine falcons typically forage in habitats such as marshlands and croplands, which do not occur in the project area. Proposed activities could occur during the breeding or the non-breeding seasons. Given the distance from the eyrie, the potential timing of activities, and the lack of suitable habitats in the project area, a low risk of adverse direct, indirect, or cumulative effects to peregrine falcons would be anticipated.
Pileated woodpecker (*Dryocopus pileatus*) Habitat: Late-successional ponderosa pine and larch-fir forest	Some potential pileated woodpecker foraging and nesting habitats exist in the project area. Retention of large ponderosa pine and Douglas-fir along with some of the snags could facilitate some pileated woodpecker use into the future. Thus, given the habitats present, proximity to human developments, and the small area, a low risk or adverse direct, indirect, or cumulative effects to pileated woodpeckers would be anticipated.
Townsend's big-eared bat (*Plecotus townsendii*) Habitat: Caves, caverns, old mines	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 as a result of either alternative.
Wolverine (*Gulo gulo*) Habitat: Alpine tundra and high-elevation boreal forests, areas with persistent spring snow.	No areas of persistent spring snow or high elevation areas exist in the project area. Thus, no direct, indirect or cumulative effects to wolverine would be anticipated as a result of either alternative.
BIG GAME SPECIES	
Big game	The project area includes white-tailed deer, mule deer, elk, and moose winter range. Year-round use by deer, elk, and moose is likely. Some reductions in thermal cover and snow intercept would be anticipated with the proposed harvesting; however, a portion of the material proposed for removal has been experiencing recent insect and disease mortality and therefore is not providing thermal cover or snow intercept capacities. Overall the negligible effects to winter range quality would have little or no effect on big game populations using the larger winter ranges. No elk security habitats exist in the project area; no measurable increases in elk security habitats would be anticipated from the proposed reductions of motorized human access in the Tin Cup drainage. Overall a low risk of adverse direct, indirect, or cumulative effects to big game would be anticipated.