

# DEADMAN'S TIMBER SALE ENVIRONMENTAL ASSESSMENT

MONTANA DEPARTMENT of NATURAL RESOURCES and CONSERVATION

SOUTHWESTERN LAND OFFICE  
CLEARWATER UNIT



# DEADMAN'S TIMBER SALE ENVIRONMENTAL ASSESSMENT

## Table of Contents

Checklist EA: 13 pages  
Attachment A-1, Vicinity Map: 1 page  
Attachment A-2, Project Map: 1 page  
Attachment A-3, Soils Map: 1 Page  
Attachment B, Initial Proposal: 1 Page

## CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name:</b>	Deadman's Timber Sale
<b>Proposed Implementation Date:</b>	February, 2011
<b>Proponent:</b>	Lincoln Station, Clearwater Unit, Southwestern Land Office, Montana DNRC
<b>Location:</b>	West ½ Section 10 T. 14 N., R. 11 W., P.M.M.
<b>Counties:</b>	Powell

### I. TYPE AND PURPOSE OF ACTION

The Montana Department of Natural Resources and Conservation (DNRC) is proposing timber management activities on approximately 210 acres in the West ½ of Section 10 T. 14 N., R. 11 W. The proposed project would include harvest of approximately 1.6 MMBF of timber and pre-commercial thinning of approximately 80 acres. Ponderosa pine trees in the area are under attack from the mountain pine beetle (*Dendroctonus ponderosae*). Douglas-fir, spruce, and true fir trees are suffering heavy defoliation from the western spruce budworm (*Choristoneura occidentalis*). The proposed harvest and pre-commercial thinning treatments would emulate disturbances caused by natural wildfire events, salvage the value of dead trees, reduce the likelihood of future losses, and improve timber stand health and vigor.

Road maintenance would take place on approximately 0.75 miles of existing access roads within the state owned parcel.

The project objectives are to:

- 1) Maximize revenue over the long-term for the School Trust accounts from the timber resources and salvage timber on state forests that is dead, dying or is threatened by insects, disease, fire, or windthrow as mandated by State Statute 77-5-207, MCA,
- 2) Manage the identified parcel intensively for healthy and biologically diverse forests to provide long-term income for the Trust.
- 3) Improve timber stand health and vigor.

The lands involved in this proposed project are held by the State of Montana in trust for the Capital Building Trust (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.*

The initial proposal, which was distributed to the public, organizations, and other agencies in April 2010, proposed the harvest approximately 800 MBF from approximately 200 acres. However as project development continued it became apparent that the western spruce budworm damage was much greater than originally estimated. Due to this increased damage a large portion of the Douglas-fir trees are now included in the harvest proposal, thus increasing the estimated harvest volume to 1.6 MMBF.

In addition to public scoping, resource professionals in state agencies were scoped to notify them and receive input. Comments were received from within the DNRC, Defenders of Wildlife, and one member of the public. These were grouped into the concerns as well as issues that were identified internally within the DNRC. These concerns were used to help guide the development of the action alternative.

The mailing list of parties receiving initial scoping notices for this project is located in the project file at the Lincoln Field Office. Public scoping comments are also located in the project file at the Lincoln Field Office.

---

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

Montana Department of Environmental Quality, burning restrictions.

---

## 3. ALTERNATIVES CONSIDERED:

### Alternative A – No Action

Under this alternative no large scale timber harvest would occur, however the DNRC would continue current uses including firewood permits and small timber permits. The bark beetle epidemic would continue, possibly killing the majority of ponderosa pine trees on the project area. The western spruce budworm would continue to defoliate Douglas-fir and spruce trees on the parcel resulting in growth losses and possible tree mortality.

### Alternative B – Timber Harvest (Action)

Under this alternative, the DNRC would continue current uses, and also harvest approximately 1.6 MMBF of timber from approximately 210 acres. Timber harvest would include both live and dead trees. Road maintenance would take place on approximately ¾ miles of existing access roads.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT
<ul style="list-style-type: none"><li>• RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.</li><li>• Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.</li><li>• Enter "NONE" if no impacts are identified or the resource is not present.</li></ul>



---

## 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 unstable slopes or especially unique geology features are present. The landscape is a broad glacial outwash plain on the southeast side of Kleinschmidt Flat. Primary soils in the project area are a complex of Wildgen and Yreka deep gravelly loams and extremely stony loams on the forested upland sites. These soils are well drained and tend to be droughty with a long season of use. Material quality is good for road construction, but high cobble content can lead to rough roads. No high erosion potential soils were identified and there are minimal effects of disturbance from historic use.

Previous selection harvest was mainly on moderate slopes, however some skid trails and stumps are noticeable on areas over 45 percent. Skid trails from these harvests have revegetated and low level soil effects from these harvests have mostly recovered. Some previously scarified sites have resulted in dense regeneration and overstocking. Short steep slopes > 45% (in Attachment A-3 unit 371F) have a higher risk of displacement and ground based operations that cause excessive disturbance can reduce soil depth, moisture and nutrient retention and soil productivity.

Ground based skidding will generally be limited to slopes less than 45 percent, areas over 45 percent will be designated equipment restriction zones. These steeper slopes are short and represent approximately 5 percent of the area proposed for harvest. On some selected locations designated skid trails would be used within the equipment restriction zone. Equipment operation would be restricted to these designated trails which would be located on the shortest and gentlest slopes possible, or on skid trails used in previous harvests. To limit the area of disturbance, these skid trails would be located by the forest officer prior to use.

The harvest of overstocked trees will improve tree spacing and should reduce competition for limited soil moisture and nutrients and improve growth of retained trees. The transportation plan is to use the existing roads with short temporary spur roads to landing sites and complete road maintenance and improvements as needed on approximately 3/4 mile of existing access roads. Planned road use, construction and ground skidding operations should have low risk of direct, in-direct and cumulative impacts based on implementing forestry Best Management Practices (BMP's), and mitigation measures. Mitigations include season of use limits, use of existing skid trails where available, and retaining a portion of woody debris for nutrient cycling and moisture retention, while providing hazardous fuel reduction and prompt revegetation as needed to protect soil resources.

---

**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.*

The proposed salvage sale is located in W ½ of Sec 10, T14N, R11W and the DNRC ownership includes a segment of Ward Creek that is classified as B-1 in the Montana Water Quality Standards. Ward Creek ( from Brown's Lake to the headwaters) has been identified as an impaired water body in Montana's 2008 305(b) Report, because the stream only partially supports aquatic life and cold water fisheries and no other beneficial uses are listed as impaired. The impairments listed are sedimentation, siltation and substrate habitat alterations. The listed causes of impairment are agriculture (diversions and grazing), silviculture activities and roads. No harvest or management is planned near Ward Creek. TMDL's have been approved to rectify all identified threats or impairments. There is erosion on two short steep segments of road where additional road surface drainage is needed. This road work is planned as part of the proposed action. These road segments are not near streams and there are no sediment sources which deliver to surface waters and no water quality impacts were observed from the existing access roads.

The proposed project has very low risk of direct, indirect or cumulative effects to water quality based on the following considerations. The proposed salvage harvest and thinning is a small scale project of about 210 acres mainly on gentle to moderate slopes and well drained soils. No streams occur within the harvest units and no SMZ harvest is proposed within 120 ft. of Ward Creek. Most of the harvest units are located on well drained soils that slope toward Kleinschmidt Flat, less than ten percent of the area proposed for harvest is on slopes draining towards Ward Creek. No sites with high erosion risk were identified that would be affected. The project is not in a Municipal watershed. Road drainage would be repaired or improved. 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 and thinning of dead, dying and live trees 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 are expected to have a low risk of direct, in-direct and cumulative impacts based on implementing BMP's, Forest Management Rules and site specific recommendations.

---

**6. AIR QUALITY:**

*What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.*

---

The DNRC is a member of the Montana/Idaho Airshed Group which was formed to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction (Montana/Idaho Airshed Group 2006). The Group determines the delineation of airsheds and impact zones throughout Idaho and Montana. Airsheds describe those geographical areas that have similar atmospheric conditions, while impact zones describe any area in Montana or Idaho that the Group deems smoke sensitive and/or having an existing air quality problem (Montana/Idaho Airshed Group 2006).

The project area is in Airshed 3B which includes all of Blackfoot drainage in central Powell County. The project area is not near any heavily populated areas. However, a few year-round homes and vacation homes do exist adjacent to and within a few miles of the project area. The Bob Marshall Wilderness area is approximately 10

miles north of the project area. This wilderness area exceeds 5,000 acres and as such, is considered a Federal Class I Area that ultimately receives protection under the Federal Clean Air Act of 1977.

### **Alternative A - No Action**

Under the No Action Alternative, no slash piles would be burned within the project areas. Thus, there would be no effects to air quality within the local vicinity and throughout Airsheds 3B.

### **Alternative B – Timber Harvest (Action)**

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

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

Burning that may occur on adjacent properties in combination with the proposed action could potentially increase cumulative effects to the local airshed and the Class I Areas. The United States Forest Service and large scale industrial forestry operations in the area participate as airshed cooperators and operate under the same Airshed Group guidelines as the DNRC. Non-industrial timberland operators are regulated by the Montana Department of Environmental Quality and burning is only allowed during seasons that provide good ventilation and smoke dispersion. Thus, cumulative effects to air quality due to slash pile burning associated with the proposed action would also be expected to be minimal.

Harvesting and log hauling could create dust which may affect local air quality. Harvesting operations would be short in duration and could occur during the winter months that would minimize dust dispersal. 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.*

### **Existing Condition**

#### **RARE PLANTS AND NOXIOUS WEEDS**

No rare plants have been identified in the project area. Knapweed (*Centaurea spp.*) and houndstongue (*Cynoglossum officinale*) occur on range and forested sites and along roads in the project area. Yellow Toadflax (*Linaria vulgaris*) has been found in north half of the project area. As a pre-project weed control measure, an existing road was sprayed for weeds in the summer of 2010 to reduce the potential for seed spread. The grazing leasee is responsible for weed control consistent with use. To prevent the introduction of new noxious weeds, off-road equipment will be cleaned prior to entry into harvest areas. Newly disturbed roads and landings will be seeded to grass to reduce the spread of weeds. Noxious weed spread would not be greatly increased by this action or cause cumulative impacts to vegetation based on the mitigation measures. The landings would be prioritized for herbicide treatment in spring 2011 to reduce existing weeds.

#### **STANDARD VEGETATIVE COMMUNITY**

Ponderosa pine cover types currently make up approximately 249 acres of the 320 acre gross project area. Approximately 197 acres of the ponderosa pine cover type is in sawlog size stands, approximately 11 acres is in

a pole size stand, and approximately 47 acres is in a sapling sized stand. The other forest cover type that exists on the project area is a 17 acre, Douglas-fir sawtimber size stand. The remaining 54 acres is in non-forested lands. Compared to the desired future condition all areas, but the Douglas-fir stand, meet the desired future cover type. Based on forest stand modeling the desired future condition for all forest stands on the gross project area is the ponderosa pine cover type. Overall approximately 95% of the gross project area currently has a cover type that meets the desired future condition.

**Table 7-1: Cover Types for the Deadman’s Timber Sale Project Area**

Cover Type	Current Acres	Current Percent of Project Area	Desired Future Condition Percent of Project Area	Post Harvest Percent of Project Area
Ponderosa Pine	249	78%	83%	78%
Non-forested	54	17%	17%	17%
Douglas-fir	17	5%	0%	5%

The overall stand characteristics are generally a result of past timber harvest and fire suppression. As noted above and in Table 7-1 ponderosa pine is the dominant cover type. The stand proposed for harvest is generally two-storied in structure. The average DBH across the stand is 18 inches and the average age is 140. The current basal area is approximately 105 square feet per acre. The current standing volume on the proposed harvest unit is approximately 2.7 MMBF. Pre-cruise data shows that approximately 10 percent of the merchantable ponderosa pine is currently infested with the mountain pine beetle. Project area walk-throughs show some sapling and small sawtimber stands outside of the proposed harvest area are over 50 percent infested with mountain pine beetle. The Douglas-fir trees in the overstory range in health and vigor. Some are in good health and vigor, while others have been severely defoliated by the western spruce budworm and lack vigor.

The existing regeneration varies in terms of species composition, stocking, health, and vigor. Most of the forested areas in the North half of the section were pre-commercially thinned in 2006 leaving approximately 300 trees per acre in the understory. Ponderosa pine was the desired leave tree and now makes up the majority of the understory in the pre-commercially thinned areas. The South half of the section was not pre-commercially thinned and is severely overstocked. Species composition is approximately 55 percent Douglas-fir and 45 percent ponderosa pine. The Douglas-fir regeneration is currently being severely defoliated by the western spruce budworm.

At the larger scale, DNRC lands managed by the Clearwater Unit are approximately 85% forested, mostly in the ponderosa pine and western larch/Douglas-fir cover types. Compared to the desired future condition at this scale, Douglas-fir, subalpine fir, and mixed-conifer cover types are slightly over-represented while ponderosa pine and western larch/Douglas-fir are slightly under-represented. Overall, however, about 84% of these lands do have a cover type that matches the desired future condition. This area falls within climatic section 332B, which was historically about 79% forested. Within the climatic section, the historically dominant cover type was lodgepole pine, followed by Douglas-fir and ponderosa pine on lower slopes (Losensky, 1997).

DNRC has adopted old-growth definitions based on minimum age and number of large live trees as described in Green et al. (1992). Based on Stand Level Inventory age data, timber sale pre-cruise data, and field reconnaissance no stands in the project area meet the minimum criteria to be classified as old-growth according to DNRC’s definition.

**Environmental Consequences**

**Alternative A - No Action**

No large scale timber harvest would occur at this time. Small timber permits, firewood permits, grazing, and pre-commercial thinning projects would likely continue. Weed control would take place as funding allows. The mountain pine beetle would likely continue to kill trees. Defoliation from western spruce budworm would likely continue, resulting in growth loss and possible mortality. Some openings in the canopy from tree mortality would be expected. Over time, natural regeneration would be expected in these openings.

### **Alternative B – Timber Harvest (Action)**

The proposed action alternative would harvest approximately 1.6 MMBF from approximately 210 acres. The harvest would be designed not only to capture the value of dead, dying and at risk timber, but also to emulate natural disturbance and promote desired future conditions.

The harvest would result in a more open stand by removing approximately 60 percent of the volume and basal area in the sawlog size classes. Approximately 25 sawlog size trees per acre would be retained. To promote seral species western larch and ponderosa pine would be the preferred leave trees, Douglas-fir would be left in areas of high beetle activity or other suitable areas. Reserve trees would be distributed unevenly across the harvest unit to retain the healthiest, most vigorous trees and emulate a mixed severity fire. This uneven distribution would leave some areas with many more reserve trees per acre while others would retain very few sawlog size trees. Some large openings, possibly up to a few acres in size would be created. Trees of all age classes would be retained to maintain and promote the uneven aged characteristics of the stand.

Where advanced regeneration is healthy, efforts would be taken to maintain that existing regeneration. Following harvest these healthy areas would be pre-commercially thinned to improve tree growth and reduce ladder fuels. In some areas the current advanced regeneration is in very poor health due to overstocking, western spruce budworm defoliation, and mountain pine beetle in some of the larger ponderosa pine regeneration. In these areas the advanced regeneration would be cut down and new regeneration would be expected to become established. Regeneration would also be expected in areas where openings in the overstory are created.

All proposed harvest units currently match the modeled desired future condition of a ponderosa pine cover type. The proposed harvest would help maintain the stands in this cover type. The stand that currently does not meet the desired future condition would not be harvested due to its relatively good health, inaccessibility, steepness and the fact that it makes up the Streamside Management Zone of Ward Creek.

At a larger scale the proposed harvest represents less than one percent of the Clearwater Unit land base. The proposed timber harvest, in combination with timber harvests completed in the last ten years and on-going projects represents approximately 17 percent of the Clearwater land base. Many of these projects have been salvage harvest operations. However all projects have been designed to maintain or promote desired cover types on the project areas thus contributing to the trend toward desired future conditions on the Clearwater Unit.

---

## **8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:**

*Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife*

### **Terrestrial and Avian Life and Habitats**

The following species were considered but eliminated from detailed study due to lack of habitat present: Bald Eagle, Fisher, Peregrine Falcon, Black-backed Woodpecker, Elk winter range, Common Loon, Harlequin Duck, Townsend's Big-eared Bat, Coeur d'Alene Salamander, Northern Bog Lemming, Mountain Plover, and Columbian Sharp-tailed Grouse.

**Pileated Woodpecker**—There are approximately 208 acres of potential pileated woodpecker habitat (dbh  $\geq$  15 inches, and moderate to well stocked; SLI database) within the affected parcel. The proposed harvest on approximately 210 acres would reduce timber volume by approximately 60% within all potential pileated woodpecker habitat within the project area. Because the impetus for the proposed action is tree mortality induced by mountain pine beetles in lodgepole pine and Ponderosa pine, the proposed action would remove overstory trees that are currently dead, or are expected to die, and would subsequently reduce stand canopy closure under baseline conditions. However, such action would also reduce the quantity of snags and snag recruits for future pileated woodpecker nesting sites that would be expected under baseline conditions. The proposed action would retain snags and snag recruits as detailed under ARM 36.11.411. Given that the proposed action would retain at least 1 snag and 1 snag recruit per acre of the largest size class available, because of open roads, there would be a moderate to high risk of snag loss due to firewood harvesting. Such conditions would also be expected under baseline conditions. Because all of the potential pileated woodpecker habitat within the project area is subject to harvesting, and has been affected by mountain pine beetles, there

would likely be moderate risk of direct, indirect, and cumulative effects to pileated woodpeckers from the proposed action, and low to moderate risk of such effects under baseline conditions.

**Flammulated Owl**—Given the proposed harvest and retention levels discussed under the pileated woodpecker, the proposed action may produce marginal habitat for flammulated owls due to an expected retention of approximately 40% of the project area's volume. While there may be short term direct effects to this species, there would likely be low risk of long term (>15 years) direct, indirect, or cumulative effects from the proposed action.

**Mule Deer and White-tailed Deer**—The proposed action would harvest approximately 60% of the existing volume, thereby reducing snow-intercept cover for wintering deer. However, the area is currently being affected by mountain pine beetles and western spruce budworm. With approximately 85% of the project area being Ponderosa pine and lodgepole pine (SLI database), much of the proposed harvest units could lose snow-intercept cover through insect-induced mortality or defoliation under baseline conditions. As a result, there would likely be low to moderate risk of direct, indirect, or cumulative effects to deer from the proposed action, but would not be expected to exceed what would occur under baseline conditions.

**Red-tailed Hawk**—This species is common and utilizes open grasslands, pastures, and open forests. However, it is also protected under the Migratory Bird Treaty Act. A nest with young-of-the-year was located during a field visit to the project area in 2010. This species typically lays eggs in April, with incubation lasting about a month. Young typically fledge in June or July when 6 to 7 weeks old, but still remain associated with the nest in late July. The recommended mitigations include:

- Prohibit harvest operations within ¼ mile of active nests between April 1 and July 31.
- Retain nest tree.
- Retain several perch trees within 100 yards of the nest tree for use by roosting adults and fledglings.

Should the proposed mitigations be implemented, there would likely be low to moderate risk of direct and indirect effects to the red-tailed hawks nesting on the parcel from the proposed action. There would likely be low risk of cumulative effects because the proposed action would open the forest, creating increased foraging opportunities.

### **Aquatic Life and Habitats**

No fish species identified as threatened or endangered under the Endangered Species Act or as Sensitive Species by DNRC are known to occur within the project area or other potentially affected downstream waterbodies. Longnose sucker (native) and eastern brook trout (nonnative) are known to occur in Ward Creek within and downstream of the project area. Ward Creek and a part of Deadman Lake occur within the DNRC ownership but would not be affected by this project. No harvest or road activities are planned within 120 feet of Ward Creek and there would be no proposed project related impacts to stream channel stability, sedimentation or habitat components of connectivity, large woody debris or water temperature.

As noted in Section 5, no road management or riparian harvest activities would occur under the Action Alternative that would be expected to impact fisheries resources in Ward Creek. Consequently, there is expected to be a very low risk of direct and indirect effects to fisheries resources or other aquatic life as a result of the proposed actions.

Existing cumulative effects to fisheries habitat resources in the project area include immediate upstream impacts from grazing (sedimentation and over-utilization of riparian forage), irrigation diversions, road-stream crossings, and past riparian harvest. Impacts to fisheries species resources likely include the displacement of native westslope cutthroat trout from the drainage by eastern brook trout. Existing cumulative impacts to fisheries resources may therefore be moderately high. However, as no direct or indirect impacts are expected to occur from the proposed actions, the risk of additional cumulative effects to fisheries resources in the project area as a result of the Action Alternative (beyond those that would otherwise occur under No Action) is also expected to be low.

---

**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**— The affected parcel is located in occupied grizzly bear habitat, and approximately 4 miles west of the Northern Continental Divide Ecosystem grizzly bear recovery area. The proposed action would harvest approximately 60% of the timber volume on approximately 210 acres. To reduce potential impacts to grizzly bears: (1) retained timber volume would be heavier along open roads to provide for visual screening; (2) aspen regeneration would be encouraged by removing conifers from within and 50 to 75 feet around aspen clones; and (3) operators would be required to store food and other attractants in a bear resistant manner. Because much of the aspen on the affected parcel occurs in or near wet areas, resultant aspen sprouts would provide additional visual screening in and around grizzly bear foraging areas within 5 to 10 years post-harvest. Because the proposed action would not construct new roads, and visual screening would be retained along open roads, and stimulated near potential foraging sites, the proposed action would likely have low risk of direct, indirect, or cumulative effects to grizzly bears.

**Gray Wolf**—The affected parcel is located between the Arrastra Creek and Ovando Mountain packs. Because the proposed action would retain visual screening cover along open roads, there would likely be low risk of direct, indirect, or cumulative effects to wolves as a result of the proposed action. However, should a wolf den or rendezvous site occur within 1 mile of the affected parcel, a DNRC wildlife biologist would be consulted to develop further mitigation measures (as per ARM 36.11.430).

**Lynx**—Based on habitat type, and existing lynx habitat definitions under the Forest Management ARMs, there currently is no lynx habitat within the project area (Stand Level Inventory data). As a result, there would likely be low risk of direct, indirect, or cumulative effects to lynx from the proposed action.

**Fisheries**—No fish species identified as threatened or endangered under the Endangered Species Act or as Sensitive Species by DNRC are known to occur within the project area or other potentially affected downstream waterbodies. Please see additional information regarding aquatic species in Section 8 above.

**Wetlands**—Several small wetlands occur within the general harvest area, but would be protected by wetland management zones (WMZ's). Within these WMZ's ground based equipment operation would be avoided where possible. If ground based operations cannot be avoided within a WMZ operations would be limited to periods of low soil moisture, frozen soil, or snow covered ground conditions (ARM 36.11.426). Based on the harvest design there is low risk of this project impacting wetlands.

---

**10. HISTORICAL AND ARCHAEOLOGICAL SITES:**

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

Portions of the proposed project area were inventoried for cultural resources in 1987 and 1988. No cultural resources were found at that time. Therefore, no impacts to cultural resources would be expected under either alternative.

---

**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.*

The parcel is located approximately 7 miles east of Ovando, MT and portions of the proposed harvest unit are visible from Highway 200 and the Kleinschmidt Flat area. Public roads go through the section and are used year-round by local landowners and recreationists. Much of the traffic that drives through the area is accessing National Forest land including Coopers Lake, the Bob Marshall Wilderness Area, and Huckleberry Pass. The section is also used by walk-in recreationists for activities such as hunting. Currently red-needled dead trees are visible from Highway 200, Kleinschmidt Flat and to people driving or walking through the section.

If the No Action Alternative were selected the tree mortality would likely become greater and more red needled trees would be visible in the foreground, from within the stand, and in the middleground viewing from the Highway. Over time these trees would lose their needles, leaving just the bole of the tree standing, and the forest would appear more open. Eventually the dead trees would rot and fall to the ground creating a more open forest than currently exists.

If the Timber Harvest Alternative is selected the harvested area would be much more open. This would be noticeable from the open roads that travel through the proposed harvest area, from the highway, and from the Kleinschmidt Flat area. Where sufficient healthy trees exist along open roads more leave trees would be left to ease the visual impacts of the proposed harvest. Some large woody debris and fine slash foliage would be left scattered throughout the harvest units. Skid trails, where the ground has been scarified to bare mineral soil, could also be visible. Following harvest, slash and skid trails could dominate foreground viewing due to their contrast with an un-harvested forest setting.

Over time the slash would decompose and skid trails would become revegetated. Regeneration would be expected in very open areas of the proposed harvest and the existing regeneration and leave trees would continue to grow, thus reducing the openness of the stand.

The potential effects of each alternative would be perceived differently by different people, but overall it could be said that the Action Alternative would likely result in a low risk of direct, indirect, or cumulative effects, beyond what is expected under the No Action Alternative.

---

**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.*

No negative direct, indirect or cumulative effects are expected to occur as a result of the proposed project.

---

**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.*

State Forest Land Management Plan EIS, DNRC 1996, set the strategy that guides DNRC management decisions statewide.

Ward Creek Timber Sale 1979

Deadman Pre-commercial Thinning 2005

<b>IV. IMPACTS ON THE HUMAN POPULATION</b>
--

- |  |
|--|
| <ul style="list-style-type: none"><li>• <i>RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.</i></li><li>• <i>Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.</i></li><li>• <i>Enter "NONE" if no impacts are identified or the resource is not present.</i></li></ul> |
|--|

---

**14. HUMAN HEALTH AND SAFETY:**

*Identify any health and safety risks posed by the project.*

Human health would not be impacted by the proposed timber sale or associated activity. Safety considerations and temporary risks would increase for the professional contractors working within the sale area. Log truck traffic would increase but safety concerns would be minimized by posting signs and, imposing a speed limit, if necessary. There are no unusual safety considerations with the proposed timber sale. The general public and local residents would not face increased health or long term safety hazards because of the proposed timber sale

No additional negative effects would be expected as a result of the proposed action

---

**15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:**

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

Two grazing leases currently exist within the proposed timber sale. These leases produce approximately \$420.00 per year. Under the no action alternative no short term changes would be expected. As trees die and expose the forest floor to more sunlight an increase in forage production would be expected, eventually these trees would fall over possibly impeding livestock's ability to use these areas. Under the proposed action alternative a similar increase in forage production would be expected, additionally slash from harvest activities could impede livestock's ability to use the areas, much like in the no action alternative.

People are currently employed in the wood products industry in the region. Due to the relatively small size of the timber sale, there would be no measurable direct, indirect, or cumulative effects from this proposed action on industrial, commercial and agricultural activities and production.

---

**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-term jobs in the local area may be created for the duration of the proposed action.

---

**17. LOCAL AND STATE TAX BASE AND TAX REVENUES:**

*Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.*

The proposed action has only indirect, limited implications for tax collection.

---

**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 there would be minimal impacts related to demand for government services due to the relatively small size of the timber sale the short-term impacts to traffic, and the small possibility of a few people temporarily relocating to the area.

---

**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 State Forest Land Management Plan (SFLMP) is the plan under which DNRC manages forested state trust lands. DNRC developed the SFLMP in 1996 to provide field personnel with consistent policy and direction for the management of forested state trust lands. The SFLMP provides the philosophical basis, technical rationale, and direction for DNRC's forest management program. The SFLMP is premised on the philosophy that the best way to produce long-term income for the trust is to manage intensively for healthy and biologically diverse forests. In the foreseeable future, timber management will continue to be the primary source of revenue and primary tool for achieving biodiversity objectives on forested state trust lands.

The DNRC Administrative Rules for Forest Management (*ARM 36.11.401 through 456*) are the specific legal resource management standards and measures under which DNRC implements the SFLMP and subsequently its forest management program. The Rules were adopted in March 2003 and provide the legal framework for DNRC project-level decisions and provide field personnel with consistent policy and direction for managing forested state trust lands. All forest management projects administered by DNRC on forested state trust lands must comply with the Rules.

---

**20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:**

*Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.*

The project area is used by the public primarily for hunting. The open roads that go through the parcel are used by people accessing National Forest Land, BLM land and additional DNRC land to the north of the project area. The National Forest Land includes the Bob Marshall and Scapegoat Wilderness Areas, which are approximately 10 miles north.

No direct, indirect, or cumulative effects to this recreational access or to the Wilderness Areas would be expected as a result of the proposed project.

---

**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.*

There would be no measurable direct, indirect, or cumulative impacts related to population and housing due to relatively small size of the timber sale proposed project.

---

**22. SOCIAL STRUCTURES AND MORES:**

*Identify potential disruption of native or traditional lifestyles or communities.*

No negative direct, indirect, or cumulative effects would be expected under either alternative.

---

**23. CULTURAL UNIQUENESS AND DIVERSITY:**

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

No negative direct, indirect, or cumulative effects 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.*

**Alternative A - No Action**

A grazing lease on the parcels would continue to generate approximately \$420.00 annually. Small timber permits could yield some additional revenue.

**Alternative B – Timber Harvest (Action)**

Revenue from grazing would continue. The timber harvest would generate approximately \$96,000 for the school trust. This is based on a stumpage rate of \$10.00 per ton, multiplied by the estimated volume of tons. This stumpage rate was derived by comparing attributes of the proposed timber sale with attributes and results of other DNRC timber sales recently advertised for bid. 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. The most recent revenue-to-cost ratio of the Southwestern Land Office was 1.16. This means that, on average, for every \$1.00 spent in costs, \$1.16 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.

<b>EA Checklist Prepared By:</b>	<b>Names:</b> Jeff Collins, Mike McGrath, Neil Simpson	<b>Date:</b> 11/24/2010
	<b>Titles:</b> Soils Scientist, Wildlife Biologist, Management Forester	

## V. FINDING

### 25. ALTERNATIVE SELECTED:

**Alternative B- Action Alternative.**

### 26. SIGNIFICANCE OF POTENTIAL IMPACTS:

This Environmental Analysis has been completed for the Deadman Salvage project. After a thorough review of the EA, project file, response and discussions with Department and other specialists, discussions with neighboring landowners, Department policies, standards and guidelines, and the State Land Management Rules, I have taken the decision to choose the action alternative. I believe that this EA has described a good approximation what this project would accomplish.

This proposed project put forth three objectives to be met by this project:

- 1) Maximize revenue over the long-term for the School Trust accounts from the timber resources and salvage timber on state forests that is dead, dying or is threatened by insects, disease, fire, or windthrow as mandated by State Statute 77-5-207, MCA,
- 2) Manage the identified parcel intensively for healthy and biologically diverse forests to provide long-term income for the Trust.
- 3) Improve timber stand health and vigor.

I find that this project meets the objective given in number one. The No Action alternative (Alternative A) would not meet that need (*EA part 3 Alternatives Considered and EA part 24 Other Appropriate Social and Economic Circumstances*). The harvest is predicted to generate a stumpage value of approximately \$96,000.00 dollars. Currently, there are grazing leases on these parcels, this income (\$420.00 per year) would continue under the action alternative (*EA part 24 Other Appropriate Social and Economic Circumstances*).

The action alternative would salvage dead and dying timber before it loses its economic value, and improve stand health and vigor of the stand by thinning the remaining portions of the stand. It will also be pre-commercially thinned to reduce stocking of some regenerated portions of the parcel. This is explained in *EA Type and Purpose of Action, part 3 Alternatives Considered, EA part 15 Industrial, Commercial, and Agriculture Activities and Production, EA part 24 Other Appropriate Social and Economic Issues*, and is required by law in MCA 77-5-207 -Salvage timber program.

Concerns regarding several wildlife and bird species were raised by the DNRC. To protect pileated woodpecker populations, a minimum of 1 snag and one snag recruit per acre (ARM 36.11.411) of the largest size class trees available (*EA part 8 Terrestrial, Avian, and Aquatic Life and Habitats*). Given this mitigation, and the reduced likelihood of firewood harvest of reserved snags, the probable effects to the pileated woodpeckers are considered moderate for direct, indirect, and cumulative conditions. Two red-tailed hawks nests have been found within the project area. Although these birds are common they are protected under the Migratory Bird Treaty Act. Given the proposed mitigations for this project (reserving nest tree and potential perch trees, providing buffers, and timing of harvest), the direct and indirect effects would be low to moderate to the red-tailed hawks. Cumulative effects would be low (*EA part 8 Terrestrial, Avian, and Aquatic Life and Habitats*).

Concerns over effects of grizzly bears were also raised. This project has several open roads and is within the occupied grizzly habitat and is less than 5 miles from the Northern Continental Divide Ecosystem recovery area. The mitigations for this project include heavier timber volume retained next to roads for visual screening, aspen

regeneration will also be promoted, and food and other attractants will be stored in bear resistance containers. The effects are predicted to be low (EA 9 part *Unique, Endangered, Fragile or Limited Resources*).

The third objective is met by the removal of trees, primarily ponderosa pine, attacked by mountain pine beetle (*Dendroctonus ponderosae*) and Douglas-fir, spruce, and true fir trees are suffering heavy defoliation from the Western spruce budworm (*Choristoneura occidentalis*) (EA *Type and Purpose of Action*, part 3 *Alternatives Considered* , and EA part 7 *Vegetation Cover, Quality, and Quality*). Within part 7 of this EA it is stated “*To promote seral species Western larch and ponderosa pine would be the preferred leave trees, Douglas-fir would be left in areas of high beetle activity or other suitable areas. Reserve trees would be distributed unevenly across the harvest unit to retain the healthiest, most vigorous trees and emulate a mixed severity fire.*” This treatment would open the stand and promote natural regeneration (EA part 7 *Vegetation Cover, Quality, and Quality*).

---

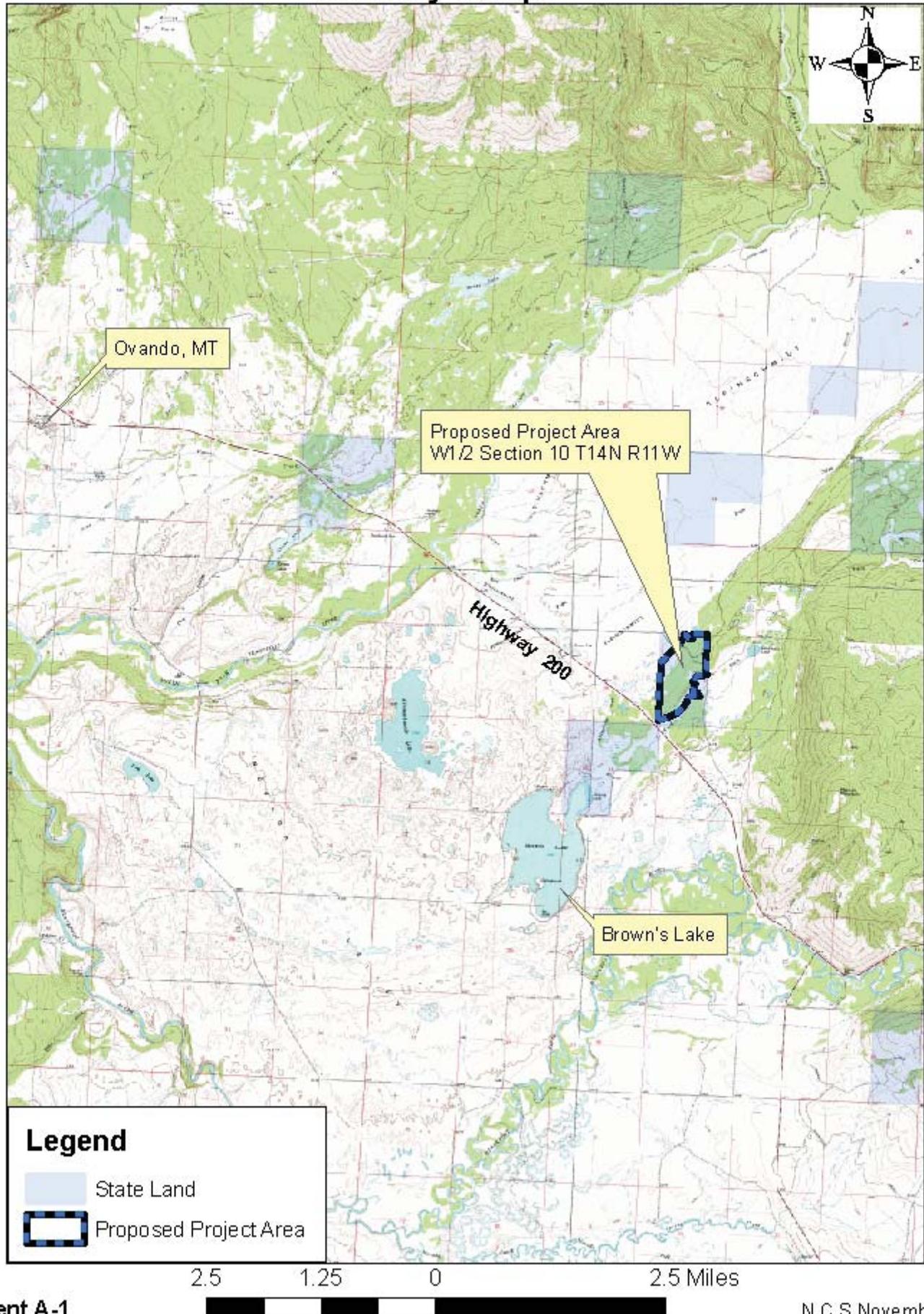
**27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:**

EIS                       More Detailed EA                       No Further Analysis

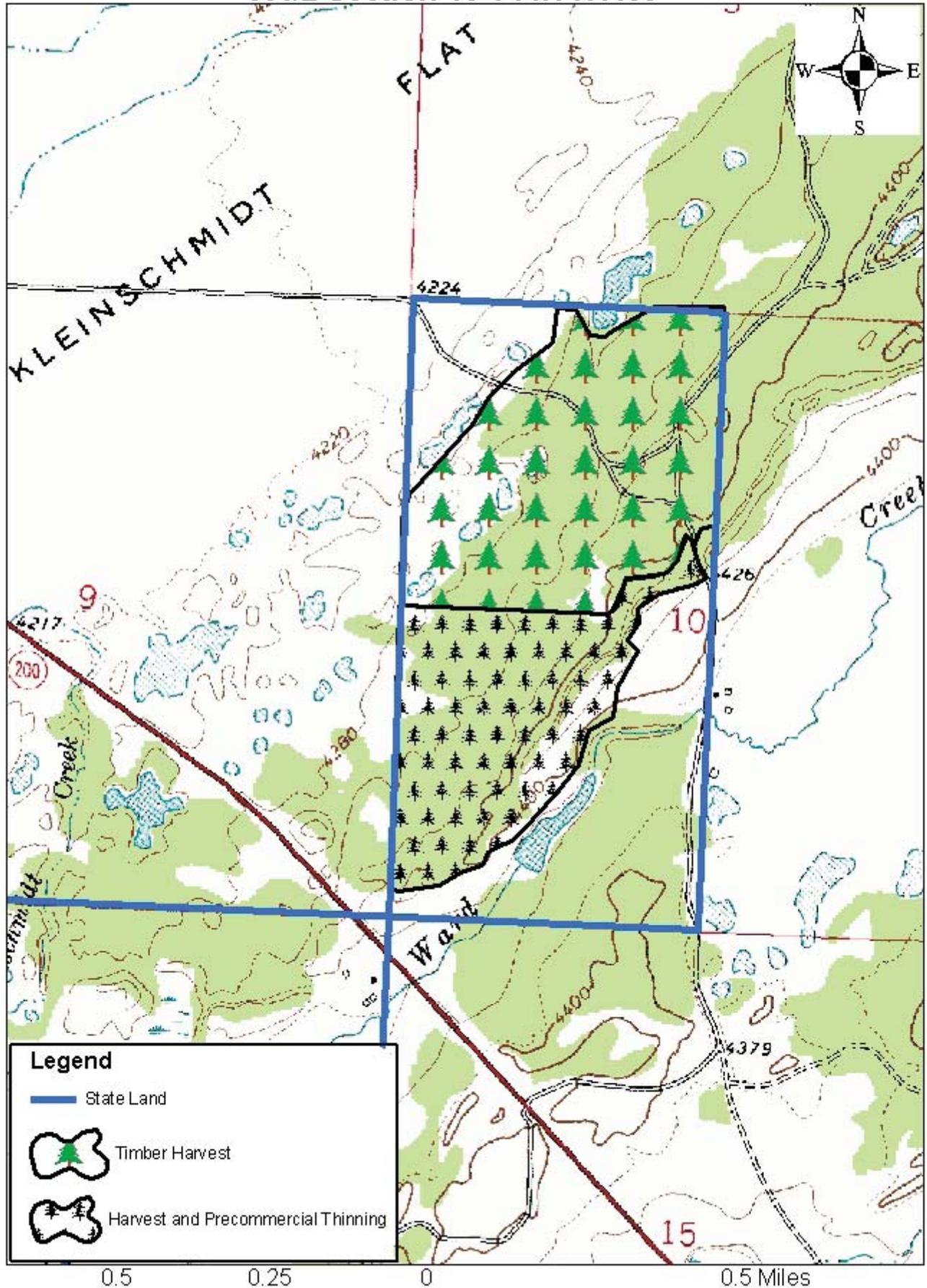
<b>EA Checklist Approved By:</b>	<b>Name:</b> Craig V. Nelson
	<b>Title:</b> <b>Supervisory Forester, Clearwater Unit, Montana DNRC</b>
<b>Signature:</b> /S/ Craig V. Nelson	<b>Date:</b> Dec 21, 2010

# **ATTACHMENT A MAPS**

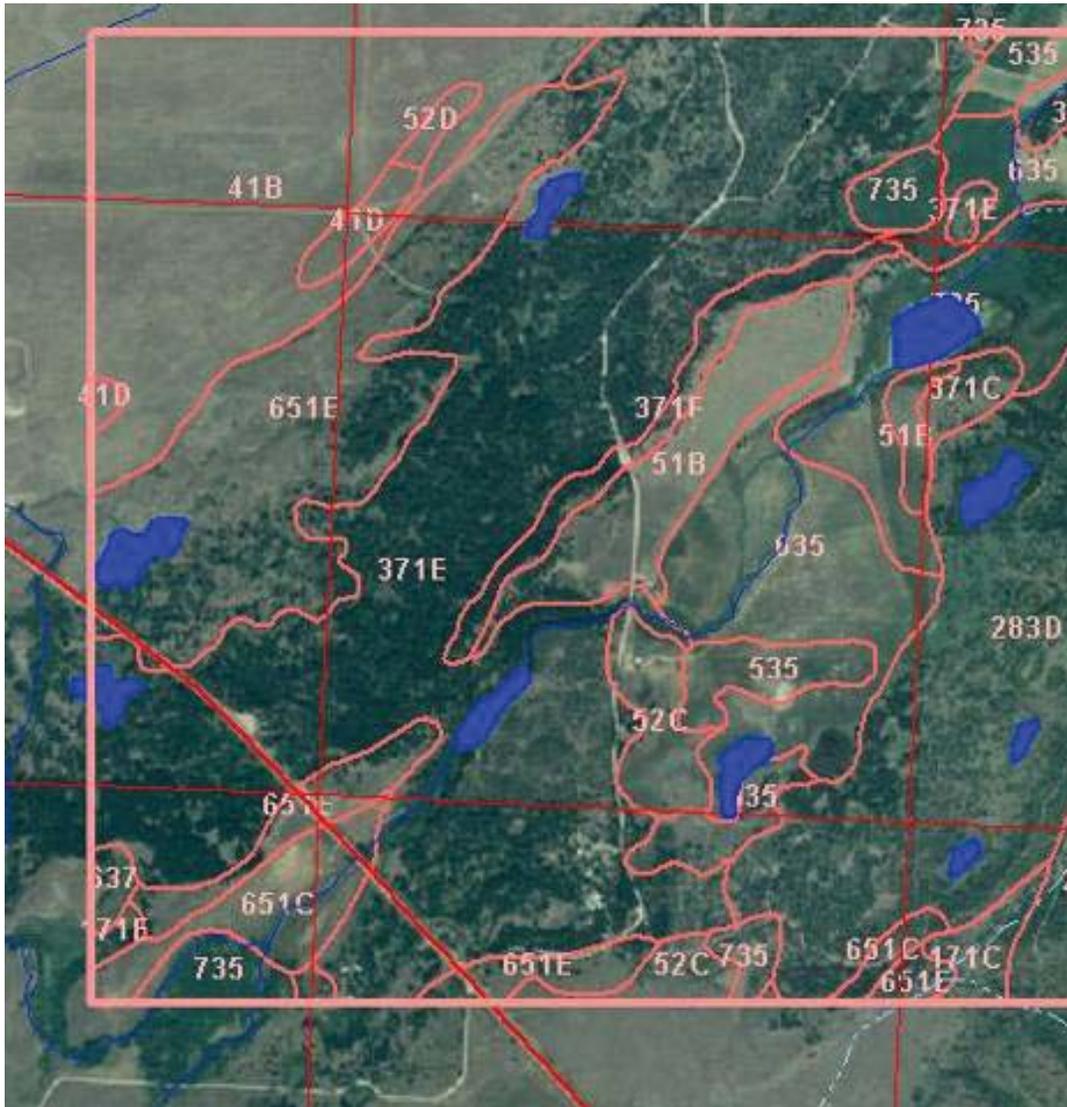
# Deadman's Proposed Timber Sale Vicinity Map



**Deadman's Proposed Timber Sale  
Project Area Map  
W1/2 Section 10 T14N R11W**



## Soil Map Deadman's Timber sale



Map Unit	Mapping Unit Name	Cover Type
371E	Wildgen-Yreka gravelly loams, 8 to 25 percent slopes	Forest
371F	Wildgen-Yreka gravelly loams, 25 to 50 percent slopes	Forest
51B	Shawmut gravelly loam, 0 to 4 percent slopes	Range
52D	Martinsdale loam, 8 to 15 percent slopes	Range

**ATTACHMENT B  
INITIAL PROPOSAL**

DEPARTMENT OF NATURAL RESOURCES  
AND CONSERVATION



BRIAN SCHWEITZER, GOVERNOR

SOUTHWESTERN LAND OFFICE

STATE OF MONTANA

Phone: (406) 542-4200  
Fax: (406) 542-4285

1401 27th Avenue  
Missoula, MT 59804-3199

Initial Proposal  
Deadman's Timber Salvage

The Montana Department of Natural Resources and Conservation, Clearwater Unit is proposing to salvage harvest timber on the following state owned parcels.

Section 10 T.14N., R.11W. Capital Building Trust

The primary objective of the proposed project is to harvest ponderosa pine trees that have been, are currently, or are at risk of being attacked by the mountain pine beetle. Road maintenance and improvement would be needed on approximately one mile of existing access roads. Noxious weed management, property line surveys, and tree planting may also occur under the proposed action.

The proposed salvage harvest is in accordance with State Statute 77-5-207, the DNRC's intent is to harvest timber before there is substantial value loss. Additionally the proposed harvest would contribute to the DNRC's sustained yield as mandated by state statute 77-5-222.

The proposal is in the general vicinity of Kleinschmidt Flat and Highway 200. This area is known to contain numerous wildlife species and streams run through the project area. Protective measures to fulfill the endangered species act, and protect other environmental considerations, would be used.

The proposal would harvest approximately eight hundred thousand board feet from approximately 200 acres. The proposed action would likely be implemented in the late summer of 2010.

The DNRC is in the scoping phase of the project environmental assessment so all volumes and acreages are preliminary estimates. In preparation for this project, specialists such as wildlife biologists, hydrologists, soil scientists, and archeologists will be consulted. Neighboring landowners will also be asked for their input.

The Montana D.N.R.C. invites comments and suggestions concerning this proposal from all interested parties. Please respond by May 25, 2010:

Department of Natural Resources and Conservation  
Attn: Neil Simpson  
Clearwater Unit  
48455 Sperry Grade Road  
Greenough, MT 59823-9635

or: **mail to: [nsimpson@mt.gov](mailto:nsimpson@mt.gov)**  
or: (406) 244-2387