

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Promised Toomey Salvage Timber Sale
Proposed Implementation Date:	Summer 2013
Proponent:	DNRC/ Dillon
Location:	Portions of Sections 24,25, 26, & 36 (All) Township 1 North, Range 14 West
County:	Beaverhead

I. TYPE AND PURPOSE OF ACTION

DNRC, Dillon Unit, is proposing a commercial timber sale to harvest an estimated 11,340 tons (1.7 MMbf) of lodgepole pine, Douglas-fir and Engelmann spruce sawlogs and post/rail material from approximately 169 acres of State land located in Sections 24,25,26, and 36, T1N-R14W, Approximately .08 miles of temporary, minimum standard new road construction would be needed to access the harvest units. These roads would be closed and stabilized upon completion of harvest. The purpose of the action is to:

- generate revenue for the Common School Trust;
- improve the health, vigor and productivity of the forest stands through the removal of dead, dying, at-risk, overstocked and suppressed timber;
- reduce susceptibility to fire and additional insect and disease in the proposed project area.

DNRC, Dillon Unit, is proposing a pre-commercial thinning of approximately ~25 acres of young lodgepole pine stands that have regenerated from past timber sales in 1993 located within Section 36-T1N-R14W. Purpose of the action is to:

- develop a long-term asset for the Common School Trust;
- improve the health, vigor and productivity of the regenerated stands through the removal of overstocked and suppressed seedlings/saplings;
- reduce susceptibility to fire and insect and disease in the proposed project area.

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 these 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), the Administrative Rules for Forest Management (ARM 36.11.401 through 450), and all other laws applicable to timber harvest activities on State lands. Sections 25, 26 & 36 will also be managed in accordance with the DNRC Habitat Conservation Plan.

(See Attachment A for site specific locations).

II. PROJECT DEVELOPMENT

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

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

DNRC Forester Mike Atwood (Dillon Unit) developed this timber sale proposal to be further analyzed through a comprehensive environmental assessment and review by DNRC Resource Management Supervisor G. Frank, and other DNRC resource specialists listed below. MEPA review will be coordinated through DNRC Forest Management Planner Amy Helena. Public and individual scoping notices were sent on February 8, 2013 to a comprehensive list of individuals and agencies who might have an interest in this proposal (Attachment E –

Scoping list). A vicinity map along with a sale area map and a description of the proposed timber management activity was sent to those individuals on the scoping list.

Publication of a Legal Notice in the Dillon Tribune on February 28, 2013 and the Montana Standard on February 17th – 24th 2013. Project details were posted on the DNRC website on February 14th 2013.

Other contacts involved in Environmental Assessment of this proposal:

DNRC: Gary Frank, Resource Management Supervisor

DNRC: Patrick Rennie, Archaeologist

DNRC, Ross Baty, Wildlife Biologist

DNRC, Amy Helena, MEPA Coordinator

FWP: Jim Olson, Fisheries Biologist

FWP, Wildlife Biologist, Craig. Fager

Montana Natural Heritage Program

Montana Fisheries Information System

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

In December 2011, the USFWS approved a Habitat Conservation Plan for DNRC and issued an Incidental Take Permit (Permit) under Section 10 of the Endangered Species Act. The Permit applies to select forest-management activities affecting the habitat of grizzly bears, Canada lynx, and 3 fish species (bull trout, westslope cutthroat trout, and Columbia redband trout). 3 of the parcels included in the project area for this proposal are covered under the HCP and all applicable HCP conservation measures would be applied if the Action Alternative is selected.

The Beaverhead County Weed Board administers the State weed laws in Beaverhead County. The Weed Board is contacted by the DNRC and given a weed plan for each project.

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.

Access to the State parcels has been obtained via a Temporary Road Use Agreement with the East Bench Ranch and Temporary Road Use Permits for existing roads with the BLM (Butte District office).

Montana Fish, Wildlife & Parks has issued a SPA 124 Permit for a temporary culvert installation crossing Toomey Creek. Upon the completion of the proposed harvest, the culvert will be removed, the crossing will be reclaimed and the temporary haul road will be reclaimed and grass seeded. Montana Fish, Wildlife & Parks has provided the 318 Authorization Review on behalf of Environmental Quality (DEQ) pursuant to the Montana Water Quality Act Short-term Water Quality Standards for Turbidity 75-5-318 MCA.

3. ALTERNATIVES CONSIDERED:

No Action Alternative: Current management actions would be maintained and forest management and harvesting actions would not occur at this time. These tracts are currently leased for grazing. Present and impending insect and disease infestations would continue to escalate with estimated losses to mature timber resources of 85-90% and the probability of additional resource losses due to the risk of fire associated with the dead and dying timber. Unmanaged stands of regeneration would remain overcrowded and suppressed, greatly diminishing growth.

Action Alternative: Commercially harvest approximately 1.5 MMbf of mature and overstocked commercial timber from an estimated 169 acres of state land, located on Sections 24,25,26 & 36, T1N, R14W. Approximately 0.8 miles of temporary, minimum standard new road construction would be needed to access the harvest units. Following project completion new roads will be closed and rehabilitated /stabilized and managed for non-motorized vehicle use. The DNRC would administer pre-commercial thinning of approximately 25 acres of overstocked and suppressed lodgepole pine regeneration from previous commercial harvest units, located in Section 36, T1N-R14W.

Action Alternative: A commercial timber harvest is designed to treat 169 acres within 11 harvest units, removing approximately 1700 MMbf of mature and overstocked commercial timber on state land. Harvest prescriptions will utilize lodgepole pine species selection harvest (clear-cut) within 11 harvest units with canopy openings ranging from 5 acres to 30 acres within 62% (105 acres) of the area being treated. This harvest prescription will encourage natural regeneration of shade intolerant species present and convert these acres to younger successional lodgepole pine cover types with even-age management direction. Individual and group selection harvest will remove approximately 40 -50% of the existing Douglas-fir merchantable overstory trees present on approximately 64 acres dispersed over harvest units 1,2,4,5,7 and 8. It is estimated that about 3500 bd. Ft. per acre of merchantable Douglas fir will be marked for reserve within these stands. Age class diversity will be achieved through Douglas-fir group selection and individual selection for sapling/intermediate/co-dominant and dominant age classes.

It is estimated that ~10 acres of the stands to be treated would meet the minimum characteristics for Old Growth Type Code 1 Douglas –fir cover type (OLD-GROWTH FORESTES TYPES OF THE NORTHERN REGION, USDA Forest Service) located within Section 36, Unit 1. Individual selection harvest marking guidelines within this stand would retain a sufficient number of trees (4 trees per acre 17 inches DBH or more), size (Large trees 200 years +), and maintain a minimum 60 sq. ft. basal area per acre to meet the minimum characteristics to maintain this Old Growth cover type at this present time. Healthy stands of young lodgepole pine regenerated from previous harvests are present within Section 36, consisting of 15-20 foot tall well-stocked cover types in mosaics adjacent to the proposed harvest units. These stands provide excellent cover and security for wildlife as well as age class and cover type diversity. Reserve groups of younger sub-merchantable lodgepole pine, spruce, and Alpine fir will be retained throughout harvest units to provide for diversity in habitat types, cover and canopy structure within the areas being treated. The proposed action represents .036% (<4%) of the total forested acres within the Toomey Creek watershed. Aspen stands present will benefit greatly through the reduction of competing conifers adjacent and within the colonies while ground disturbance and the opening of the canopy will stimulate regeneration of decadent Aspen stands present.

Approximately 0.8 miles of temporary, minimum standard new road construction would be needed to access the harvest units. Following project completion all new roads will be rehabilitated and stabilized with grass seed and course woody debris. The DNRC would administer pre-commercial thinning of approximately 30 acres of overstocked and suppressed lodgepole pine regeneration from previous commercial harvest units, located in Section 36- T1N-R14W within the next five years.

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.

The Promised Toomey sale area is located on moderate slopes with soils weathering from coarse granitic and valley fill deposits of the Boulder Batholith. Bedrock and boulders are common at shallow depth, mainly along

ridges and convex slopes. No especially unique or unstable geology or soils occur in the proposed harvest areas.

Forested sites are predominately on northerly aspects with mixed sagebrush range on dryer ridgelines and southerly aspects. Primary forest soils have moderate depth (4-10") topsoil's over coarse, gravelly loamy sand subsoil's. These soils are well-drained, tend to be droughty, and have a long season of use. Soils are erosive and can be easily disturbed, but risk is moderate on the gentle slopes proposed for harvest. Compaction risk is moderate to low. Scarification should be light to avoid displacing the topsoil, which retains the most fertility and moisture important for seedling growth. Swales and isolated wetlands within the section typically have deeper sandy clay rich soils that are subject to rutting if operated on and should be avoided by traffic. The area is a cool site subject to frost and the proposed harvest is expected to encourage lodgepole regeneration. Leaving slash would provide shade to enhance survival of seedlings and provide protection from animal use.

The proposed temp road in S.36 (unit 1) is located on a stable ridgeline to access timber while avoiding wet areas and rock outcrops. Temporary roads will be obliterated with larger slash material and stabilized with erosion control features and grass seed. The existing ranching road (low-standard two-track through sagebrush and rolling low-lands) will be utilized with minimal blading to accommodate log trucks. The proposed Toomey Creek stream crossing will access timber in Sections 24 and 25. The culvert installation and associated road construction will be directed through a SPA 124 permit obtained by DNRC. The culvert will be pulled, banks and road way re-contoured, seeded and stabilized when hauling is completed.

Primary soil concerns are potential rutting, and excessive surface disturbance with harvest operations and site preparation. Planned ground skidding operations and temporary road construction would have moderate to low direct, in-direct and cumulative impacts. To maintain soil productivity, and promote conifer regeneration, BMP's and mitigation measures would be implemented to minimize the area and degree of soil effects associated with harvest operations. Mitigations include:

- season of use limits (October 1 – March 15 logging season),
- general skidding plans,
- retaining woody debris for nutrients
- seedling protection
- prompt revegetation of disturbed sites on roads to protect soil resources.

The proposed harvest would not have any additive effect on previous harvest units and there is low risk of cumulative effects.

Only minor evidence of naturally occurring erosional processes was observed within the harvest units. These areas were well within the natural base erosion rate for watershed. Coarse and fine woody material currently averages between 5-20 tons/acre.

No Action Alternative: Under the no-action alternative forest stands would continue to age with natural mortality expected to increase as insect and disease outbreaks continue to flourish in southwest Montana. Soil resources would continue on a stable trend with no new impacts from displacement, compaction or additional erosion. This would result in no net increase or decrease in soil productivity.

Action Alternative: Under the action alternative, detrimental soil impacts resulting from compaction, displacement and erosion would be expected on approximately 15% or less of each harvest unit and would be localized to primary skid trails and log landing sites. With the implementation of BMP's and recommended soil and erosion control mitigation measures, moderate levels of long-term impacts to soil productivity from compaction and displacement are expected due to some steep, localized areas planned to be harvested with traditional methods. Assuming 15% of all harvest units (169 acres) would be detrimentally impacted, this would result in approximately ~25 acres of harvest related impacts within the project area. Fall/Winter logging is specified by the adjacent landowner providing access, greatly reducing potential impacts to soils. Within these impacted areas soil productivity may be reduced for a period of 5-20 years depending on the extent and magnitude of the impacts. The non-mechanical thinning of ~25 acres would have no impacts on soil compaction, displacement or erosion. There is a low risk of direct, indirect or cumulative effects to soil resources due to forest management activities, including timber harvest and pre-commercial thinning within the proposed project area.

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 Promised Toomey Timber Sale is located in the Toomey Creek watershed situated in the West Pioneer Mountains. Toomey Creek is a 3rd order perennial tributary to the Big Hole River within the Missouri River Basin. Toomey Creek drains a watershed area of approximately 6,780 acres.

The mainstem stream channel of Toomey Creek has existing low standard road crossings used by vehicles for ranching and recreational hunting access. An existing road would be re-constructed and re-located on suitable terrain with a proposed culvert to be installed across Toomey Creek (on State land) at a location that would minimize impacts associated with short term timber hauling and vehicular traffic. This facility would be closed and rehabilitated under the 124 permit obtained through FWP.

The proposed harvest area does contain several isolated wetlands, springs and unnamed segments of Class II and Class III streams. While most stream segments and ephemeral draws within State section 36 are discontinuous, there are several segments that may contribute direct channel delivery to Toomey Creek during high runoff events.

The proposed haul route would also utilize an existing stable road located on private land and BLM land in the Squaw Creek drainage. This segment of road does not contain stream crossings and is not located in an area with direct delivery to stream channels.

The Big Hole River and its tributaries, including Toomey Creek, are classified as A-1 in the Montana Surface Water Quality Standards (ARM 17.30.610(1)(d)). Waters classified A-1 are suitable for drinking, culinary and food processing purposes after conventional treatment for removal of naturally present impurities. Water quality must also be suitable for bathing, swimming and recreation; growth and propagation of salmonid fishes, and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply (ARM 17.30.622(1&2)). Among other criteria for A-1 waters, no increases are allowed above naturally occurring concentrations of sediment, which will or are likely to create a nuisance or renders the waters harmful, detrimental or injurious to public health, recreation, safety, welfare, livestock, wild animals, birds, fish or other wildlife (ARM 17.30.622(3)(f)). Downstream beneficial uses in Toomey Creek include: cold-water fisheries, irrigation, and livestock watering. Toomey Creek has not been identified on the State's 303(d) list of impaired bodies of water in need of TMDL development (MTDEQ 2004).

Toomey Creek supports a cold-water fishery within the immediate timber sale project area. The segment of Toomey Creek supporting a fishery is located approximately 0.4 miles down slope from proposed harvest units with no direct surface delivery of channel flow anticipated to Toomey Creek.

Based on analysis of aerial photos the density of existing roads and level of existing timber harvest in the watershed appear to be low to moderate. Road densities are approximately 0.3 miles of road per square mile of watershed area. Approximately 76% of the watershed area is forested and approximately 5% of the watershed area appears to have been harvested in the recent past (over the last 45 years). These levels of activity are well below the levels of forest management that are normally associated with detrimental increases in water yield and sediment yield. Therefore, it is unlikely that there are measurable cumulative effects on stream flow regimes (water yield, magnitude, and duration of peak flows) and sediment yield due to forest road construction and timber harvesting in the Toomey Creek watershed.

The existing road system on the State section contains high standard roads used to access and haul timber during a previous State timber sales, and lower standard roads used for grazing management. While some segments of the lower standard road do not meet BMP's, they do not appear to be impacting water quality due to erosion and direct delivery of sediment. The proposed haul routes would utilize existing stable roads located on private lands and BLM land in the Toomey Creek drainage.

Grazing practices and heavy big game use have also caused detrimental impacts to the ephemeral draws, wet areas and isolated segments of stream channel within the proposed project area on the State section. Streambank and wetland trampling and subsequent erosion have lead to increased levels of in-stream sedimentation on State lands and adjacent private lands. While these impacts are occurring within the proposed project area, they do not appear to be impacting downstream water quality or downstream beneficial uses due to the discontinuous nature of drainage features occurring within the proposed project area.

The proposed timber harvest activities would result in harvest of approximately 1700 MMbf from 11 harvest units totaling approximately 169 acres in size, and approximately 0.8 miles of new temp road construction and 2.2 miles minor improvements and BMP maintenance of existing low standard roads. Minor improvements would consist of adding additional road surface drainage features where needed. A majority of the existing road would be used without any reconstruction or improvements. All of these proposed activities are located in the Toomey Creek watershed. One new stream crossing is proposed to access a 23 acre unit in the NE corner of Section 25 and SE corner of Section 24- T1N-R14W. This road would utilize an existing two-track ranching road across sagebrush rolling hills to the crossing point on the lower end of Toomey Creek.

Harvest activities would occur on gentle to moderate slopes ranging from 5 to 35%. Several springs, wet areas, ephemeral draws and isolated segments of Class II and Class III stream channels are located within or immediately adjacent to the proposed harvest areas. All segments of discontinuous stream, wetlands and well-defined ephemeral draws would either be excluded from timber harvest, have SMZ delineated or would incorporate equipment restrictions to prevent excessive levels of soil disturbance and erosion. The State has adopted Forestry Best Management Practices through its Nonpoint Source Management Plan as the principle means of controlling nonpoint source pollution from silvicultural activities. The west boundary of the two units in Section 26 (Unit 9 &10) have additional Riparian Management Zones identified (RMZ's) greater than 100 feet from the ordinary high water banks of the Big Hole River where no harvest will occur through this proposal. This additional buffer will add further protection for potential erosion and forested visual screening of the harvest activity. All proposed timber harvest activities are low risk for sediment delivery to streams and adverse impacts to downstream beneficial uses including cold-water fisheries.

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.

This proposed project is within the Montana Airshed 7 jurisdiction. The project plans for the piling and burning of larger concentrations of logging slash. Localized short duration particulate emissions occur during slash burning. Slash burning is normally conducted in late October through November. The DEQ and the Cooperative Airshed groups regulate particulate emissions during this period. Burning times are coordinated to 1) limit burning periods of acceptable smoke dispersion and 2) to limit the cumulative generation of particulates.

This project is located approximately 4 air-miles from the Class 1 Airshed Anaconda-Pintler Wilderness boundary. Impacts to the Class 1 Wilderness area are anticipated to be minimal given the prevailing wind direction and requirement to burn on days with good air dispersion. The DNRC is a member of the Montana/Idaho Airshed Group, which coordinates burning activities related to forest management among the group's members in order to minimize impacts from smoke generated by those activities. As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Smoke Management Unit in Missoula, MT. Thus direct, indirect, and cumulative impacts associated with the proposed action are expected to 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.

The State parcels are located on the northwest side of the Pioneer Mountains along the forest/grassland interface within the Squaw Cr / Toomey Creek watershed. Adjacent ownership to the north, south and east is the Beaverhead-Deerlodge National Forest, to the northwest is BLM and to the north and west is private.

Slopes range from 5-35% with an elevation of 6,100-6,500 feet. The State forested parcels consist of 960 acres of which ~470 acres are forested.

Two commercial timber harvest projects have taken place over the past 20 years. Approximately 5 years ago 1.1 MMBf was removed from 105 acres and 20 years ago 1.4 MMBf of timber was removed from 124 acres. Approximately 135 acres were harvested in the Toomey Creek and Squaw Creek watersheds on the adjacent private lands 20-25 years ago. No harvest activity has occurred on adjacent National Forest or BLM lands. The majority of all the harvested acres have regenerated very well with moderate to heavy 8'-20' lodgepole pine growth and 1'-2' Douglas-fir regeneration from the most recent harvest. There are 5,116 forested acres within the Toomey Creek watershed with ~364 acres (.07%) having been logged in the last 50 years.

Aspen stands are prevalent in this drainage, but are being overtaken by conifer encroachment. The absence of fire, in combination with encroachment, has resulted in overstocked and suppressed stands, primarily mature lodgepole pine, late successional cover types. These conditions make the stands present more susceptible to fire and attack from insects and disease.

Forested stands within the State parcel occur on northerly aspects and are predominately even aged, single story lodgepole pine cover type. Stand structure is a result of a stand replacing fire that occurred approximately 125 years ago. Subalpine fir is the indicated climax species and lodgepole pine dominates the stand currently as a seral species with subalpine fir/grouse whortleberry (*Abla/Vasc*) as the dominant habitat type (Pfister et al. 1977). The area lies along the drought limitations of the habitat type and consequently subalpine fir is sparsely represented. Stand composition ranges from dense mature forest to heavily overstocked and near stagnant forest. Regeneration is sparse within untreated stands with moderate understory vegetation and coarse woody debris. Mountain pine beetle infestations within the lodgepole stands have been active for several years. Western Spruce budworm and Douglas-fir bark beetle activity is present in most of the mature Douglas-fir and Engelmann spruce stands.

Douglas-fir is indicated as a climax species on the drier slopes with Douglas-fir/pine grass (*Psme/Caru*) as the habitat type (Pfister et al. 1977). These stands are comprised of moderately to densely stocked forest. Regeneration is sparse within untreated stands with moderate understory vegetation and coarse woody debris. Older Douglas-fir trees (150 - 200 years) are minimal but do occur within proposed Units 1,2,4,5,7,& 8 within Section 36.

Dominant tree heights: 60-70', co-dominants: 50-60'. Age: 110 to 125 years (LP) and 120 to 205 years (DF). Yield capability: 45-55 cu. ft/ac/yr. Common understory species include: elk sedge, pine grass, grouse whortleberry, dwarf huckleberry and kinnikinnick. The predominate management activities are grazing and forest management.

The proposed harvest represents .036% (<4%) of the total forested acres within the Toomey Creek watershed. Harvesting an estimated 1.7 MMBf of commercial timber (sawlogs and post and pole material combined) would alter the forest cover on approximately 169 acres planned for treatment. Harvest design is intended to capture value from impacted resources before it is lost, reduce overstocking, fire hazard, and additional insect and disease while promoting forest health, stand regeneration and productivity through the emulation of mixed severity and stand replacing fires. Additionally, the planned harvest would open the stands to encourage natural regeneration of shade intolerant species while maintaining lodgepole pine and Douglas-fir cover types of varying age class, to maintain a semblance of historic stand conditions.

Shade intolerant Aspen stands are present throughout the proposed harvest acres. These decadent colonies would likely rejuvenate through mechanical ground disturbance and disturbance of mature, decadent overstory stands. Mature aspen trees would periodically be knocked to the ground, which would stimulate "suckering" of root growth and slow conifer encroachment around the colonies. Many of the stands are located within streamside management zones where mechanical treatment is not allowed or feasible. Removing competing conifer growth adjacent to the aspen would benefit the sites by promoting habitat diversity.

Data summaries (Losensky 1997) for Beaverhead and Madison Counties were compared with the inventory of state forested lands and anticipated changes under the Action alternative. The data comparison indicates that

for either alternative, the forested stands for all cover types on the State lands post-harvest would maintain more total forest cover than in prior historical conditions.

No rare plants or cover types have been noted by the Montana Natural Heritage Program or observed within the proposed project area. The DNRC requires the washing of equipment, seeding of compatible rangeland grasses and monitoring of disturbed areas to minimize the potential of noxious weeds being introduced. There is low risk of direct, indirect, or cumulative impacts due to weeds.

(See Attachment B – Vegetative Analysis/Stand Prescription)

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.

A variety of big game, small mammals, raptors and songbirds use this area. Toomey Creek supports a known cold-water fishery (see section addressing Water Quality, Quantity and Distribution),.

Bull elk vulnerability and potential reductions in hunter opportunity are a concern expressed by FWP in this hunting district and the Pioneer EMU. Achieving this goal can be hampered when available cover at the landscape level is reduced appreciably through timber harvest activities, road management, or natural disturbances, such as large scale stand-replacement wildfires. Additional reductions in hiding cover and/or security habitat may influence achievement of FWP's harvest goal for this Hunting District and EMU. Timber harvest can reduce cover on winter ranges that is important in providing thermal protection and areas of relatively low snow that help elk to escape from predators and avoid other disturbances with minimal expenditure of energy (FWP 1992). Additionally, harvest activities occurring when winter range is occupied could cause undue stress and disturbance to elk. While harvest activities are generally planned during the summer – fall months, winter timber harvest may need to occur given the short duration of activity planned under the limited access through private land for this project. Vast acreages of adjacent federal timber lands currently in an over-mature age class will provide transitional relief to big game seeking winter thermal protection. There exist well stocked regenerated lodgepole stands 12-25 feet tall adjacent to proposed harvest units within Section 36 where the largest harvest units are proposed. These stands along with the broken topography will provide adequate visual screening and security during hunting season. Healthy aspen stands are a high priority for FWP's managers. This proposal will employ mechanical treatments to reduce conifer competition and encourage natural aspen suckering beneficial to wildlife and riparian environments. State DNRC managers will continue to work pro-actively with FWP officials and the adjacent private owner on road management/enforcement and closure policies to mitigate impacts associated with manipulating the vegetation cover in this area. Minimal short-term impacts are expected to wildlife and fisheries habitats with this proposal.

(See Attachments B & C - Vegetative Analysis/Stand Prescription; Checklist for Endangered, Threatened and Sensitive Species).

“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.”

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.

Toomey Creek supports a known cold-water fishery. Species present include brook trout, mottled sculpin and westslope cutthroat trout (WCT). Recent fisheries surveys indicate that abundance of brook trout is common,

mottle sculpin unknown and WCT are rare (MFISH 2005). Fisheries surveys completed by the U.S. Forest Service in 2002 yielded only a few WCT. The WCT are thought to potentially genetically altered from hybridization (Kujala 2005).

Habitat for grizzly bears is marginal within the proposed project area. Occasional use of the area from grizzly bear could potentially occur but is generally considered outside of their normal occupied habitat. Minimal impacts are anticipated. See attachment C for more detailed discussion.

The proposed project area is located along the fringes of preferred lynx habitat. Habitats high in coarse woody debris that are preferred for denning, and large acreages of dense conifer regeneration at high elevations that are preferred for foraging are marginal in the project area. Lynx habitat within the proposed project area is marginal due to naturally induced fragmentation, and the high level of interspersion of native grassland habitat and dry forest types; and to the lack of highly desirable habitat conditions for lynx and their primary prey, snowshoe hares. Impacts to lynx as a result of this project are expected to be minimal. See attachment C for more detailed discussion.

The Big Hole River is suitable habitat for bald eagles. The nearest documented eagle nest location is greater than 2 miles from any portion of the project area. Timber harvest operations in units 9,10, and 11 adjacent to the Big Hole River may impact potential eagle nesting habitat. Contractual operating periods will be managed for these three harvest units to reduce potential impacts to eagles. All other harvest activity is ~ 1 mile away from nesting habitat. Impacts to bald eagles as a result of this project are expected to be minimal. See attachment C for more detailed discussion.

Wolf pack activity occurs in the Big Hole Valley and wolves could occasionally use or travel through the project area at any time. However, due to the small size, nature and location of the proposed project, activities associated with this proposal are not expected to affect wolves. Should a den be detected within one mile of the project area or a rendezvous site within 0.5 miles of the project area, activities would cease and a DNRC biologist would be contacted immediately. Mitigations would then be developed and implemented to minimize adverse impacts to wolves prior to initiating any further activity. Direct, indirect or cumulative effects to wolves associated with this project are expected to be negligible.

Additional detailed analyses for terrestrial sensitive species is contained in Attachment C.

A plant species of concern, Lemhi Beardtongue, has been observed within the State parcel in the Toomey Creek drainage. No other sensitive species/species of special concern have been documented or observed within the proposed project area.

No direct, indirect, or cumulative impacts to the cold-water fishery in Toomey Creek are expected to result from the proposed actions. Due to the size, season, duration and harvest method of the proposed project, minimal road construction and additional recommended mitigation measures, no impacts are expected to occur to any endangered, threatened or sensitive species.

(See Attachments B, C, & D – Vegetative Analysis/Stand Prescription; Checklist for Endangered, Threatened and Sensitive Species; and Elk Security and Vulnerability/Winter Range).

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

The DNRC has no record of cultural resources within the project's area. If previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

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 proposed project area is remote and located in a rural agricultural community. The harvest is not visible to any populated area. Small portions of the project may be seen from highway 43. Specific harvest units #9, 10 & 11 could be seen from a short segment of Highway 43. Given the speed of traveling vehicles, the units will only be visible for a short duration. It is unlikely that aesthetics would be impacted adversely as a mature forest buffer will be left to partially screen the harvest openings.

Noise associated with the timber harvest (log trucks and logging equipment) may be noticed by the adjacent resident rancher who is favorable to this timber management activity and has been cooperative in allowing access. Occasional recreational fishing traffic occurs on the Big Hole River adjacent to this project area however majority of the timber harvest activity is screened topographically and ~1 mile away.

Thus, direct, indirect, and cumulative impacts to aesthetics are expected to 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.

There is no demand for limited environmental resources in this project area or from any other nearby activities. Therefore no direct, indirect, or cumulative effects would occur under either alternative.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

An EA and public scoping was completed in August 2009 for the T-3 and T-4 Salvage Timber Permits covering 130 acres in Sections 36 & 26-T1N-R14W. This project proposed to much of the same area outlined in Promised Toomey EA.

An EA was completed in February 1987 for the Toomey Creek Timber Sale (Section 36-T1N-R14W) for the harvest of 1354 MBF from 124 acres.

An EA was completed in May 1988 for two timber permits (Section 36-T1N-R14W) for the harvest of post & rail from 2 acres.

An EA was completed in 1993 for the Toomey Sagebrush Burn (Section 36-T1N-R14W) for the improvement of range and forage production on 175 acres.

An EA was completed in 1999 for a spring development (Section 36-T1N-R14W) to protect spring areas through fencing while providing reliable stock water.

A range evaluation was conducted in October 2000.

An EA and public scoping was completed in October 2006 for the Toomey Two Timber Sale which treated 106 acres harvesting 800 MBF within Section 36-T1N-R14W

An EA and public scoping was completed in August 2009 for the T-3 and T-4 Salvage Timber Permits outlining the treatment of 130 acres in Sections 36 & 26-T1N-R14W. These two projects proposed to treat the same stands impacted by insects and disease with the Promised Toomey EA.

Cumulative impacts as a result of the proposed action in conjunction with the above listed activities are expected to be minor and temporary.

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.

Timber harvest activities will overlap with the fall hunting season. The proposed project access road on private ownership is part of a FWP Block Management area and would have hunter traffic during October – November periods of log truck hauling.

The public segment of the access road has a good sight radius, which combined with adequately placed traffic signs would allow hunter traffic to avoid any disagreeable encounters with log truck traffic.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

The proposed timber sale would continue to provide industrial production in the region.

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.

People are currently employed in the wood products industry however local mills are operating at 60-70% of full capacity due to a shortage in timber supply. The significant reduction of federal timber sale offerings in the last decade as well as private lands being harvested at a rate exceeding growth, has resulted in a timber supply shortage to local mills for sawlog resources and post and rail fencing material. While this timber sale is relatively small in historical sale size, it will help to maintain the current employment in the industry with much needed raw material supply. Competitive bidding for this timber sale is expected to be very strong given recent similar sales transactions.

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.

People are currently paying taxes from the wood products industry in the region. Due to the relatively small size of the timber sale program, there would be no measurable direct, indirect, or cumulative impact from this proposed action on tax revenues.

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.

There would be no measurable direct, indirect, or cumulative impacts related to demand for government services due to the small size of the timber sale program, 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.

No direct, indirect, and cumulative impacts related to locally adopted environmental plans and goals would be expected under this 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.

Persons having legal access to the parcels and possessing a valid state lands recreational use license or FWP conservation license may conduct recreational activities on the parcels. The proposed project would not affect the existing access for the general public. Access is managed for motorized use and recreational experience.

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 the relatively small size of the timber sale program, and the fact that people are already employed in this occupation in the region.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

No direct, indirect, and cumulative impacts related to social structures and mores would be expected under either alternative.

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

No direct, indirect, and cumulative impacts related to cultural uniqueness and diversity would be expected under either alternative.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

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

No Action Alternative: Current uses would continue. No revenue would be generated for the trusts at this time.

Action Alternative: The estimated return to the trust would be \$82,895 (1700 MMbf) of sawtimber and post and rail material @ \$47.53/MBF). This estimate is intended for comparison of alternatives, not as an absolute

estimate of return. Income from grazing license's of \$9,115.41/year for 917 AUM's of use would continue with or without the harvest proposal.

EA Checklist Prepared By:	Name: Mike Atwood	Date: March 15, 2013
	Title: Dillon Unit Forester	

V. FINDING

25. ALTERNATIVE SELECTED:

After review, I have selected the proposed Action Alternative, to harvest approximately 1700 MMbf of commercial timber (sawlogs and post and rail material) from an estimated 169 acres of Common School Trust land located in portions of sections 24, 25, & 26, and 36 (All) T1N-R14. Access to the timber is facilitated through temporary right-of-way agreements to utilize ~3.5 miles of existing roads on adjacent private and Bureau of Land Management lands. Approximately 0.8 miles of temporary minimum standard road will be constructed on state land and closed and rehabilitate upon completion of this project. I believe this alternative can be implemented in a manner that is consistent with the long-term sustainable natural resource management of the area while promoting forest health and diversity, and generating revenue for the school trust from timber harvest.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

I conclude after scoping potential public concerns for this project, all identified potential impacts will be avoided or mitigated through project design, short duration, timing of harvest activities, contract provisions and administration, BMP compliance, and adherence to state laws pertaining to timber harvest, no significant impacts will occur as a result of implementing the selected alternative.

MEASURES RECOMMENDED TO MITIGATE POTENTIAL IMPACTS:

- 1) Compliance with Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws, the Montana Stream Protection Act (124 Permit) and applicable DNRC Forest Management ARMS.
- 2) Limit equipment operations to periods when soils are dry (less than 20% soil moisture), frozen or snow covered (12 inches packed or 18 inches unconsolidated) to minimize soil compaction, rutting, vegetative disturbance and maintain drainage features. Control erosion by installing adequate drainage on roads and skid trails.
- 3) The Forest Officer shall approve a plan for felling, yarding and landing location in each harvest unit prior to the start of operations in the unit. The locations and spacing of skid trails and landings shall be designated and approved by the Forest Officer prior to operations and skid trails would not be spaced less than 60 feet. Retain all fine litter as feasible and 5-10 tons/acre of large woody debris >3" diameter. Minimize soil disturbance by general skid trail planning and limit sustained tractor skidding to slopes ≤50%. Limit scarification to 30-40% of the harvest area. Slash would be left in the harvest units where feasible, and distributed on skid trails upon completion of use, for nutrient cycling, to control erosion and to provide shade and protection for seedlings.

- 4) For slope stability on the road construction segments, construct cutslopes at 1:1 (run/rise) in common material and 1/4:1 for rock. Install adequate road drainage to control erosion concurrent with harvest activities and road opening and new construction. Provide effective sediment filtration along drainage features near crossing sites. New construction and major skid trails on State lands would be closed with slash and debris and/or barriers, and adequate drainage provided.
- 5) All road and logging equipment would be power washed and inspected prior to being brought on site. Sale area would be monitored for weeds following harvest and a treatment plan would be developed should noxious weeds occur. All road-stream crossings would be monitored for sedimentation and deterioration of road prism.
- 6) At sale closure, grass seed roads, skid trails (where needed) and landings with an appropriate seed mixture.
- 7) One snag and one snag recruit per acre, of the largest diameter class, would be retained where applicable. Cull live trees and cull snags would be retained where applicable.
- 8) Retain live, healthy older trees and stand attributes suitable for old growth development where available and applicable.
- 9) Contact DNRC wildlife biologist should any threatened or endangered species be encountered within the proposed project area.

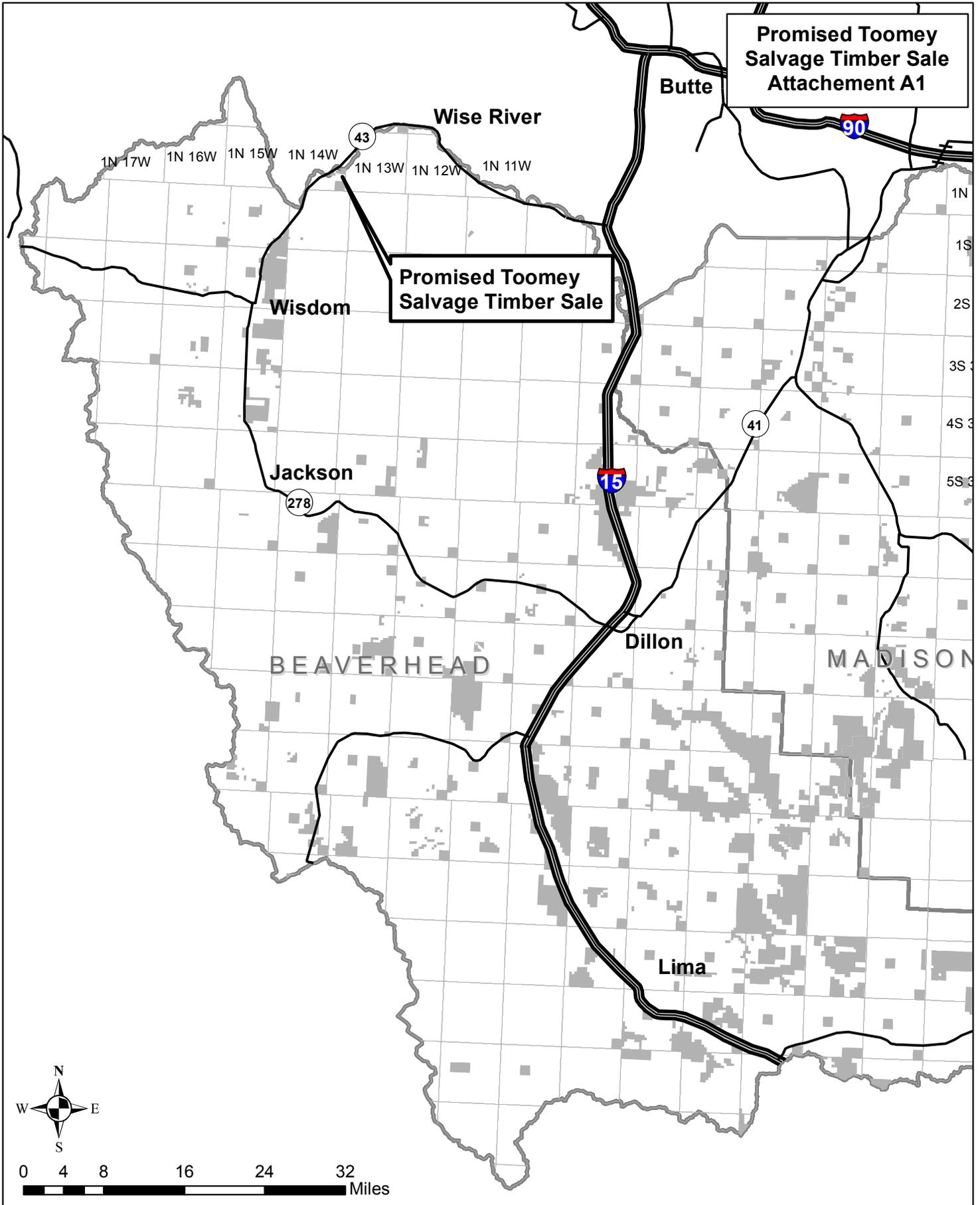
27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS
 More Detailed EA
 No Further Analysis

EA Checklist Approved By:	Name: Tim Egan
	Title: Dillon Unit Manager
Signature: /S/ Timothy Egan	
Date: March 14 2013	

ATTACHMENTS

- A – Vicinity/Site Specific Map
- B -- Vegetative Analysis/Silvicultural Prescription
- C -- Checklist for Endangered, Threatened and Sensitive Species
- D – Elk Security and Vulnerability
- E -- List of Individual Scoping Notices



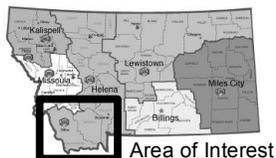
Promised Toomey Salvage Timber Sale Attachment A1

Promised Toomey Salvage Timber Sale



0 4 8 16 24 32 Miles

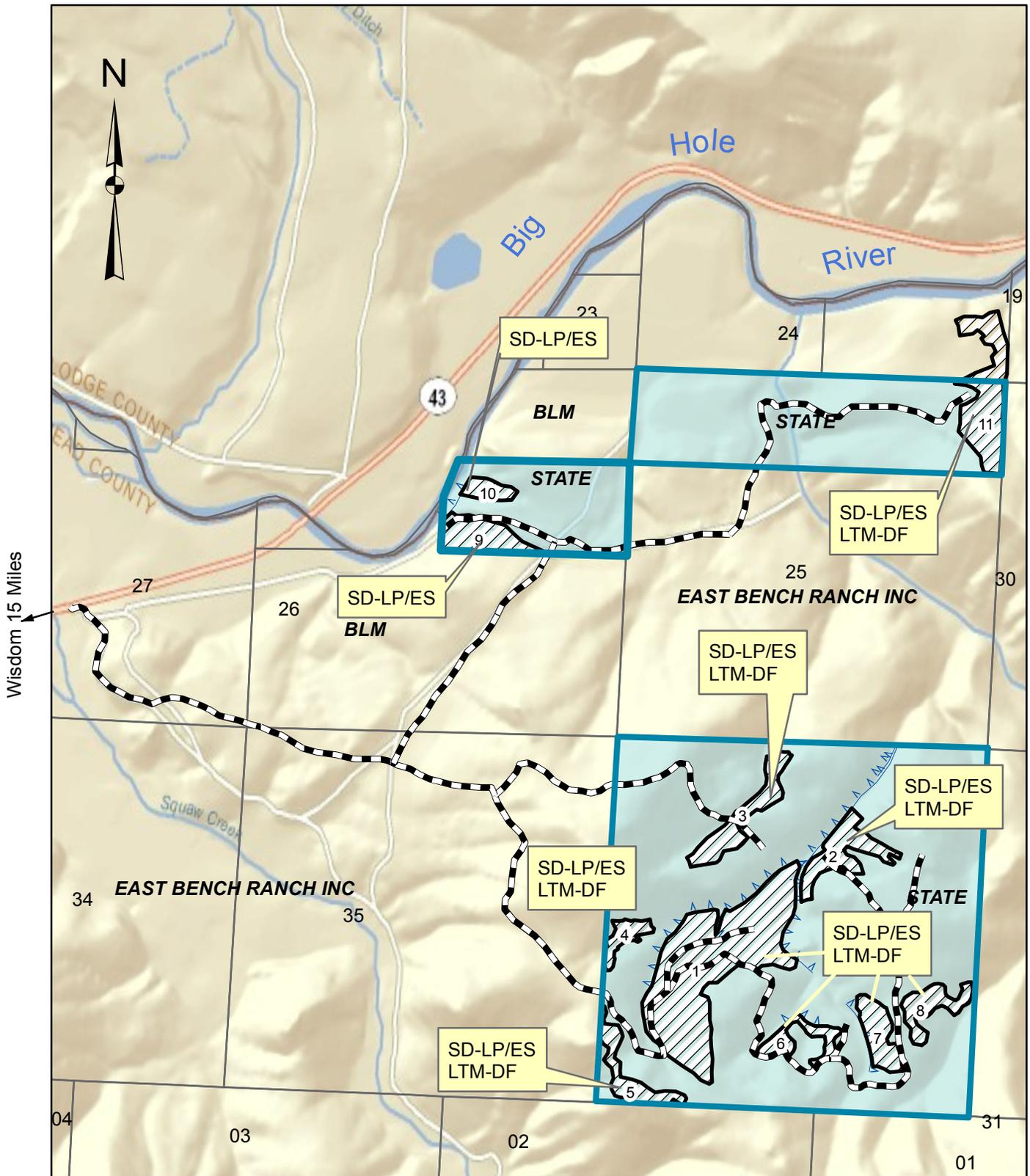
secondary	Interstate	State Highway	DNRC Trust Lands
U.S.	County		



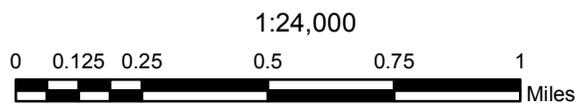
Promised Toomey Salvage Timber Sale

Portions of Sections 24,25, 26 & 36 (all), T1N, R14W Beaverhead County

SALE MAP



Toomey Roads
 Harvest Units



Labels designate harvest type:
 SD-LP/ES = Species Designation Lodgepole/Englemann Spruce
 LTM DF = Douglas-fir marked to leave

ATTACHMENT B

Vegetative Analysis/Stand Prescription Promised Toomey Salvage Timber Sale

Forest Vegetation:

The State parcels are located on the northwest side of the Pioneer Mountains along the forest/grassland interface within the Squaw Cr / Toomey Creek watershed. Adjacent ownership to the north, south and east is the Beaverhead-Deerlodge National Forest, to the northwest is BLM and to the north and west is private. Slopes range from 5-35% with an elevation of 6100-6500 feet. The State forested parcels consist of 960 acres of which ~425 acres are forested. Two commercial timber harvest projects have taken place over the past 20 years. Approximately 5 years ago 1138 MBF was removed from 105 acres and 20 years ago 1354 MBF of timber was removed from 124 acres. Approximately 135 acres were harvested in the Toomey Creek and Squaw Creek watersheds on the adjacent private lands 20-25 years ago. No harvest activity has occurred on adjacent National Forest or BLM lands. The majority of all the harvested acres have regenerated very well with moderate to heavy 8'-20' lodgepole pine growth and 1'-2' Douglas-fir regeneration from the most recent harvest. There are 5,116 forested acres within the Toomey Creek watershed with ~364 acres (.07%) having been logged in the last 50 years. Aspen stands are prevalent in this drainage but are being overtaken by conifer encroachment. The absence of fire, in combination with encroachment, has resulted in overstocked and suppressed stands. These conditions make the stands more susceptible to fire and attack from insects and disease.

Forested stands within the State parcel occur on northerly aspects and are predominately even aged, single story lodgepole pine cover type with interspersed Douglas fir stands present with varying age class. Stand structure is a result of a stand replacing fire that occurred approximately 125 years ago. Subalpine fir is the indicated climax species and lodgepole pine dominants as a seral species with subalpine fir/grouse whortleberry (Abla/Vasc) as the dominant habitat type. The area lies along the drought limitations of the habitat type and consequently subalpine fir is sparsely represented. Stand composition ranges from dense mature forest to heavily overstocked and near stagnant forest. Regeneration is sparse within untreated stands with moderate understory vegetation and coarse woody debris. Mountain Pine Beetle infestations within the lodgepole stands has been active for several years. Spruce Bud Worm and Douglas-fir Bark Beetle activity is present in most of the mature Douglas-fir and Engelmann Spruce stands.

Douglas-fir is indicated as a climax species on the drier slopes with Douglas-fir/Pine Grass (Psme/Caru) as the habitat type. These stands are comprised of moderately to densely stocked forest. Regeneration is sparse within untreated stands with moderate understory vegetation and coarse woody debris. Older Douglas-fir trees (>150 years) occur in most of the stands as scattered individual trees.

Dominant tree heights: 60-70', co-dominants: 50-60'. Age: 110 to 125 years (LP) and 120 to 205 years (DF). Yield capability: 45-55 cu. ft/ac/yr. Common understory species include: elk sedge, pine grass, grouse whortleberry, dwarf huckleberry and kinnikinnick. The predominate management activity is grazing and forest management.

The proposed harvest represents .036% (<4%) of the total forested acres within the Toomey Creek watershed. Harvesting an estimated 1700 MBF of commercial timber (sawlogs and post and pole material) would alter the forest cover on approximately 169 acres as planned. Harvest design is intended to capture value from impacted resources before it is lost, reduce overstocking, fire hazard, and additional insect and disease while promoting forest health, stand regeneration and productivity through the emulation of mixed severity and stand replacing fires. Additionally, harvest would open the stands to encourage natural regeneration of shade intolerant species; maintain a lodgepole pine and Douglas-fir

cover type while maintaining a semblance of historic stand conditions. Shade intolerant Aspen stands are present throughout the proposed harvest acres. These decadent colonies would likely rejuvenate through mechanical ground disturbance and mature decadent overstory stands being knocked-over to the ground to stimulate “suckering” of root growth and reduction of conifer encroachment around the colonies. Many of the stands are located within Stream protection zones where mechanical treatment is not allowed or feasible. Removing competing conifer growth adjacent to the Aspen will benefit the sites.

No rare plants or cover types have been noted by the Montana Natural Heritage Program or observed within the proposed project area.

Cumulative Effects

The No Action alternative would leave all vegetation undisturbed. Over time forest encroachment would continue to occur and forest patches would expand into native rangeland. The risk of fire from additional fuel loading of dead trees and insect and disease infestation in overstocked and suppressed stands would continue to increase. Estimated loss of mature timber resources to present and impending insect and disease infestation is 85-90%. Furthermore, there is a probability of additional resource losses due to the risk of fire associated with the dead and dying timber. Unmanaged stands of regeneration would remain overcrowded, suppressed and growth would be greatly diminished.

The Action alternative of harvesting 172 acres would alter 50% of the forested acres on the State tract. Estimated losses to mature timber resources from present and impending insect and disease infestations would be greater than the proposed timber harvest.

The proposed levels of harvest and subsequent reduction in forest canopy would be similar or less than what would be expected to occur under the present natural conditions. Adjacent forest stands to the east and south (USFS) are mature lodgepole stand types with heavy disease and mortality present.

Commercial stand treatments proposed on the State lands would reduce the risk of catastrophic fire and additional insect and disease infestation and recover value from resources before it is lost while aiding in the restoration of encroachment threatened aspen stands. This is a very productive timber management area as evidenced by the excellent regeneration and growth from recent timber management.

Data summaries (Losensky 1997) for Beaverhead and Madison Counties were compared with the inventory of State forested lands and anticipated changes under the Action alternative. The data comparison indicates that for either alternative, the forested stands for all cover types on the State lands post-harvest would maintain more total forest cover than in prior historical conditions.

Fire History/Ecology:

Stands within the project area fall into fire group seven (Fischer and Clayton 1983) where periodic wildfires tended to recycle the stands before any significant amount of mature lodgepole pine dies out. Lodgepole pine habitats in this elevation range rely on fire to perpetuate and renew the stand with stand-replacing fires playing a large role. The mean fire interval ranges from less than 100 years to 500 years. Low to moderately severe fires may thin the stands periodically in between stand-replacing fires. Fuel loadings are typically 15 tons/acre but can easily exceed this (Fischer and Clayton 1983). Stands >80 years old are more susceptible to severe fire damage due to over crowding and insect and disease infestations. A severe fire burned through the proposed project area approximately 125 years ago.

The scattered Douglas-fir climax areas are included in fire group six. The presence of scattered old, open-grown Douglas-fir were likely the result of frequent fires burning at lower intensities on gentler

slopes and indicate that some of the project area was likely influenced by relatively frequent fire events. Existing trees that are less than 150 years old appear to represent forest encroachment due to forest succession and lack of fire disturbance during the past century. Fire suppression efforts have led to an increase in forest cover over the past 100 years. This is readily seen with comparisons of photographs taken in the late 1800's/early 1900's with photographs taken in the 1980's (Gruell 1983) showing a significant increase in forest cover.

Cumulative Effects

The No Action alternative would result in no appreciable change in the forest cover types or stand structures in the near term and current successional patterns would continue unless fire or other disturbances intervened. The stands would continue to be dominated by lodgepole pine, with a gradual trend to increase the number of more shade tolerant species, such as Douglas-fir, subalpine fir and spruce, in the understory. Tree mortality from present and impending insect and disease infestations would contribute to site factors that would be conducive to stand replacement fires. Such an event would likely revert the forest stands back to a grassland-sage cover type with a few scattered old Douglas-fir remnant trees that would have survived due to micro-site conditions or location.

The Action alternative would change the classification of forest types for the short term due to the removal of the majority of the mature lodgepole pine and leaving scattered individual Douglas-fir trees and stands of previously selective harvest Douglas-fir stands dominant. Harvest treatments for lodgepole pine would be regeneration cuts focusing on developing a younger, more vigorous stand of lodgepole pine in the future. Pro-active thinning projects would be employed in well-stocked regenerated lodgepole stands from recent timber harvest. Harvest treatments for Douglas-fir would be group selection/selection focusing on removing dead, dying, and Spruce Bud Worm infested at-risk trees. These treatments scattered across a landscape would emulate small-scale, moderate to severe disturbance events. Harvest/thinning treatments would reduce the likelihood of larger scale stand replacement events from occurring by reducing the fuel loads of the treated stands and reducing stand susceptibility to additional insect and disease infestations. Minor cumulative effects of shifts in age class distribution would be expected at the watershed level. The acres proposed for treatment are generally accessed by well established existing roads from previous timber harvest. The area receives a high degree of recreational use during big game season as adjacent lands are open to the public through the Block Management Access Program (FWP). Minimal sedimentation delivery to the drainage is expected from the proposed timber harvest on these grassed-in and stable low standard roads. Approximately 90% of the roads on Section 36-T1N-R14W are administratively closed to motorized use. Any new temporary access roads or logging spurs needed for this proposal will be physically closed with earthen barriers and slash debris, grass seeded and rehabilitated.

Insect and Disease:

All lodgepole pine stands are presently under attack from Mountain Pine Beetle and the majority of the mature trees, >80 years old, are expected to yield to beetle attack within the next two years. Additionally, these stands are moderately infected with Dwarf mistletoe, which can reduce height growth, stand volume, seed production and tree vigor. Individual Douglas-fir and Douglas-fir stands are exhibiting some crown defoliation due to repeated infestations of Spruce Budworm. These stands are also under light to moderate attack from Douglas-fir Bark Beetle.

Years of regional drought and warm winters combined with high stand densities of mature and over-mature timber have compounded and aggravated the risk of more serious insect and disease outbreak. Younger, more open stands where tree growth and vigor is encouraged are more resistant to insect and disease infestations.

Cumulative Effects

Under the No Action alternative stands would be susceptible to continued insect and disease infestations due to overstocked and suppressed conditions with an increased risk of stand replacing fire.

The Action alternative would recover value from affected resources while reducing the potential of additional infestation in the harvested/thinned units by encouraging the development of young, vigorous stands. Younger stands where tree growth and vigor is encouraged are more resistant to insect and disease infestations.

Successional Stages:

The proposed project area falls under climatic section 13 (Section M332E) (Losensky 1997), which encompasses the southwest corner of Montana and the upper Salmon and Lemhi drainages of Idaho, and includes Beaverhead and Madison Counties. In this climatic section, forested cover types were historically found on about 39% of the area, with the remainder being grassland and shrubland. At the turn of the century, 10% of the timber in the climatic section and 19% of the Beaverhead and Madison County timber was old forest >150 years old.

Current forest inventory data on State lands in the Beaverhead and Madison Counties can be used to compare the current age structure of each forest cover type to Losensky's evaluation of conditions that existed in 1900. A complete stand level inventory of all the forested State lands in Beaverhead or Madison County is presently not available. An estimate of age structure is available on approximately 67% of the forested State lands. However, the data available is on the majority of lands that have potential for timber harvest activity and therefore would tend to represent stands that have had human disturbance during the last century and consequently younger age classes are likely represented. Comparison of the data indicates the current age structure of the forested State lands is substantially older than would be expected from Losensky's data. Currently approximately 59% of the forested stands on State lands are greater than 100 years of age. Also, there is currently a greater than expected percentage (39%) of old stands on State land when compared to the historic estimate of 19% on all lands in 1900. High representation of old stands is consistent with the belief that modern fire suppression policies have limited the natural disturbance role played by fire in this region and that human caused disturbances have not approached historic levels of disturbance.

Cumulative Effects

The No Action alternative would result in continued succession toward a climax vegetation condition unless fire or other disturbance intervened to move succession back to the non-stocked and seedling/sapling stage.

The Action alternative would move 169 acres of mature lodgepole pine cover types, distributed over 11 units, to younger successional lodgepole pine cover types. By removing the dead, dying and at-risk overstocked trees, the mature age classes, and the current age structure of all commercial timber stands would be converted to a younger age structure. Age class diversity will be achieved with Douglas-fir group selection and individual selection for sapling/intermediate/co-dominant and dominant age classes along with lodgepole pine regeneration cuts. There exist large islands of healthy lodgepole regeneration from recent timber harvest and smaller submerchantable lodgepole pine, within proposed harvest units that would create different stages of growth and succession. Forest cover mosaics on the landscape with varying age distribution will contribute to forest diversity and wildlife use while increasing grazing and forage.

Old Growth:

The Forest Management Rules state that DNRC shall manage old growth to meet biodiversity and fiduciary objectives, and shall consider the role of all stand age classes in the maintenance of biodiversity when designing harvests and other activities. In the Rules, DNRC defines old growth as: forest stands that meet or exceed the minimum number, size, and age of those large trees as noted in “Old-Growth Forest Types of the Northern Region” by P. Green, J. Joy, D. Sirucek, W. Hann, A. Zack, and B. Naumann (1992, USFS Northern Region, internal report).

A small stand of Douglas-fir (<10 acres) that would meet the minimum criteria for old growth occurs within proposed harvest Unit 1, Section 36. Leave tree marking within this stand would retain a sufficient number of trees (4 trees per acre 17 inches DBH or more), size (Large trees 200 years +), and maintain a minimum 60 sq. ft. basal area per acre to meet the minimum characteristics to maintain this Douglas-fir Old Growth cover type at this present time.

Cumulative Effects

The No Action alternative would likely result in an appreciable change in the older age structure and the present high representation of older trees over historic levels. As the majority of the unhealthy trees are represented by the larger, older age classes, these trees would eventually succumb to the present and future effects of insect and disease. All stands would remain at a higher susceptibility to insect and disease, and possible stand replacing fire.

The Action alternative would remove dead, dying and at-risk older trees leaving a more open stand where tree growth and vigor is encouraged in older, healthy leave trees and are more resistant to fire and insect and disease infestations. Approximately 159 acres of the 169 acres in the proposed timber management activity currently would not meet old growth definition. Old growth restoration treatments would be utilized on those acres meeting old growth definition. Where applicable, stands not meeting old growth definition would be treated to retain healthy older trees and stand attributes suitable for old growth development. Large, older trees would be harvested while still retaining many of the old growth characteristics of the existing stand. Large live trees, snags and coarse woody debris, which are important attributes associated with old growth and future development of old growth, would be retained in sufficient quantities to meet or exceed the SFLM Rules where available and applicable. The harvest of old growth under this proposal would reduce the total old growth within the project area by ~10 acres and have a negligible cumulative effect on the percentage of old growth remaining on State lands in Beaverhead and Madison Counties.

Fragmentation and Corridors:

The abundance of lodgepole pine habitats and scarcity of old trees found in the proposed project area indicates that stands were likely influenced by periodic moderate to severe intensity wildfire events historically. Stands were recycled before any significant amount of mature trees could die out. The presence and absence of forest and non-forest patches would have been dynamic, shifting through time. Periodically, sites where conifers presently occur would have appeared more as non-forest meadows than forest.

Serotinous cones, and surviving individual trees and clumps of trees in cool areas served as seed sources that would have promoted the periodic regeneration of young-aged stands that may or may not have survived subsequent fire events. Historic fires, climate, vegetative manipulation and land forms have contributed to the existing patchy distribution forest habitat. Existing forest cover is predominately

located in broken, foothill habitats and generally exhibits a low level of habitat connectivity to the north, south and west of the proposed project area.

Cumulative Effects

Under the No Action alternative, habitat conditions would not change in the near term from their current condition. Forested habitat patches within the proposed project area would remain at their current size and shape and offer the greatest level of habitat security and lower proportional amounts of edge habitat. Wildlife species adapted to use larger patches of mature forest would be expected to benefit from this alternative. Over time, influences of forest succession would be expected to decrease habitat availability for species that are adapted to thrive in open forest and edge habitats, or for those that use such habitats for meeting their life requisites.

Under the Action alternative, there would be no human development that would decrease linkage value and proposed activities would not impede wildlife movements across the landscape, valley or mountain ranges. The proposed project would harvest a total of 172 acres, over eleven harvest units ranging from four acres to sixty-seven acres, and increase the amount of non-forest in the area for the short term until these stands regenerate. Species of wildlife preferring less dense forest conditions would benefit from the creation of additional habitat, whereas species adversely affected by decreased forest density would not. The anticipated effects of the proposed harvest are considered to be minor given the vast acreage of adjacent over-mature lodgepole cover types and sufficient advanced regeneration within the harvest area. Endemic species that occur in this area would likely not be affected appreciably, as most likely evolved with naturally fragmented forest conditions, created by natural disturbance events. The proposed levels of harvest and subsequent reduction in forest canopy would be similar or less than what would be expected to occur under the present natural conditions. Due to the size of the proposed harvest/thinning units and number of acres harvested/thinned, expected effects would be minor and temporary.

The proposed ~0.6 miles of temporary road construction would have minimal expected adverse impact on fragmentation of habitat or increases in human activity as it would be physically closed upon project completion. Existing road facilities planned for timber management use are also utilized by the private landowner for ranching and the public for recreation. These roads will be improved through application of Best Management Practices (surface blading, erosion control features, and grass seeding where needed). A temporary stream crossing is planned for Toomey Creek with the approval of a culvert installation (and removal) through the 124 Permit process. Cumulative effects related to the proposed road construction and reconstruction in the proposed project area would be minimal due to the small area affected and closure that is planned upon project completion.

Average stand size of existing forested acreage would be reduced within the immediate proposed project area. Stand density and forest canopy structure would be reduced dramatically. Cumulative fragmentation effects associated with the proposed project would be minor at the landscape level due to the size of the proposed project and the low probability of adjacent ownerships conducting additional vegetative manipulation within the proposed project area. No known wildlife corridors of notable importance would be affected by the proposed activities.

Noxious Weeds:

A small infestation of spotted knapweed (<1/10 acre) was found and treated on the State tract in 2005/2006. Post treatment monitoring will be performed to insure infestation has been eradicated. No other noxious weed infestations have been detected on the State parcel. State managers will work with the grazing leasee to identify and treat annually any outbreaks that may occur.

Cumulative Effects

Under the No Action alternative, noxious weeds could become established on existing roads and onto dry vegetation sites by vehicle or animal use.

The Action alternative would involve ground-disturbing activities that have the potential to introduce or spread noxious weeds in susceptible habitat types. An Integrated Weed Management (IWM) approach, combined with prevention and revegetation, is considered the most effective weed management treatment. To reduce the possible introduction and spread of weeds associated with this proposed project, the following mitigation measures would be implemented:

Soil scarification would be kept to a minimum to limit potential noxious weed impacts. Some or all of the timber harvest activity may occur during winter months. All newly disturbed soils on road cuts and fills and obliteration measures would be promptly seeded to site adapted grasses. All road construction and logging equipment would be power washed and inspected prior to being brought on site. DNRC would monitor the project area for two years after the completion of the harvest activities to identify if noxious weeds occur on the site. A weed treatment plan would be developed and should noxious weeds be detected, the plan would be implemented.

Transportation/Roads:

The existing road access begins at the Christensen Ranch and proceeds east through the ranch to State Section 36-T1N-R14W. Drainage features currently present on this road would be maintained to reduce erosion, sediment delivery and provide adequate drainage to meet BMP's. Existing roads on adjacent Bureau of Land Management and Christensen Ranch lands would be utilized to access isolated timber parcels on State lands within Sections 25 and 26-T1N-R14W. These access roads are primary logging roads and more primitive two-track, range type roads that historically have been used for ranching purposes and during the public hunting season. 90% of the roads on State lands within the proposed project area are administratively closed to motorized vehicle use for recreational purposes. Roads on adjacent ownerships may be open, have seasonal restrictions or closed to motorized use.

Cumulative Effects

Under the No Action alternative, roads would remain in their present conditions. Lower standard roads not meeting BMP's would continue to degrade due to erosion.

The Action alternative would construct ~0.6 miles of temporary, minimum standard road. Standard drainage features would be implemented to stabilize roads and control erosion concurrent with the proposed operations. After completion of harvest, temporary roads would be closed with long-term drainage features installed, effectively closed with slash and debris and reseeded with site-adapted grass. This closure process would result in no net increase of open roads in the area. Selected segments of the existing access road would be improved through implementation of mitigation measures. The primary access road on the State parcel would have an existing barrier reconstructed to prevent motorized vehicle use. The existing roads on State lands would remain administratively closed to motorized vehicle use for recreational purposes to meet departmental management objectives for resource protection and assist with FWP management goals.

Stand Prescriptions:

Treatments would target shade intolerant species for removal and overall stand density reduction. Older, large shade tolerant trees would be harvested to cull out defective or damaged trees, where applicable. Large live trees, live cull trees, snags, cull snags, and coarse woody debris and fine materials would be protected and retained in sufficient quantities where applicable. Submerchantable trees and shrubs would be protected and retained for visual screening and wildlife use.

Treatments for Douglas-fir cover types would target dead, dying and at-risk trees for removal. Trees of all age classes exhibiting signs of insect/disease, poor health and/or poor tree form characteristics would be designated for harvest. Large live trees, live cull trees, snags, cull snags, and coarse woody debris and fine materials would be protected and retained in sufficient quantities where applicable. There is a significant component of sub merchantable trees and shrubs within and adjacent to the harvest units that will be protected and retained for visual screening, big game species security, and age class diversity.

Severity of stand conditions would dictate harvest method used, emulating moderately severe ground fire to stand replacing fire. Harvest prescription would recover value from resources before it is lost, reduce overstocking, fire hazard, and additional insect and disease while promoting forest health, vigor and productivity. Additionally, harvest would open the stands to encourage natural regeneration of shade intolerant species; maintain a lodgepole pine cover type (and Douglas-fir cover type where applicable) while maintaining a semblance of historic stand conditions and promote Aspen stands.

Aspen Areas - A regeneration harvest of all conifer sawtimber within 75-100 feet of the aspen clone would be used to reduce conifer encroachment into aspen stands and promote aspen regeneration. Submerchantable conifer and aspen would not be protected during harvest operations to further reduce conifer encroachment and induce suckering of aspen. Post harvest treatment to fall and lop any remaining sub-merchantable conifer trees will occur.

Unit 1 (67 ac/570 MBF), Unit 2 (13 ac/139 MBF), Unit 3 (12 ac/130 MBF), Unit 4 (5 ac/ 40 MBF), Unit 5 (9 ac/88 MBF), Unit 6 (9 ac/100 MBF), Unit 7 (9 ac/92 MBF), Unit 8 (9 ac/75 MBF), Unit 9 (12 ac/125 MBF), Unit 10 (4 ac/35 MBF), Unit 11 (23 ac/293 MBF): Units are composed of lodgepole pine with scattered stands of larger Douglas-fir. Some small pockets of aspen are found along moister sites and riparian areas. Lodgepole pine sawtimber size ranges from small to large. Post and rail sized lodgepole stands are present consisting of older suppressed trees to be harvested in conjunction with sawlog class trees. The stands are overstocked and suppressed. Moderate to heavy infestations of Mountain Pine Beetle and light to moderate infestations of mistletoe are found throughout the stands.

A regeneration harvest would remove all merchantable lodgepole pine (sawtimber and post and rail material) and all conifers within 75-100' of aspen colonies for aspen restoration. Douglas-fir <35" dbh would be selectively harvested based on defect, disease, proximately to Aspen colonies (75-100') and to achieve desired leave tree spacing to mitigate damage from Spruce Bud Worm. A minimum of one large snag or snag recruit (≥ 21 " dbh) per acre would be left where available.

Group selection and selection harvests would be utilized in the south portion of Unit 1 for Douglas-fir. Primarily defective Douglas-fir <35" dbh would be harvested, removing up to ~50% of the merchantable Douglas-fir sawtimber. Desirable dominate/co-dominate trees would be left for seed source. One large snag or snag recruit (≥ 21 " dbh) per acre, or next available size down to a 16" dbh, would be left where available.

Retain all fine litter and 5-10 tons/acre of large woody debris >3" diameter as feasible. Consolidate remaining slash at landings for burning. Conduct regeneration survey in 5-7 years and a thinning survey in 15 years after harvest.

Natural regeneration would be expected. No rare plants or cover types have been noted by the Montana Natural Heritage Program or observed within the proposed project area.

MEASURES RECOMMENDED TO MITIGATE POTENTIAL IMPACTS

- 1) Compliance with Forestry Best Management Practices (BMP's), Streamside Management Zone (SMZ) laws, applicable DNRC Forest Management Administrative Rules and applicable Montana DNRC Forested State Trust Lands Habitat Conservation Plan (HCP).
- 2) Limit equipment operations to periods when soils are dry (less than 20% soil moisture), frozen or snow covered (12 inches packed or 18 inches unconsolidated) to minimize soil compaction, rutting, vegetative disturbance and maintain drainage features. Control erosion by installing adequate drainage on roads and skid trails.
- 3) The Forest Officer shall approve a plan for felling, yarding and landing location in each harvest unit prior to the start of operations in the unit. The locations and spacing of skid trails and landings shall be designated and approved by the Forest Officer prior to operations and skid trails will not be spaced less than 60 feet. Retain all fine litter as feasible and 5-10 tons/acre of large woody debris >3" diameter. Minimize soil disturbance by general skid trail planning and limit sustained tractor skidding to slopes $\leq 45\%$. Limit scarification to 30-40% of the harvest area. Slash would be left in the harvest units where feasible, and distributed on skid trails upon completion of use, for nutrient cycling, to control erosion and to provide shade and protection for seedlings.
- 4) Install adequate road drainage to control erosion concurrent with harvest activities. Provide effective sediment filtration along drainage features near crossing sites. Major skid trails on State lands would be closed with slash and debris and/or barriers, and adequate drainage provided.
- 5) All road and logging equipment would be power washed and inspected prior to being brought on site. Sale area would be monitored for weeds following harvest and a treatment plan would be developed should noxious weeds occur.
- 6) At sale closure, grass seed roads, skid trails (where needed) and landings with an appropriate seed mixture.
- 7) One snag and one snag recruit per acre, of the largest diameter class down to 16", would be retained where applicable. Cull live trees and cull snags would be retained where applicable.
- 8) Retain live, healthy older trees and stand attributes suitable for old growth development where available and applicable.
- 9) Contact DNRC wildlife biologist should any threatened or endangered species be encountered within the proposed project area.
- 10) Human or pet food, livestock food, garbage, and other attractants would be stored in a bear resistant manner. Burnable attractants (such as food leftovers or bacon grease) would not be buried, discarded, or burned in an open campfire.
- 11) Clearcut and seed tree cutting units would be designed to provide topographic breaks in view or to retain visual screening for bears by ensuring that vegetation or topographic breaks be no greater than 600 feet in at least one direction from any point in the unit.
- 12) Forest management activities would be prohibited during the spring period of April 1 through June 15 in spring habitat.

- 13) Written brochures that describe risks and concerns regarding humans living and working in bear habitat would be provided to contractors and their employees conducting forest management activities prior to start of operations.
- 14) DNRC employees and contractors and their employees would be prohibited from carrying firearms while on duty, unless the person is specifically authorized to carry a firearm under DNRC Policy 3-0621.
- 15) Emphasize the retention of downed logs of 15-inch diameter or larger where they occur.
- 16) On blowdown salvage projects, 1 percent of the blowdown area would be left unsalvaged. The material would preferably be retained in a nonlinear patch or patches.
- 17) Retain patches of advanced regeneration of shade-tolerant trees (subalpine fir, and Engelmann spruce), as a component of commercial harvest prescriptions. Cover of the retained patches should not exceed 10 percent of the stand area.

Literature Cited

Fischer, W. C., and B.D. Clayton. 1983. Fire ecology of Montana forest habitat types east of the Continental Divide. U.S. For. Serv. Gen. Tech. Rep. INT-141. 83pp.

Green, P., J. Joy, D.Sirucek, W. Hann, A. Zack, and B. Naumann. 1992. Old growth Forest Types of the Northern Region. USDA Forest Service R-1 SES 4/92. Missoula, MT.

Gruell, G.E. 1983. Fire and vegetative trends in the Northern Rockies: Interpretations from 1971-1982 Photographs. USDA. Intermountain Forest and Range Experiment Station. General Technical Report INT-148. Ogden, Utah.

Losensky, J.B. 1997. Historical vegetation of Montana. DNRC Intern. Rept. 100pp.

ATTACHMENT C
CHECKLIST FOR ENDANGERED, THREATENED AND SENSITIVE SPEICES
 Pertains to Section II. 9. of the DS-252 DNRC Environmental Checklist
 (Rev. May 3, 2013)
 CENTRAL LAND OFFICE

Prepared by Mike Atwood and Ross Baty
 May 8, 2013

For this analysis, direct and indirect effects were considered for the lands within the 1,322-acre project area. Cumulative effects were assessed within a broader 24,984-acre cumulative effects analysis area.

Threatened and Endangered Species	[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur (Explain Below)
<p>Grizzly Bear (<i>Ursus arctos</i>) Habitat: recovery areas, security from human activity</p>	<p>[N] The proposed project area lies outside of any grizzly bear recovery area. The nearest recovery area is the Yellowstone Grizzly Bear Recovery Zone (USFWS 1993) situated ~90 miles southeast of the project area. Grizzly bear use of the Pioneer Mountains may occur, however, the project area is currently considered outside of occupied habitat (Interagency Occupied Habitat Map, September 2002). Riparian habitats preferred by bears may occur in the project area along the tributaries of Toomey Creek, but these tributaries support relatively low levels of hiding cover. Human access levels are presently low to moderate because access is regulated by local private landowners and FWP block management restrictions. New road construction and reconstruction would be temporary and constructed to low standard. The potential for any measurable increases in bear-human conflicts following the project activities are expected to be negligible, and habitats preferred by grizzly bears would be minimally affected. Adverse direct, indirect and cumulative impacts to bears as a result of this project are expected to be minimal.</p>
<p>Lynx (<i>Felis lynx</i>) Habitat: mosaics--dense sapling and old forest >5,000 ft. elev.</p>	<p>[Y] The 1,322-acre project area is located along a grassland/forest ecotone that contains potentially suitable lynx habitat of marginal quality. Approximately 287 acres of this habitat occurs in the project area. Of these acres, 170 would be harvested and would be converted temporarily to non-habitat until trees would grow back in the harvested stands (~20 years). Given the relatively small amount of marginal habitat that would be affected,</p>

	adverse direct, indirect and cumulative adverse impacts to lynx would be minor as a result of this proposed harvest project.

DNRC Sensitive Species	[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur (Explain Below)
<p>Bald Eagle (<i>Haliaeetus leucocephalus</i>) Habitat: late-successional forest <1 mile from open water</p>	<p>[N] Bald Eagles have been documented within the quarter latilong (L36B) that encompasses the proposed project area (Skaar 1996, MNHP 2003, MNHP 2013). The nearest potential eagle nest is greater than 2 miles from the nearest parcel that is a part of the project area, thus, any potential to disturb nesting eagles would be minimal. Also activities would be planned for completion (Oct. 1 to Feb. 15) almost entirely outside of the typical nesting season for eagles (Feb. 1 to Aug. 31). Direct, indirect or cumulative effects to bald eagles associated with this project are expected to be negligible.</p>
<p>Gray Wolf (<i>Canis lupus</i>) Habitat: ample big game pops., security from human activity</p>	<p>[N] Wolf pack activity occurs in the Big Hole Valley and wolves could occasionally use or travel through the project area at any time. However, due to the small size, nature and location of the proposed project, activities associated with this proposal are not expected to affect wolves. Should a den be detected within one mile of the project area or a rendezvous site within 0.5 miles of the project area, activities would cease and a DNRC biologist would be contacted immediately. Mitigations would then be developed and implemented to minimize adverse impacts to wolves prior to initiating any further activity. Direct, indirect or cumulative effects to wolves associated with this project are expected to be negligible.</p>
<p>Black-Backed Woodpecker (<i>Picoides arcticus</i>) Habitat: mature to old burned or beetle-infested forest</p>	<p>[Y] Black-backed woodpeckers have been documented within the quarter latilong (L36B) that encompasses the proposed project area but not within the proposed project area (Skaar 1996, MNHP 2003). Stands found within the project area are diversified in habitat and age-class resulting from three previous timber management projects on the landscape. The areas proposed for this harvest are mature and show active endemic stages of mountain pine beetle activity. Black-backed woodpeckers</p>

	<p>sometimes use mature stands heavily infested with beetles. No recent burns (≤ 5 years old) have occurred within the state tracts or adjoining private or neighboring sections on national forest lands. Foraging and nesting opportunities may be present on the State lands proposed for harvest due to the abundance of beetles. However, given the fact that vast acreages of adjacent federal lands (U.S. Forest Service & BLM) exist with forested stands containing mature, beetle-infested stands of lodgepole pine, it is anticipated there will be negligible direct, indirect or cumulative effects to black-backed woodpeckers and their habitat as a result of this project.</p>
<p>Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>) Habitat: Prairie, shortgrass prairie, badlands</p>	<p>[N] Grassland habitats suitable for use by black-tailed prairie dogs do not occur within one mile of the proposed project area. Impacts to black-tailed prairie dogs are not anticipated.</p>
<p>Flammulated Owl (<i>Otus flammeolus</i>) Habitat: late-successional ponderosa pine and Doug.-fir forest</p>	<p>[N] Flammulated owls have been documented within the quarter latilong (L36B) that encompasses the proposed project area (Skaar 1996, MNHP 2003). The parcels involved in the proposed project occur at elevations between 6000-6500 feet, and mature Douglas-fir/ponderosa pine cover types, which are preferred habitat for flammulated owls generally found at lower elevations, are not characteristic of this area. No direct, indirect or cumulative effects to flammulated owls are anticipated as a result of this project.</p>
<p>Greater Sage-grouse (<i>Centrocercus urophasianus</i>) Habitat: sagebrush semi-desert</p>	<p>[N] Sage grouse have been documented in the quarter latilong (L36B) that encompasses the proposed project area and the nearest lek is approximately 5 miles southwest of the project area (Skaar 1996, MNHP 2003, MNHP 2013). No sage grouse leks are known to occur within the proposed project area (C. Fager, FWP, Pers. Comm. February 2006). However, sagebrush semi-desert habitats suitable for use by sage grouse do occur within one mile of the project area. Birds could occasionally use open grasslands found on the project area, however, grass/shrub habitat would be minimally affected by proposed activities and activities would occur in late fall and winter, outside of the breeding and nesting season. Thus, no direct, indirect or cumulative effects to sage grouse are anticipated.</p>
	<p>[N] Harlequin ducks have not been</p>

<p>Harlequin Duck (<i>Histrionicus histrionicus</i>) Habitat: white-water streams, boulder and cobble substrates</p>	<p>documented within the quarter latilong (L36B) that encompasses the proposed project area (Skaar 1996, MNHP 2003, MNHP 2013). No high gradient streams suitable for use by harlequins occur within the project area or along proposed haul routes. No impacts to harlequin ducks would be expected to occur as a result of this project.</p>
<p>Mountain Plover (<i>Charadrius montanus</i>) Habitat: short-grass prairie, alkaline flats, prairie dog towns</p>	<p>[N] Mountain Plover have not been documented within the quarter latilong (L36B) that encompasses the proposed project area (Skaar 1996, MNHP 2003, MNHP 2013). No short-grass prairie or prairie dog towns occur on, or within one mile of the proposed project area. No impacts to mountain plovers are expected as a result of this project.</p>
<p>Northern Bog Lemming (<i>Synaptomys borealis</i>) Habitat: sphagnum meadows, bogs, fens with thick moss mats</p>	<p>[N] No sphagnum meadows or suitable bogs occur in the proposed project area. No impacts to bog lemmings would be expected to occur as a result of this project.</p>
<p>Peregrine Falcon (<i>Falco peregrinus</i>) Habitat: cliff features near open foraging areas and/or wetlands</p>	<p>[N] Peregrine Falcons have not been documented within the quarter latilong (L36B) that encompasses the proposed project area (Skaar 1996, MNHP 2003, MNHP 2013). No cliff features suitable for use by nesting peregrine falcons occur within 1 mile of the project area. No direct, indirect or cumulative effects associated with this project are anticipated.</p>
<p>Pileated Woodpecker (<i>Dryocopus pileatus</i>) Habitat: late-successional ponderosa pine and larch-fir forest</p>	<p>[N] Pileated woodpeckers have been documented within the quarter latilong (L36B) that encompasses the proposed project area but not within the proposed project area (Skaar 1996, MNHP 2003, MNHP 2013). The project area is poorly suited for use by pileated woodpeckers (McClelland and McClelland 1999). As suitable habitat is not present in the project area, no impacts to pileated woodpeckers would be expected to occur as a result of this project.</p>
<p>Townsend's Big-Eared Bat (<i>Plecotus townsendii</i>) Habitat: caves, caverns, old mines</p>	<p>[N] The DNRC is unaware of any mines or caves within the proposed project area or close vicinity that would be suitable for use by Townsend's big-eared bats. Impacts to Townsend's big-eared bats are not anticipated as a result of this project.</p>
<p>Montana Natural Heritage Program - Sensitive</p>	<p>[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur</p>

Species (U.S. Forest Service, Bureau of Land Management, U.S. Fish & Wildlife Service)	Y = Impacts May Occur (Explain Below)
--	---------------------------------------

Western Toad (<i>Anaxyrus boreas</i>) Habitat: Wetlands, Floodplain pools	[N] Harvest activity adjacent to riparian zones and stream courses will follow SMZ law and RMZ/HCP rules, exceeding MT Field Guide management recommendations, thus protecting the primary habitat for this species. Activity months for this species are from late April – Early October. No adverse impacts are anticipated as a result of this project.
Longed-billed Curlew (<i>Numenius americanus</i>) Habitat: grasslands	[N] Timber harvesting and proposed haul route is not anticipated to impact grasslands utilized by this species for habitat and breeding. All activities with this project will take place outside the period of use (spring and summer) for this potential habitat zone. No adverse impacts are anticipated as a result of this project.
Brewer's Sparrow (<i>Spizella breweri</i>) Habitat: Sagebrush	[N] No activity will take place during the breeding season for this species (Mid April – Mid July). This project does not adversely impact species dependent on sagebrush habitat. Harvest units are contained within the forest canopy habitats. All roads crossing sagebrush habitat are existing and bare of mature sagebrush. Adverse impacts are not anticipated as a result of this project.
Fringed Myotis (<i>Myotis thysanodes</i>) Habitat: Riparian and dry mixed conifer forests	[N] This species has been observed in Montana only during June to September, indicating it may migrate out of the state for winter. All harvest activity would take place during Oct 1 – Feb 15. No impacts are expected associated with this proposal.

Pygmy Rabbit (<i>Brachylagus idahoensis</i>) Habitat: Sagebrush	[N] Pygmy rabbits have been documented near the Big Hole River within ~0.6 miles of the project area. Thus, presence and some use of the grass/shrub habitats in the project area are possible. Areas proposed for harvest are well buffered from the sagebrush habitat these mammals utilize. Harvest and snowplowing would be limited to within the forest canopy and existing road system, which are areas generally not suitable for this species. No impacts would be expected to occur from this
--	--

	proposal.
<p>Wolverine (<i>Gulo gulo</i>) Habitat: Boreal Forest and Alpine forest habitats</p>	<p>[N] The project area is within the “confirmed area of occupancy” based on tracking regions containing core habitat for this species (MNHP 2013). However, no preferred high elevation areas with late persisting snow occur in the project area. Vast acreage of adjacent federal lands managed as roadless and wilderness in character appear to be suitable adjacent habitat. There will be a -0- net gain in open roads with this proposal as all new temp roads will be closed and obliterated when the harvest is completed. Due to the size, nature and location of the proposed project, activities associated with this proposal are not expected to adversely affect this species.</p>
<p>Westslope Cutthroat Trout (<i>Oncorhynchus clarkii lewisi</i>) Habitat: Mountain streams, rivers, lakes</p> <p>and</p> <p>Arctic Grayling (<i>Thymallus arcticus</i>) Habitat: Mountain rivers, lakes</p>	<p>[N] Direct and indirect sediment impacts associated with the Toomey Cr temp road crossing (124 permit) have been determined to be “minimal and temporary” by the MT DFWP. Harvest units are greater than 100 feet from Toomey Creek. Riparian Management Zones ~100 feet in width (no harvest) have been employed in units adjacent to Toomey Creek and the Big hole River. A low risk of adverse impacts to westslope cutthroat trout, Arctic grayling, and their respective habitats is anticipated as a result of this project.</p>

ATTACHMENT D

Elk Security and Vulnerability/Winter Range Promised Toomey Salvage Timber Sale

The Pioneer Mountains are an isolated range that occurs in southwest Montana bordered by the Big Hole River for approximately two-thirds of its perimeter. The northwest portion of the Pioneer Mountains lie between the Big Hole River and Grasshopper Creek. This area is part of the FWP Pioneer Elk Management Unit (EMU) and includes Hunting District 332. Habitats found within Hunting District 332 range from grassland-sagebrush along foothills at lower elevations (~6,000 feet) to those at the highest elevations (up to ~9,400 feet) characterized by rocks, scree, whitebark pine and subalpine fir. The State parcel is located at the forested foothills along the forest/grassland interface. Primarily mature lodgepole pine forests with interspersed Douglas fir stands dominate vegetation communities found at these lower elevations within the proposed project area. Lodgepole pine habitats in this elevation range rely on fire to perpetuate and renew the stand with stand-replacing fires playing a large role, especially at the landscape level. Old harvest units on private and State ownership that were cut 20-25 years ago have regenerated and now provide good hiding cover with 15-20 foot tall young lodgepole pine. A pre-commercial thinning of 25-30 acres in the regenerated harvest units is scheduled for the State parcel over the next five years.

The following terminology is used to describe elk habitat values in the context of the proposed project area and is consistent with Lyon and Christensen (1992), and Montana State Field Guide.

Security - The protection inherent in any situation that allows elk to remain in a defined area despite an increase in stress or disturbance associated with the hunting season or other human activities. High open road densities reduce security and habitat effectiveness.

Hiding Cover (functional def.) – Hiding cover allows elk to use areas for bedding, foraging, thermal relief, wallowing, and other functions year-round. Hiding cover may contribute to security at any time, but it does not necessarily provide security during the hunting season.

Elk Vulnerability – A measure of elk susceptibility to being killed during the hunting season.

Criteria for security cover developed for forests in western Montana by Hillis et al. (1991) requires a minimum of 250 acres of mature timber (contiguous and non-linear) that is $\geq 1/2$ mile from an open road during hunting season.

Timber harvest can increase elk vulnerability by changing the size, structure, juxtaposition and accessibility of areas that provide security during hunting season (Hillis et al. 1991). As visibility and accessibility increase within forested landscapes, elk have a greater probability of being observed and subsequently harvested by hunters. Because the cow segment of the harvest is normally regulated carefully, primary concerns are related to substantial reduction of the bull

segment and subsequent decrease in hunter opportunity. The presence of fewer mature bulls early in the hunting season reduces the odds of any given hunter to see or harvest such an animal throughout the remainder of the 6-week season. The forested stands within the State parcel and adjoining lands to the north, south and west do not meet the Hillis et al. (1991) definition of security cover, due to their small size and/or accessibility by motorized vehicles. The greatest forest cover on State managed lands is within section 36. All roads within this section are administered as closed roads to public motorized vehicle travel all year. To the east of the State parcel is the edge of a large, contiguous forested block that includes the upper portion of the Toomey Creek watershed. However, the forested patches in the proposed project area do have value for corridor connection and temporary hiding cover, which can serve to lower bull elk vulnerability. Retaining the greatest amounts of dense forest cover possible would pose the least risk of increasing elk vulnerability from present levels. The cover change that will occur as a result of this timber harvest may have short term impacts to elk vulnerability during hunting season. The greater numbers of elk that use a particular area, the more important cover patches are as they serve to reduce vulnerability of a greater portion of animals.

Timber harvest can reduce cover on winter ranges that is important in providing thermal protection and areas of relatively low snow that help elk to escape from predators and avoid other disturbances with minimal expenditure of energy (FWP 1992). Additionally, harvest activities occurring when winter range is occupied could cause undue stress and disturbance to elk. The proposed project area lies within FWP Hunting district 332 and it occurs in important winter habitat for elk, and is an important access and hunting destination for hunters (C. Fager, FWP, Letter, March 28, 2005). Within this Elk Management Unit, FWP has a stated habitat objective to... "Work with land management agencies to maintain fall elk security so that elk harvest is distributed throughout the season, with no more than 30% of the harvest of bulls occurring during the first week of the general season" (FWP 2004). This objective is stated to promote hunter opportunity, which is considered an important aspect of FWP's management goal for the Pioneer EMU (FWP 2004). Bull elk vulnerability and potential reductions in hunter opportunity are a concern expressed by FWP in this hunting district and the Pioneer EMU. Achieving this goal can be hampered when available cover at the landscape level is reduced appreciably through timber harvest activities, road management, or natural disturbances, such as large scale stand-replacement wildfires. Additional reductions in hiding cover and/or increased open road use during hunting season, may influence achievement of FWP's harvest goal for this Hunting District and EMU.

Terrain in the proposed project area is moderately open and gentle with moderate road densities allowing relatively easy access to motorized vehicles. FWP manages a Block Management area during general hunting season within the Toomey Creek/Squaw Creek watersheds utilizing the private access to the proposed project area. The State parcel is closed to motorized vehicles.

Effects on Elk Security and Vulnerability/Winter Range:

Under the No Action alternative, no immediate change from the present condition would occur. Hiding cover, access and winter range would remain essentially unchanged. Over time, and in the absence of wildfires, conifer cover would continue to mature and develop into dense forest, further increasing amounts of hiding cover and size of potential security blocks. Aspen stands

present however, will continue to decline from conifer encroachment. Given available local information, selection of this alternative is presumed to provide the lowest risk of increasing elk vulnerability over the short term and over the long term (>20 years) in the absence of wildfires or other natural disturbance agents. Subsequently, it is expected that bull elk survival and hunter opportunity would have the least risk of being impacted under this alternative.

Under the Action alternative, ~ 169 acres of hiding/thermal cover would be altered, reducing that which would be available to elk during winter and the general hunting season. In conjunction with harvest activities, the proposed new temporary road construction segment within Section 36 (Unit 1) would be physically closed upon completion, rehabilitated and covered with slash and grass seeded. This would likely not have any influence on mitigating elk vulnerability within the proposed project area, due to the high inherent accessibility of the open terrain.

Visual screening properties of hiding cover would change considerably in all harvest units. Following the proposed harvest, visual obstruction would be provided by smaller patches and stringers of mature and sub merchantable trees than the larger, dense patches, which currently exist in the proposed project area. Douglas-fir leave trees would be retained in a clumped distribution and/or individual trees marked for reserve on an average spacing of 35-45 feet (bole to bole) to minimize sight distance where opportunities exist. Mature and suppressed lodgepole pine stands could have hiding cover value reduced by up to 90% on approximately 105 acres of treated stands, and as much as 60% within the stands treated with selective harvest methods (Douglas fir leave tree marked units). Reducing 169 acres of hiding/thermal cover would represent a 3% cumulative reduction of forested acres within the Toomey Creek watershed. Low proportional increases in elk vulnerability and energy expenditures could be expected for elk that use this area during the winter and fall seasons.

Within the context of Hunting District 332 and the Pioneer EMU, cover removal associated with the proposed project would result in a minor adverse contribution to cumulative effects, but would be additive if other timber harvests occurred within these administrative boundaries on State trust lands and other ownerships. This could result to some degree, in increasing the difficulty that FWP could have in meeting their Elk Plan objective for maintaining bull harvest below 30% during the first week of the general big game hunting season. However, under their current management, federal lands within the Toomey Creek watershed, which comprise 88% of the forested acres, are not likely to be harvested unless a major natural disturbance occurs, such as wildfire or insect and disease. Effects associated with this proposal would likely be difficult to detect in the population at the Hunting District level or over a broader cumulative acreage considered at the EMU scale. The risk of hunter harvest rate increases during the first week of the general hunting season would be present until recovery of hiding cover and/or security cover could occur. Recovery of sufficient forest hiding cover in this area is expected to take 15-20 years for this site as gauged by adjacent regenerated stands and historical knowledge.

The road use agreement with private ownership and the State to access the proposed project restricts use from March 16 – September 30th of each year. Harvest activities for the proposed project would occur from October 1 – March 16 weather dependent. The proposed harvest window will have some effect on elk winter range usage (C. Fager, FWP, Pers. Comm. December 2005). Any potential direct disturbance or displacement of elk due to harvest

operations is anticipated to be minor. Elk usually summer at higher elevations and move down to grass and/or shrub winter ranges (with nearby trees for thermal cover); habitat use is strongly influenced by human activities (Montana Field Guide/*Cervus Canadensis*, mt.gov). Operations planned to occur within harvest unit's 9, 10 and 11 (representing 39 acres total), are constrained to occur within one fall/winter season during the months of October – December 1. This seasonal restriction will help to reduce potential impacts to wintering elk usage on adjacent open grass, shrub, and sagebrush terrain within sections 24, 25, and 26.

Open road densities are already moderate and cover capable of providing security is also moderate in this area. Elk that might use this area would likely have a greater potential for vulnerability if the route were to remain accessible. The actual extent of increase is uncertain as many factors can influence vulnerability (e.g. size, extent and juxtaposition of security areas and migration corridors; type, structure, amount and density of vegetation; road density; ease of human accessibility, motorized hunting pressure, hunting regulations, and hunter behavior, etc.) (FWP 1992). Variations in weather conditions from year to year can also influence elk vulnerability. The 0.8 miles of new temporary road construction would be effectively closed by placing slash and debris on the road surface. The existing primary road to the State parcel would have the access barrier reconstructed. By implementing mitigation efforts such as scattering slash/debris, barrier construction and seeding, motor vehicle travel on these routes would essentially be negated. Minimal cumulative influences on access would be anticipated following road closure efforts.

Literature Cited

Hillis, J.M., and M.J. Thompson, J.E. Canfield, L.J. Lyon, C.L. Marcum, P.M. Dolan, and D.W. McCleerey. 1991. Defining elk security: the Hillis paradigm. pp.38-43 in A.G. Christensen, L.J. Lyon, and T.N. Lonner, comps., Proc. Elk Vulnerability Symp., Mont. State Univ., Bozeman, MT. 330pp.

Lyon, L.J., and A.G. Christensen. 1992. A partial glossary of elk management terms. U.S. For. Serv. Gen. Tech Rept. INT-288. 6 pp.

FWP 2004. Montana Statewide Elk Management Plan. Mont. Dept. Fish, Wildlife and Parks. Wildlife Division. Helena, MT. 397 pp.

FWP 1992. Montana Elk Management Plan. Mont. Dept. Fish, Wildlife and Parks. Wildlife Division. Helena, MT. 170 pp.

Montana State Species Field Guide (http://fieldguide.mt.gov/detail_AMALC01010.aspx)

Attachment E

Promised Toomey Salvage Timber Sale – Project Scoping List

American Wildlands
Montana Audubon, Jack Kirkley
Alliance for the Wild Rockies
Friends of the Wild Swan
WildWest Institute
Montana Chapter of The Wildlife Society
Joe Weigand, Private Lands Wildlife Specialist
Montana Natural Heritage Program
Montana Fish, Wildlife and Parks
The Nature Conservancy, Nathan Korb
MT Society for Conservation Biology
University of MT School of Forestry / Wildlife Biology Program
Confederated Salish and Kootenai Tribes, Forestry Dept.
Skyline Sportsmen's Assoc. Inc.
Montana Action for Access, Tony Schoonen
MT Coalition for Appropriate Management of State Land (Butte, MT)
Pintler Audubon Society
Stuart Lewin, Great Falls
Evan Huntsman, Dell, MT
Sun Mountain Lumber, Inc., Stephen Flynn, Resource Manager
RY Timber, Inc., Ed Regan, Resource Manager
Tricon Timber, LLC, St. Regis, MT
Marks-Miller Post & Pole, Clancy, MT
Tash T Diamond Post & Pole, Dillon, MT
Montana Wood Products Association, Julia Altemus (for distribution to membership)
Montana Association of Counties
Beaverhead County Clerk and Recorder, Dillon, MT
Madison County Clerk and Recorder, Virginia City, MT
Beaverhead County Commissioners, Dillon, MT
Madison County Commissioners, Virginia City, MT
Beaverhead County Resource Use Committee, Dillon, MT
Red Rock Lakes Nat'l Wildlife Refuge, Lima, MT
Wisdom Ranger District, Russ Riebe, District Ranger
Dillon Ranger District, District Ranger
Madison Ranger District, Sue Heald
Wise River Ranger District, Darren Olsen
Jefferson Ranger District, David Neely
Bureau of Land Management/ Dillon, MT, Cornelia Hudson, Director
MT Fish, Wildlife & Parks, Pat Flowers (Bozeman)
MT Fish, Wildlife & Parks, Matt Jaeger (Dillon)
MT Fish, Wildlife & Parks, Craig Fager, (Dillon)
MT Fish, Wildlife & Parks, Jim Olsen (Butte)
MT Fish, Wildlife & Parks, Vanna Boccadori (Butte)
Beaverhead-Deerlodge N.F., Jenna Roose,
Christiansen East Bench Ranch, Inc., Ted Christiansen
Ecology Center / Native Forest Network

Pg. 2 (Promised Toomey Salvage Scoping List continued)

Montana Standard, Butte, MT (announcement posted)

Dillon Tribune, Dillon, MT (announcement posted)

DNRC AG and Grazing Mgmt. Bureau, Helena, MT

MT DNRC Centralized Services Division, John Grassy

MT DNRC Forest Management Bureau, Sonya Germann

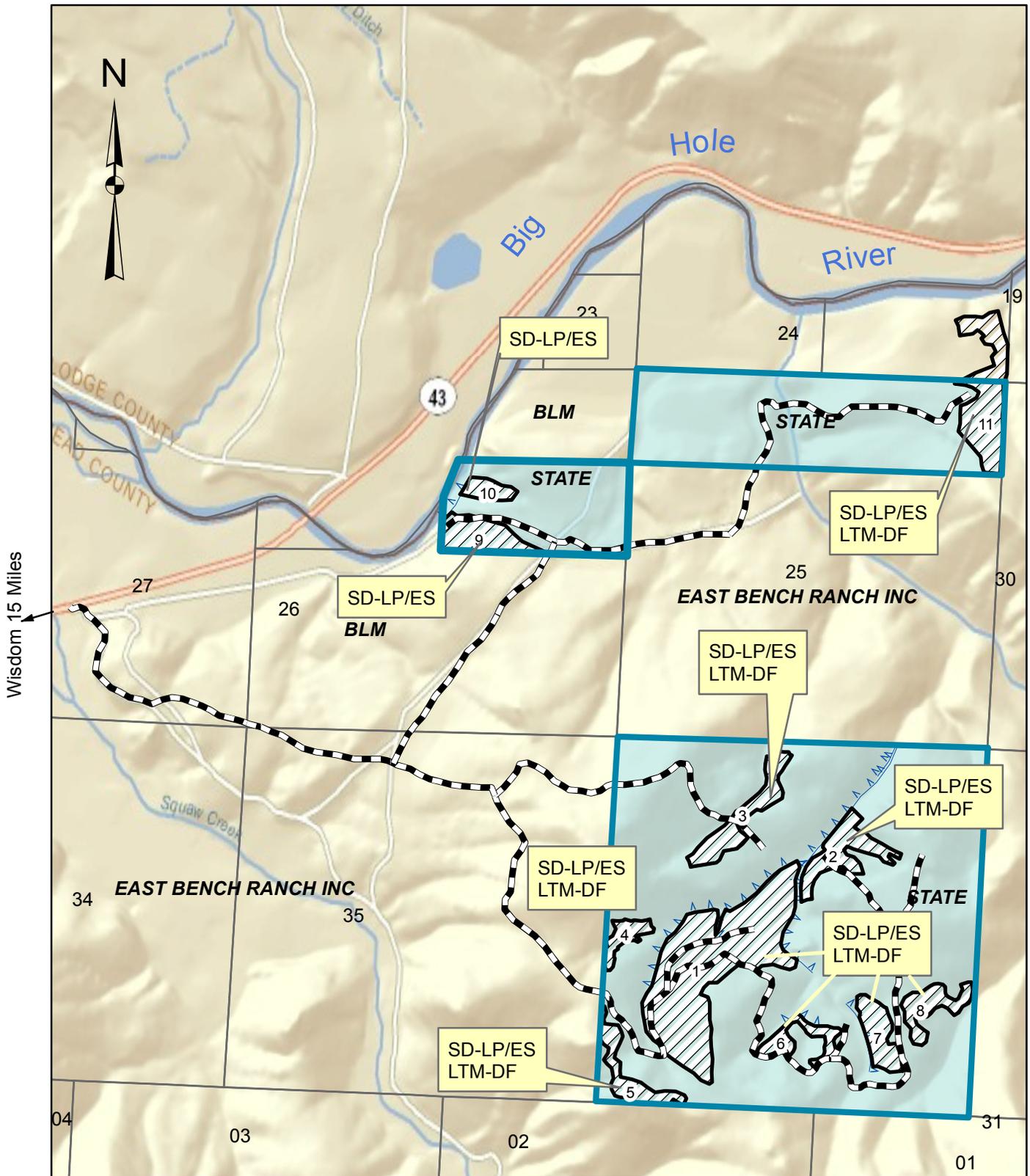
MT DNRC Helena, MT, Patrick Rennie, Archeologist

MT DNRC Centralized Services Division, Barb Powell (DNRC webmaster)

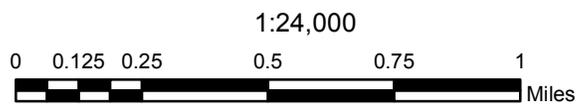
Promised Toomey Salvage Timber Sale

Portions of Sections 24,25, 26 & 36 (all), T1N, R14W Beaverhead County

SALE MAP



Toomey Roads
 Harvest Units



Labels designate harvest type:
 SD-LP/ES = Species Designation Lodgepole/Englemann Spruce
 LTM DF = Douglas-fir marked to leave