CHECKLIST ENVIRONMENTAL ASSESSMENT

FOR THE

BUTTE CREEK TIMBER SALE

Prepared by Chris Pileski
Eastern Land Office-DNRC
January, 2002

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CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name: Butte Creek Timber Sale Proposed Implementation Date: July 1,2002, 03,04

Proponent: Eastern Land Office

Type and Purpose of Action: ELO/DNRC is proposing a commercial timber harvest of ponderosa pine from a harvest area which includes approximately 220-300 acres of timber land with approximately 3,750-6,000 tons being removed. The proposed harvest area is located within one section of state land. The harvest is proposed to remove trees from a range of size classes, while maintaining a healthy stand of ponderosa pine. Approximately 2-3 miles of existing road will be reconstructed and approximately 1-2 miles of temporary spur roads will be constructed. All temporary spur roads will be reclaimed through moving the berm back onto the road surface, mechanical surface scarification and surface broadcast seeding composed of native grass species. Road use after sale activity will be restricted through possible placement of a physical barrier and placement of road closure signs. The harvest prescription is predicted to result in a healthy stand of ponderosa pine that can support re-entry in 20-40 years. If the Action Alternative is selected an estimated income to the school trust fund of approximately $48,000-80,000 is predicted.

Location: All section 36 Twn 7S Rng 50E County: Powder River

I. PROJECT DEVELOPMENT	
1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED: Provide a brief chronology of the scoping and ongoing involvement for this project.	Letters were sent in March of 2000 to resource professionals and other interested parties seeking comment on the proposed action. A public notice was placed in the Powder River Examiner, and ran for two consecutive weeks. Comments were received from: Monte Mason DNRC Minerals Management Bureau, The Ecology Center, Patrick Rennie, Archaeologist, Surface Management Bureau, The Montana Natural Heritage Program, , George Mathieus, hydrologist DNRC, The Confederated Salish and Kootenai Tribes of the Flathead Nation, and Greg Risdahl, MT FWP, Robin Rumph-Jones, Glenda Rumph, Autumn Rumph, Colonel Mark Oestreich.
2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:	No permits needed and no governmental agencies with jurisdiction.
3. ALTERNATIVES CONSIDERED:	**NO ACTION:** Current land use activities of grazing and recreation would continue without change. Increased fire hazard may occur as more ponderosa pine encroachment invades grassland areas and as stand become more heavily stocked and stagnated. **TIMBER HARVEST ALTERNATIVE:** This alternative will continue the current land uses of grazing and recreation and will also incorporate a selective timber harvest of 3,750-6,000 tons of ponderosa pine from approximately 220-300 acres. The timber harvest will consist of harvesting trees greater than 9 inches in DBH, while leaving approximately 15-30 Trees per acre with good form, crown, and vigor. The harvest activity will require the construction of approximately 1-2 miles of temporary spur roads and the reconstruction of approximately 2-3 miles of existing road. All temporary spur roads will be closed and reclaimed upon completion of the sale (see discussion in box 4, Soils).

II. IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURESN = Not present or No Impact will occur.Y = Impacts may occur (explain below)
4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations? Are cumulative impacts likely to occur as a result of this proposed action?	[Y] Soils are sandy to clayey in texture with moderate to high erodibility factor. Surface displacement will occur within the road surface and to a lesser extent in the skid trail locations. Impacts are mitigated through contract stipulations. Roads will be reclaimed by placement of water bars, ripping, seeding to native species, and elimination of vehicle use at the completion of harvest activities. Impacts from skidding activities will be mitigated mostly by the scattered nature of the timber dispersing the skidding activity over a large area. No unusual geologic features occur on the state tract. (See attachment 1 for additional information). Implementation of the above mentioned mitigation measures and implementation of the Best Management Practices will result in no cumulative impacts as a result of the proposed action.
5. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality? Are cumulative impacts likely to occur as a result of this proposed action?	[N] Several draws within the sale area contain spring fed seeps. These spring fed seeps are located in areas too steep for equipment operation and will be excluded from the proposed harvest activity. The Biologist for MT FWP located two Elk wallows, both of which are located in areas that are too steep for equipment operation and will not be included in the proposed harvest area. If any additional springs/seeps, wallows are located within the proposed harvest area they will be immediately be made Equipment Restriction or Exclusion Zones depending on the nature of the area. Due to the low precipitation, the lack of perennial streams, minimal amount of new road construction, closure and seeding of the new roads after use, and the selective nature of the harvest, there will be no impacts to water quality, and cumulative impacts are not likely. The DNRC hydrologist visited the site and those comments are included. (See Attachment 1).
6. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)? Are cumulative impacts likely to occur as a result of this proposed action?	[Y] Particulate will be released into the atmosphere when the brush piles are burned. Brush will only be ignited when ambient air conditions are suitable and air dispersal flows are adequate to lift the smoke into the winds aloft for rapid and thorough dispersal. Environmental conditions required prior to ignition must include adequate snow cover on the ground surface with a long-term forecast of continued low temperatures during daylight hours.
7. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present? Are cumulative impacts likely to occur as a result of this proposed action?	[N] The existing stand is generally an even-aged stand of ponderosa pine. In the preharvest work, tree ages were sampled by boring trees of all size classes. It was determined that the stand was dominated by 80-95 year old trees and did not meet the definition of old growth. The silvicultural prescription calls for harvesting 40 to 60% of the volume from all size classes. This will decrease competition and allow retention trees to release and regeneration should occur in the created openings. The long-term plan for this stand is to maintain the even-aged structure while maintaining available growing space for regeneration. This will be done through this and subsequent harvests. The Montana Natural Heritage Program was contacted and their search found one occurrence of a rare plant species within their analysis area. No evidence of rare plant species was found on the proposed sale area during any of the pre-sale work. DNRC has adopted the old-growth definitions proposed by Green et al (Old Growth Forest Types of the Northern Region, R-1 SES 4/92, USDA Forest Service, Northern Region, Missoula, MT) None of the proposed harvest units are in stands meeting the definition of old growth based on Green et al. Due to the selective nature of the proposed harvest and contract mitigation measures, no cumulative impacts to vegetative communities is likely to occur as a result of the proposed activity.

RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish? Are cumulative impacts likely to occur as a result of this proposed action?	[Y] This section holds the potential for a wide variety of wildlife species. The primary species that inhabit the area are mule deer, whitetail deer, elk, Merriams turkey, toads, cottontail rabbits, raptors, migratory prairie birds and others. The sale area was reviewed by the MT FWP Biologist and his comments are attached. The sale area is considered to have good potential for fawning, calving, and is a wintering area for both deer and elk. The timber harvest operations should produce only minor environmental impacts to wildlife species because of the operational season of use, the layout/location of the harvest units. The operating season (August 1 - December 15) will not interfere with fawning,calving, nesting or wintering activities. The harvest plans call for selective harvest of commercial size ponderosa pine(9" DBH with a 16.5 ft log). This will result in a very healthy remaining stand of ponderosa pine. Consequently, reduction of canopy cover will not be extensive in any one locale. All existing snags will be left in place as potential nesting and rest sites. Edge effect within the proposed timber sale should be increased due to the irregular harvest unit boundary layout. Mule deer, elk and to a lesser extent, whitetail deer may be temporarily displaced during harvest activities but their inherent mobility coupled with surrounding unharvested areas will provide security and biological needs during the displacement period. Due to the selective nature of this harvest, the selective nature of harvest on surrounding ownership, the large unharvested areas, and the lack of legal public access to this section, there will be no cumulative impacts on terrestrial, avian, and aquatic habitats as a result of the proposed action.
9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Sensitive Species or Species of special concern? Are cumulative impacts likely to occur as a result of this proposed action?	[N] There are no known threatened and endangered species in this general area. There are no documented studies suggesting the existence of T&E species in this area. There are no limited environmental resources within this area. The Natural Heritage Program was also contacted and they have no records of any T&E species, DNRC listed sensitive species, or any species of special concern on or near this section. The small size and selective nature of the sale and the existing surrounding habitat will create no cumulative impacts as a result of the proposed activity.
10. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[Y] During the course of a field inspection a single cultural resource site was identified(24PR1958). This site is outside the proposed activity area and should receive no impacts. DNRC Archaeologist comments pertaining to this site are located in the project file. Two additional locations have been identified by the Fish Wildlife and Parks Biologist during his visit, these areas will be identified on the ground and avoided during harvest activity. The timber sale contract holds a special stipulation that requires immediate curtailment of any action/activity if an historical or archaeological site is discovered during harvest operations. The site will then be completely avoided and registered with the State Historical Preservation Office. The proposed harvest received archaeological clearance from the DNRC archaeologist.
11. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light? Are cumulative impacts likely to occur as a result of this proposed action?	[Y] The proposed harvest will produce temporary visual impacts. This effect will be mitigated over time as the disturbed sites recover and the brush piles are burned. The surrounding region is lightly populated which will result in the temporary visual impact distributed over a limited population size. For these reasons, along with the scattered nature of the timber and grasslands no cumulative impacts are anticipated as a result of the proposed activity.
12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Are cumulative impacts likely to occur as a result of this proposed action?	[N] The project will not use resources that are limited in the area. The selective harvest on adjacent ownership and vast unharvested areas will have no cumulative effects on limited resources.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA: Are there other studies, plans or projects on this tract? Are cumulative impacts likely to occur as a result of other private, state or federal current actions w/n the analysis area, or from future proposed state actions that are under MEPA review (scoping) or permitting review by any state agency w/n the analysis area?	[N] This section is leased for livestock grazing and is a classified grazing tract. The lessee was contacted by letter requesting comments and concerns. Verbal concerns pertaining to a small local elk population were expressed. Written comments in opposition to the sale were received from several family members of the lessee. No cumulative impacts are likely to occur as there are no other current private, state or federal actions occurring. No other state actions are under MEPA scoping that pertain to this analysis area.

III. IMPACTS ON THE HUMAN POPULATION

RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
14. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] Human health will not be impacted by the proposed timber sale or associated activity. Safety considerations and temporary risks will increase for the professional contractors working within the sale area, and possibly for public vehicle traffic on the highway and the county road while log trucks are hauling. There are no unusual safety considerations associated with the proposed timber sale. The general public or local residents should not face increased health or long term safety hazards because of the proposed timber sale.
15. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[Y] The section involved with the proposed timber sale is classified grazing land. The primary grazing period or season of use is late May through late summer. The current amount of available livestock forage will temporarily be reduced. Over a short period of time the disturbed and re-seeded sites will recover and forage levels should return to their present levels or beyond.
16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so estimated number. Are cumulative impacts likely to occur as a result of this proposed action?	[N] People are currently employed in the wood products industry in the region. Due to the relatively small size of the timber sale program, there will be no measurable cumulative impact from this proposed action on employment.
17. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue? Are cumulative impacts likely to occur as a result of this proposed action?	[N] 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 will be no measurable cumulative impact from this proposed action on tax revenues.
18. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed? Are cumulative impacts likely to occur as a result of this proposed action?	[N] There will be no measurable cumulative impacts related to demand for government services due to the relatively small size of the timber sale program, the short-term impacts to traffic, the small possibility of a few people temporarily relocating to the area, and the lack of other timber sales in the adjacent area.
19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[Y] In June 1996, DNRC began a phased-in implementation of the State Forest Land Management Plan (Plan). The management direction provided in the Plan comprises the framework within which specific project planning and activities take place. The Plan philosophy and appropriate Resource Management Standards have been incorporated into the design of the proposed action.
20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract? Are cumulative impacts likely to occur as a result of this proposed action?	[N] There are no wilderness or recreational areas nearby or accessed by this tract. There is no public recreational potential for this tract as the area is surrounded by private land with no legal public access, therefore no cumulative effects will occur as a result of the proposed action.
21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing? Are cumulative impacts likely to occur as a result of this proposed action?	[N] There will be no measurable cumulative impacts related to population and housing due to 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: Is some disruption of native or traditional lifestyles or communities possible?	[N]

23. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N]
24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES: Is there a potential for other future uses for easement area other than for timber management? Is future use hypothetical? What is the estimated return to the trust. Are cumulative impacts likely to occur as a result of this proposed action?	[N] The proposed economic return to the trust for this sale will be approximately $48,000-$80,000, which was calculated by taking the estimated 3,750-6,000 tons multiplied by the minimum bid rate. The minimum stumpage price was estimated by using comparable sales analysis. Costs, revenues, and estimates of return are estimates intended for relative comparison of alternatives. They are not to be used as absolute estimates of return. For FY 00, ELO had revenue to cost ratio of 0.19:1 and statewide DNRC had a ratio of 2.78:1. The Eastern Land Office currently has 3.32 MMBF under contract that will significantly increase the ratio in the next two to three Fiscal years.

EA Checklist Prepared By:		
Chris Pileski	Forester	July 26, 2001
Name	Title	Date

IV. FINDING

25. ALTERNATIVE SELECTED:	The timber harvest alternative is the selected Alternative.
26. SIGNIFICANCE OF POTENTIAL IMPACTS:	The proposed harvest of approximately 3,750-6000 Tons of commercial size ponderosa pine on the State section within approximately 220-300 acres will not result in nor cause significant environmental impacts. The predicted environmental impacts will be adequately mitigated through the proposed timber sale plan, harvest prescription, operating period, unit boundaries, road layout and contract stipulations. The general public was officially notified of the proposed timber sale by published public notice and appropriate comments and concerns were incorporated into the proposed timber sale. The lessee of record was contacted and their comments and concerns are incorporated into the proposed timber sale. Agency specialists were contacted and appropriate comments and concerns were incorporated into the proposed timber sale. The sale meets the intent, standards, and guidence of the SFLMP. The proposed harvest will satisfy the trust fiduciary mandate and treat the natural resources to increase long term production. An environmental assessment checklist is the appropriate level of analysis for the proposed action.

27. Need for Further Environmental Analysis: [ ] EIS [ ] More Detailed EA [x] No Further Analysis

EA Checklist Approved By:

Dwayne Andrews — Area Manager
Name — Title

Dwayne Andrews — 01/08/02
Signature — Date

attachment 1

RECEIVED
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TO: Chris Pileski, Forester, Eastern Land Office

cc: Dwayne Andrews, Manager, Eastern land Office
Jeff Collins, Soil Scientist, Forest Management Bureau
Gary Frank, Hydrologist, Forest Management Bureau
Bill Schultz, Supervisor, State Land Management Section

FROM: George Mathieus, Hydrologist, Forest Management Bureau GM

SUBJECT: Butte Creek Proposed Timber Sale Write-up

DATE: February 27, 2001

Existing Conditions/Effects Analysis
Butte Creek Proposed Timber Sale
Section 36, T7S-R50E
Eastern Land Office

INTRODUCTION

The following document contains background information for the watershed and soils portion of the proposed Butte Creek Timber Sale Environmental Assessment. This analysis includes an existing conditions and effects assessment of all watercourses draining the proposed sale area. Write-up and assessments are based on a coarse filter screening approach and an on-site field review of all contributing areas within the proposed sale area.

POTENTIAL ISSUES

Soil Resources:

Equipment operations and timber harvest on steep slopes or sensitive soils can result in soil impacts that effect soil productivity depending on area and degree of physical effects and amount or distribution of course woody debris retained for nutrient cycling.

Noxious Weeds:

Following disturbance events such as timber harvest activities, invasion and spread of noxious weeds is more prevalent than in undisturbed areas. Noxious weed invasion and spread detrimentally influences surface cover, erosion and native species growth.

Cumulative Watershed Effects:

Cumulative watershed effects can be characterized as impacts on water quality and quantity that result from the interaction of disturbances, both human-caused and natural. Timber harvest can affect the timing of runoff, increase peak flows and increase the total annual water yield of a particular drainage.

AFFECTED ENVIRONMENT

The proposed sale area lies within one state section surrounded by private lands. Precipitation ranges from 10-15 inches per year. There are no perennial streams draining the proposed sale area, it consists of ephemeral draws and coulees with only infrequent minor surface flows for short durations. These ephemeral tributaries all drain into Butte Creek, a tributary to the Powder River.

Regulatory Framework:

This portion of the Yellowstone River Basin, including the Butte Creek drainage, is classified C-3 in the Montana Water Quality Standards. Waters classified C-3 are suitable for bathing, swimming and recreation, growth and propagation of non-salmonid fishes and associated aquatic life, waterfowl and furbearers. The quality of these waters is naturally marginal for drinking, culinary and food processing purposes, agriculture and industrial water supply. State water quality regulations prohibit any increases above naturally occurring concentrations of sediment, settable solids, oils or floating solids, which will or are likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, welfare, livestock, wild animals, birds, fish, or other wildlife in waters classified C-3 (ARM 16.20.624 2(f)).

"Naturally occurring" means conditions or materials present from runoff or percolation over which man has no control or from developed land where all reasonable land, soil and water conservation practices have been applied. "Reasonable land, soil and water conservation practices" include methods, measures or practices that protect present and reasonably anticipated beneficial uses. The state of Montana has adopted Forestry Best Management Practices (BMPs) through its Non-point Source Management Plan as the principal means of meeting Water Quality Standards.

Existing beneficial uses in the immediate vicinity of the proposed sale area include water rights for groundwater sources include stock and domestic uses. Surface water sources include stock uses, irrigation and new flood irrigation. Outside of the analysis area, downstream beneficial uses include aquatic life support and warm water fisheries.

The Clean Water Act and EPA Water Quality Planning and Management Regulations requires the determination of allowable pollutant levels in 303(d)-listed streams through the development of Total Maximum Daily Load (TMDL) limits. There are no water quality limited segments within the project area (as per Section 303(d) of the Clean Water Act) in the 305(b) report.

Water Quality:

There are no streams draining the proposed sale area. It consists of ephemeral draws and swales with only minor seasonal flow.

Fisheries:

Due to the ephemeral nature of the stream channels and disconnectivity to Butte Creek and ultimately the Powder River, no fish species are present within the analysis area.

Soil Resources:

Slopes within the sale area are moderate, ranging from 5-50%, with isolated steeper breaks along draw features. There were no signs of slumping or mass wasting. Draws are typically "box-shaped" with distinctive topographic breaks.

Soils along ridges are shallow to very shallow sandy silt loams with 2-6" topsoil and considerable outcropping sandstone on upper-forested slopes. Deeper clay loams and silty clay loams occur on moderate slopes of about 5-30% with shale outcrops common. Draw bottoms contain similar red clays as mid-slope, but are deeper and seasonally wetter. The primary soils concern is displacement and erosion of the shallow surface soils.

No especially unusual or unique geologic features were identified in the proposed harvest area.

Approximately 3.0 miles of private ranch road provides access to the sale area. These road systems contain low standard roads and two-tracks, both of which do not currently meet BMP

standards. The existing road system is currently a source of potential erosion and sediment delivery and may continue to do so unless remedial action and sufficient mitigation measures are undertaken.

Noxious Weeds:

Spots of thistle (Cirsium arvense) occur within the project area mainly along the existing roads. No real outbreaks or large infestations were noted within the project area.

Cumulative Watershed Effects:

Past management activities in the general vicinity include grazing; fire suppression, road construction and timber harvest. There has been a moderate level of recent selective timber harvest on adjoining private lands.

A cumulative watershed effects analysis for the proposed sale was completed to determine the existing conditions of the affected environment. Due to the low precipitation region, ephemeral nature of the stream channels and the large drainage area typical of east-side ephemeral drainage's, a smaller, more defined boundary was selected for the analysis area. This analysis area was selected because it was determined to be the most appropriate scale to detect potential effects.

A DNRC Hydrologist evaluated all drainage features and draw bottoms draining the proposed sale area. All tributaries to Butte Creek, within the State section, have no surface connectivity or any perennial flow.

Field evaluation concludes that past management activities have resulted in impacts to soil resources. These impacts have been limited to erosion from existing roads and cattle trampling.

ENVIRONMENTAL CONSEQUENCES

The proposed timber sale is comprised of one action alternative. This alternative would selectively treat approximately 280 acres. Approximately 1.5 miles of new temporary road would be constructed to access the proposed harvest units. Portions of the 3.0 miles of existing road would be improved to meet BMP standards.

Noxious Weeds:

No Action Alternative:

Under the No Action Alternative, weed seed may spread by vehicle traffic, wind and animal dispersion into the project area, which would result in competition with native species trying to establish in recently disturbed areas.

Action Alternative:

Ground disturbing activities associated with the proposed action alternative have the potential to introduce or spread noxious weeds in susceptible habitat types. Under the Action Alternative, DNRC would follow an integrated weed management approach to help prevent the introduction and establishment of noxious weeds and slow the expansion of existing weeds.

Cumulative Effects of Noxious Weeds:

Invasion and spread of noxious weeds would decrease soil productivity and stability and reduce the reestablishment of native species. A combination of prevention, revegetation and monitoring

will be implemented to reduce the possible infestation and spread of weeds associated with this project.

Soil Resources:

No Action Alternative:

Under the No-Action alternative, there would be no direct effects to soils or geology. Segments of existing roads with inadequate drainage identified in the affected environment would continue to erode without future mitigation and/or maintenance.

Action Alternative:

Due to the ephemeral nature of the draws and the low annual precipitation within the sale area, the proposed activities have a low potential to contribute to the degradation of water quality. The primary water and soil concerns associated with the proposed timber sale activities are sediment delivery to the draws, erosion of soil and subsequent loss of site productivity. Vegetative regrowth is a critical factor in avoiding long-term soil erosion from harvest activities.

Cumulative Effects to Soil Resources:

Portions of the existing low standard road systems would be improved under the proposed action to a standard that meets minimum BMPs. Improvements to this road system are expected to decrease existing and future risk of sediment delivery to draws and subsequent erosion.

Proper application of BMPs and site-specific designs and mitigation measures would reduce future erosion and potential water quality impacts to an acceptable level as defined by the water quality standards. Acceptable levels are defined under the Montana Water Quality Standards as those conditions occurring where all reasonable land, soil and water conservation practices have been applied. There is little risk of adverse impacts to soil resources, water quality and beneficial uses occurring as a result of the proposed action alternatives.

Cumulative Watershed Effects:

No Action Alternative:

The no-action alternative would have minimal effects to cumulative watershed effects. Moderate timber management activities in the surrounding drainage's and the range-like landscape have resulted in undetectable cumulative watershed effects.

Action Alternative:

There are no cumulative watershed effects constraints associated with the proposed sale area. This is due to the following reasons:

- Low precipitation region.
- No perennial streams.
- New road construction will be minimal design and excavation. These roads will be closed and mitigated at the end of the sale.
- The proposal is for a selective harvest in stands that are overstocked from that of natural, pre-fire suppression stands.

CONTRACT, SALE & MITIGATION DESIGN RECOMMENDATIONS

General Road Design and Mitigation Recommendations:

- Construct drain dips, grade rolls and other drainage features where necessary and practical to insure adequate road surface drainage. **Install and maintain all road surface drainage concurrent with new road construction, reconstruction and reconditioning.** Drain dips constructed on sustained road grades greater than 8% may require gravel surfacing to function properly. Sustained road grades greater than 10% may require installation of conveyor belt water diverters.

- Stabilize newly constructed road cuts and fills following excavation. Stabilization can be met through one or more of the following: seeding, benching or mulching. Apply seed as soon as conditions permit to maximize successful establishment of grass cover. Local professional judgement and consideration for temperature and precipitation would determine when seeding is likely to be most successful. Delay of seeding may require scarification of crusted soils.

- Leave all temporary or abandoned roads in a condition that will provide adequate drainage and will not require future maintenance. Partially obliterate abandoned roads through ripping and seeding. Where it is available, scatter slash across the ripped road surface. Install water bars at regular intervals to facilitate surface drainage.

- Provide effective sediment filtration through the use of slash filter windrows, filter fabric fencing or straw bales along drainage features located in areas with inadequate buffer capacity. Note: straw bales alone may not be effective in areas with heavy concentrations of livestock or big game.

- Where potential erosion exists at the outlet of drainage features, provide outfall protection using slash and/or coarse angular rock.

- Filter ditches with direct delivery to ephemeral draws at the outlet by using slash, or filter fabric and straw bales.

- Incorporate a filtering mechanism at all ephemeral draw crossings requiring fills that are greater than 2 feet deep. This may include slash filter windrows, filter fabric fencing, straw bales or rock, depending on feasibility of materials and characteristics of the site. Ensure that method used is keyed into the toe of road fill.

- When excavating material in and around ephemeral draw crossings (i.e. cleaning inlets and outlets, constructing ditches, etc.) Special care should be taken so as not to cause an excessive amount of disturbance to the draw bottom or area immediately adjacent to the crossing sites. Excess or waste material should be disposed of at a location where it will not erode directly into the stream or draw bottom.

- Limit road use and hauling to dry, frozen or snow covered conditions. **Suspend operations during periods <u>before</u> rutting occurs.**

Noxious Weeds:

- Clean all road construction and harvest equipment of plant parts, mud and weed seed to prevent the introduction of noxious weeds. Equipment would be subject to inspection by forest officer prior to moving on site.

- Re-seed all newly disturbed soils on road cuts and fills to site adapted grasses for reduction of weed encroachment and stabilization of roads.

- Monitor the project area for two years after completion of harvest activities to identify occurrence of any noxious weeds on site. If noxious weeds occur, a weed treatment plan should be developed and implemented to eradicate the noxious weeds.

General Design and Mitigation Recommendations for Harvest Units:

- Do not burn slash piles in or near areas of concentrated ephemeral flow.

- Implement equipment restriction zones (ERZ) along deeply incised ephemeral draws.

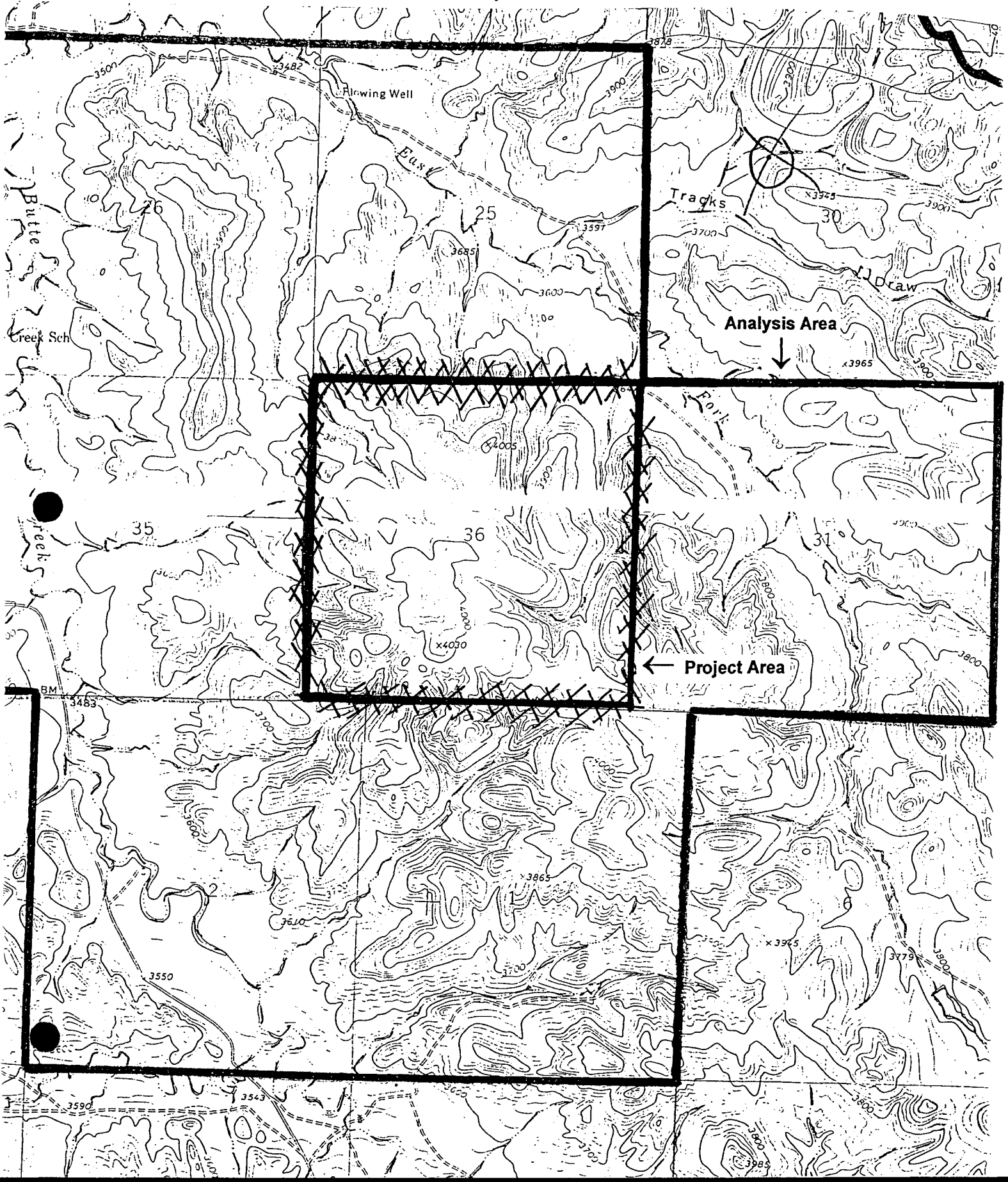
- In all units, designate ERZs below slope breaks > 45%. These areas shall require directional felling and winching as designated by the forest officer.

- Develop a skidding plan prior to equipment operations. Skid trail planning would identify which main trails to use, and what additional trails are needed. Trails that do not comply with BMPs (i.e. draw bottom trails) should not be used and closed with additional drainage installed where needed or grass seeded to stabilize the site and control erosion.

- Seed and waterbar skid trails over 30% thus reducing the potential for off-site erosion.

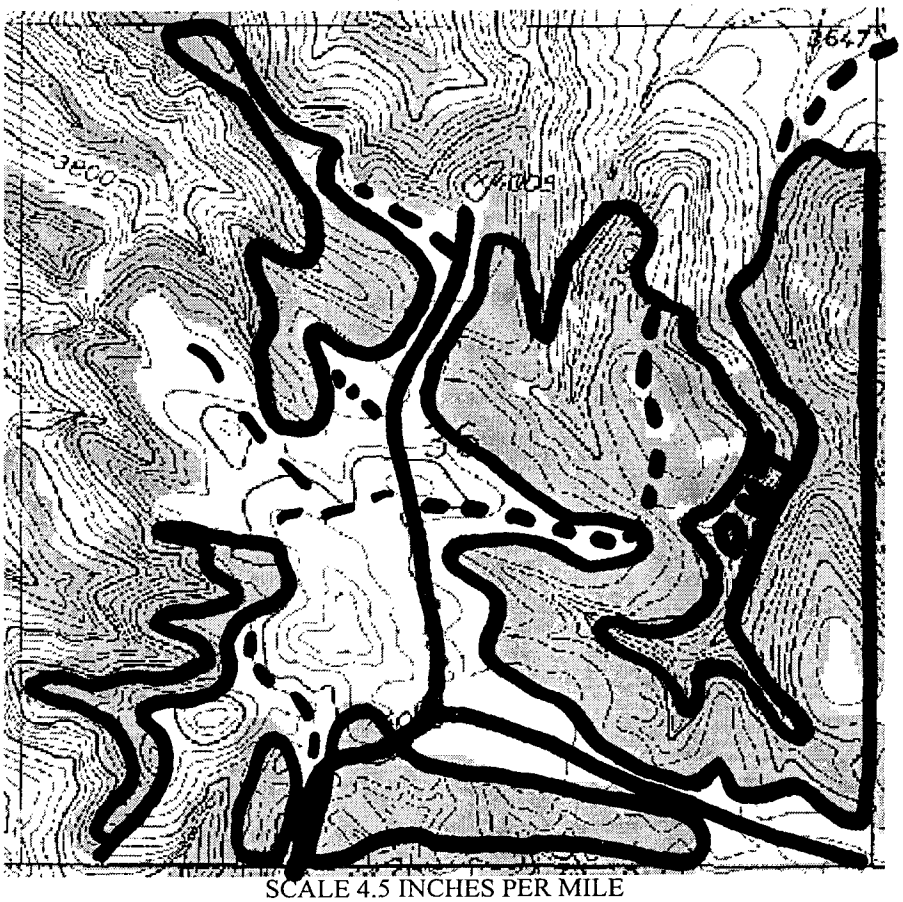
- Leave 5-10 tons/acre of coarse woody debris on the ground to enhance seedling growth and maintain long-term overall soil productivity.

Butte Creek Proposed Timber Sale
Cumulative Effects Analysis Map
Section 36, T7S-R50E



attachment 2

BUTTE CREEK TIMBER SALE
SECTION 36 TWN 7S RNG 50E
POWDER RIVER COUNTY



SCALE 4.5 INCHES PER MILE

PROPOSED HARVEST BOUNDARY

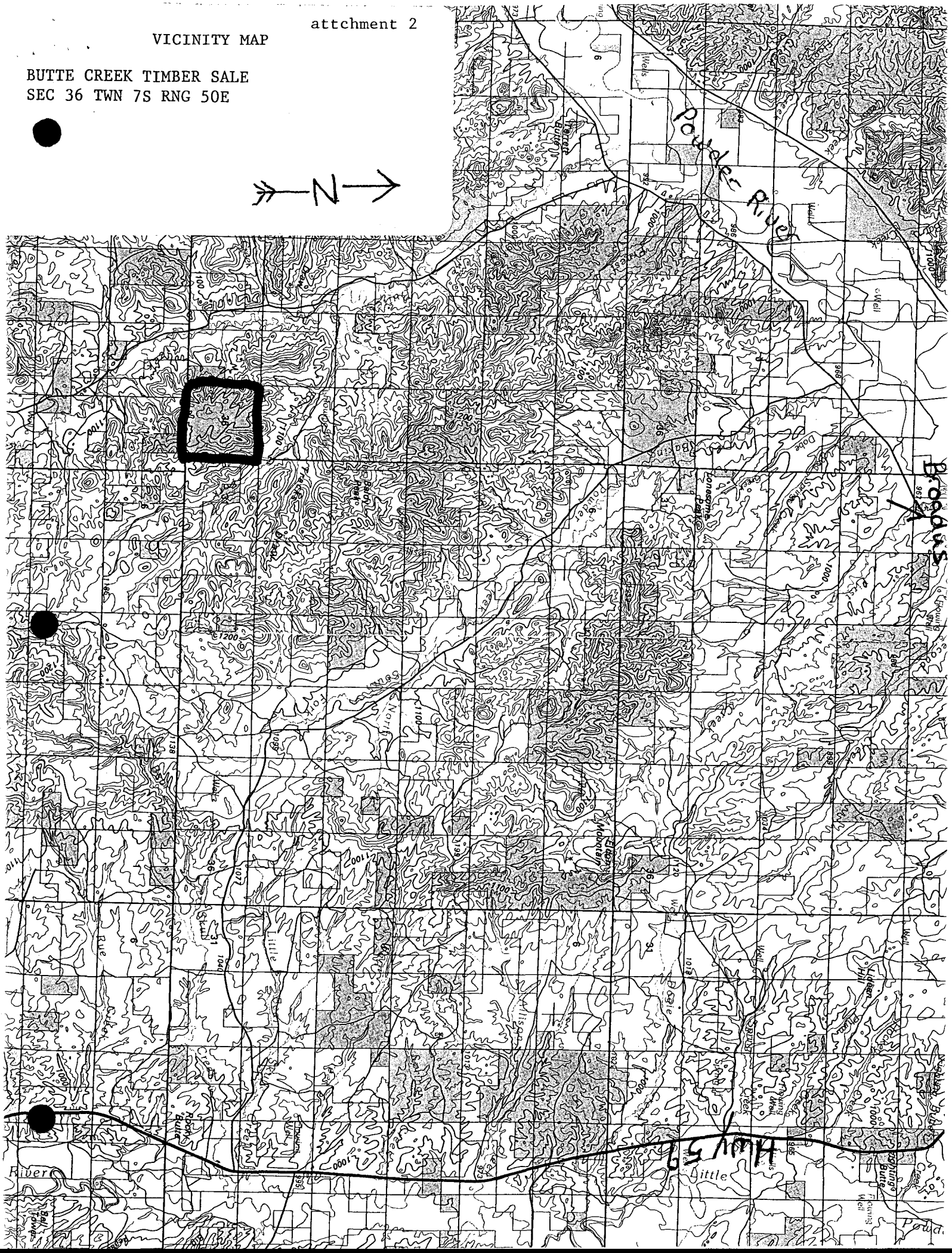
PROPOSED TEMPORARY SPUR ROAD

EXISTING ROAD

attchment 2

VICINITY MAP

BUTTE CREEK TIMBER SALE
SEC 36 TWN 7S RNG 50E



attachment 3

Montana Fish, Wildlife & Parks

RECEIVED AUG 13 2001

August 9, 2001

Gregory L. Risdahl
HC 40 Box 214
Olive, Mt. 59343

Chris Pileski, Forester
Department of Natural Resources and Conservation
Eastern Land Office
P. O. Box 1794
321 Main Street
Miles City, Mt. 59301

Dear Chris,

Thank you for the opportunity to comment on the proposed timber sale (T7S, R50E, Section 36) in Powder River County. Yesterday, on the 8th of August, I did a reconnaissance of the section. As per our conversation, here is what I found, my analysis and my suggestions for the proposed timber harvest.

Your proposed harvest regime includes the following prescription.

- "Selective harvest" of trees 9 inches DBH and over.
- Leave 15 - 25 trees per acre 10" DBH +.
- Trees whole skidded to a landing site.
- Slash piled and burned after curing.
- Construction of one mile of new road.
- Reconstruction of approximately two miles road.
- New roads reclaimed and seeded to native grass species.
- Roads closed to vehicle use following harvest.

In addition, you mentioned that the current tree spacing is about 15 to 20 feet between trees. This would be opened up to about 25 to 30 feet between trees on the average. In your words, this would equate to taking approximately one tree from a group of three. This appears to me to be a relatively light harvest. And, as you documented, the oldest trees are in the 85 to 90 year age class (range 65 to 105) which indicates the last major fire was about that many years ago. We may be nearing the time when another stand replacing fire could occur in this area. In this respect, now would be the best time to harvest trees from both economic and silvicultural standpoints.

In general - from a wildlife standpoint, it is my judgement that timber sale of the type you have proposed would have no long-term negative effects on the wildlife in the area - as long as certain conditions were met. First and foremost, roads must be closed when logging is completed. This is apparently important big game winter range and every precaution should be made to complete the timber harvest with as little habitat damage as possible. Second, this section of land has some steep

terrain (especially the west side) that could easily be damaged if much mechanical activity were to take place. If at all possible, mechanical activity should not occur in stream bottoms.

Deer use of this section is widespread. I saw several mule deer does with their fawns, which indicates that deer feel safe here and fawns are born and raised in this section. Not only that, having found 18 shed deer antlers (15 mule deer and 3 whitetail), plus a mule deer buck skull and white-tailed deer skull, it is very obvious that the area is an important winter range. Deer beds were especially abundant on the tops or just below the tops of many of the ridges overlooking the steeper coulees (especially on the west side and along the large draw on the east side in certain places). Removing trees from the tops of these draws, which is really the only feasible place to cut and remove trees on the west side, would remove or eliminate these preferred bedding sites for deer. I recommend leaving some of the better sites untouched (especially the ones overlooking springs and seeps).

Elk use of the area is extensive as well. I watched two cow elk and their calves browsing on chokecherry bushes on the north end of the section. I also jumped an elk in the southeast corner. I saw a number of elk rubs and found elk wallows in two areas. One wallow was just above the developed spring (with tank) on the west fork of the large draw (on the east side of the section). The other wallow was at a spring/seep (with rushes) in one of the steep coulees on the west side (southern end).

There is not really good hiding cover in this section for elk because the pines are large with few lateral branches (and little regeneration). Removing some trees is not going to change the basic open character of the area. With that said, it's important to understand that the elk in the area are not being disturbed, therefore they feel safe. I think it is important to preserve this feature of this environment. Therefore minimizing the disturbance factor is probably the most important consideration over the short term.

In sum, harvesting timber on this section would have no long-term negative impacts on the deer or elk if done as planned. Because this area supports a good number of wintering deer, however, timber harvest should not be conducted during the winter months. In addition, because deer are actively fawning and elk are calving here in the spring and into the summer, this time of the year should be avoided (for timber harvest) if possible. That leaves the fall… Mr. Robert Rumph indicated that hunting is not allowed on this section as they 'save' it for the wildlife, therefore, timber harvest would not conflict with any hunters pursuing game. For lack of a better time, I suggest a fall harvest, to avoid disturbing the deer and elk during these two critical time periods.

Finally, I noticed two archaeological sites (lithic scatters) in the section and Robert Rumph mentioned a third. At one site, I picked up a fairly nice projectile point (Besant?) approximately two inches long. It was handcrafted from the usual gray chert ubiquitous in this area. Some care should be taken to minimize disturbance to the cultural sites. Maybe an archaeological survey should be conducted.

Again, thank you for the opportunity to review this proposed timber sale.

Sincerely,

Greg Risdahl

Gregory L. Risdahl
c. John Ensign

INDIVIDUALS THAT RECEIVED INITIAL SCOPING NOTICE BUTTE CREEK TIMBER SALE SECTION 36 TWN 7S RNG 50E

Alliance for the Wild Rockies
P.O. Box 8731
Missoula, MT 59807

Bill Crasper
Weyerhauser Co.
275 Corporate Drive, Suite 800
Kalispell, MT 59901

Everett and Emerine Hanlan
HC 55-40
Biddle, MT 59314

Robert Rumph
Biddle, MT 59314

Bureau of Land Management
Powder River Resource Area
111 Garryowen Road
Miles City, MT 59301

Cary Hegreberg
Montana Wood Products Association
Aspen Court, Suite 2-B
33 S Last Chance Gulch
Helena, MT 59601

Tribal Office
Confederated Salish and Kootenai Tribes
P.O. Box 278
Pablo, MT 59855

Montana Natural Heritage Program
1515 East Sixth Ave.
Helena, MT 59602

Tom Schultz, Bureau Chief
DNRC Forest Management Bureau
2705 Spurgin Road
Missoula MT 59804

Stuart Lewin
615 3rd Avenue North
Great Falls, MT 59401

Powder River County Commissioners
P.O. Box 270
Broadus, MT 59317

Kevin Chappell, Bureau Chief
Trust Land Management Division
P.O. Box 201601
Helena, MT 59620-1601

John Adams
MT Wilderness Society
2708 1st Ave. N
Billings, MT 59101

Jim Krantz
Plum Creek Timber Co.
P.O. Box 1990
Columbia Falls, MT 59912

Friends of the Wild Swan
P.O. Box 5103
Swan Lake, MT 59911

Greg Risdhal
MT Dept. Fish Wildlife and Parks
HC 40 Box 214
Olive, MT59343

Dennis Espeland
917 Edgehill Vista
Billings, MT 59101

Ecology Center
801 Sherwood, Suite B
Missoula, MT 59802

F.H. Stoltz Land and Lumber
P.O. Box 1429
Columbia Falls, MT 59912

Glenda Rumph
606 Emerson
Gillette, WY 82716

March 1, 2000

RE: Proposed timber sale on State Land
All Sec 36, T7S, R50E, Powder River County

To whom it concerns,

The Eastern Land Office of the Department of Natural Resources and Conservation is in the initial planning and scoping phase of the above mentioned Timber Sale. The purpose of this letter is to identify issues and concerns as they relate to the proposed project. A brief description of the proposed action is listed below.

- Harvest approximately 500 MBF of Ponderosa Pine over approximately 280 acres.
- Select harvest of trees 9" DBH or greater approximately 10 to 20 TPA.
- Leave approximately 15 to 25 TPA 10" DBH and greater.
- Construction of approximately 1 mile of road.
- Reconstruction of approximately 2 miles of road
- All new road construction will be ripped and seeded to native grass species to promote vegetative recovery and prevent erosion.
- Roads will be closed to vehicle use following harvest.
- All harvested trees will be whole-tree skidded to a central landing and piled in large compact piles.
- All slash will be lopped, or piled and burned.

Please review proposed action and provide comments on any issues or concerns. If more information is needed or an on-the-ground review desired please don't hesitate to contact me.

Thank you for your time and effort.

Respectfully yours,

Chris Pileski
Forester, ELO