

## CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name:</b>	Bear Bottom Limited Access Timber Sale
<b>Proposed Implementation Date:</b>	January 1, 2005
<b>Proponent:</b>	Sun Mountain Lumber, Inc.
<b>Location:</b>	SW1/4SE1/4 Sec. 22, S1/2SE1/4 Sec. 26, NE1/4SE1/4 and NW1/4SW1/4 Sec. 27, NE1/4SE1/4 Sec. 28 and NW1/4NW1/4 Sec. 36, Township 10 South, Range 15 West
<b>County:</b>	Beaverhead

### I. TYPE AND PURPOSE OF ACTION

Commercial limited access timber sale to harvest an estimated 655 MBF of Douglas-fir, lodgepole pine, spruce and subalpine fir timber from approximately 135 acres. Purpose of the action is to generate revenue for the school trust, manage the forest resource, and improve forest health and productivity through removal of overstocked and insect damaged timber. (See Attachments A & B for vicinity and 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.*

The Montana Department of Natural Resources and Conservation began the process of initial scoping for the original proposed Bear Bottom Timber Harvest in June 2004. Since that time an opportunity to address this proposed harvest through the Bar TT Ranch as a limited access sale has been proposed by Sun Mountain Lumber, Inc. of Deer Lodge, MT. The DNRC has chosen to pursue this proposed action as it offers the best access route with minimal new road construction.

#### Initial June 2004 Scoping:

Individual scoping notices were sent on June 28, 2004. (See Attachment H - List of Individual Scoping Notices)

Publication of a Legal Notice in the Dillon Tribune on July 14 and 21, 2004 and the Montana Standard on July 11 and 18, 2004.

#### Additional scoping for proposed Bear Bottom Limited Access Timber Sale:

DNRC Resource Management Supervisor Gary Frank, DNRC Fisheries Program Specialist Jim Bower, DNRC Soil Scientist Jeff Collins and DNRC Forester Chuck Barone conducted a field review in October 2004.

Letters were sent to the following seeking additional comments for the proposed limited access timber harvest:

- Fish, Wildlife and Parks, Regional Supervisor, P. Flowers
- Fish, Wildlife and Parks, Wildlife Biologist, C. Fager
- Fish, Wildlife and Parks, Fisheries Management Biologist, R. Oswald
- American Wildlands, K. Davitt

#### Other contacts:

- DNRC, Archaeologist, P. Rennie
- Sun Mountain Lumber, Inc., D. Crawford
- Sun Mountain Lumber, Inc., B. Langsather
- Montana Natural Heritage Program
- Montana Fisheries Information System

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POLICY OFFICE

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

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

A Beaverhead County burning permit would be required if slash burning is done.

## 3. ALTERNATIVES CONSIDERED:

Action Alternative A: Harvest approximately 1500 MBF of overstocked and insect damaged timber from an estimated 230 acres of State land, located on Sections 16, 21, 22, 26, 27, 28 and 36-T10S-R15W, as originally proposed in June 2004.

Stand treatments would consist of harvesting approximately 60-90% of the merchantable conifer sawtimber from the harvest units. Harvest design is directed at improving forest health and productivity through the removal of overstocked and insect damaged timber. Harvest activities would occur in the spring, summer and fall months. Approximately 2.5 miles of existing road reconstruction and up to 4.5 miles of minimum standard new road construction would be needed to access the harvest units. Excess slash would be consolidated at landings and burned.

Action Alternative B: Harvest approximately 655 MBF of overstocked and insect damaged timber from an estimated 135 acres of State land, located on Sections 22, 26, 27, 28 and 36-T10S-R15W, utilizing a limited access opportunity

Stand treatments would consist of harvesting approximately 55-65% of the merchantable conifer sawtimber from the harvest units. Harvest design is directed at improving forest health and productivity through the removal of overstocked and insect damaged timber. Harvest activities would occur in the winter from January through March 2005 on frozen and snow-covered ground. Approximately 500 feet of existing road reconstruction and 0.3 miles of minimum standard temporary new road construction would be needed to access the harvest units. Excess slash would be consolidated at landings and burned.

No Action Alternative: Current management actions would be maintained and forest management and harvesting actions would be deferred. Opportunity to recover timber value through limited access would not be realized. These tracts are currently leased for grazing.

## III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

## 4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

*Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.*

Geology is fractured Challis Volcanic bedrock at shallow to moderate depth, which are suitable for construction. No unstable slopes or unique geology features are present. Typical soils on forest sites are shallow to moderate with deep, very cobbly loams and cobbly clay loams. Erosion risk is moderate and can be controlled with standard drainage features and grass seeding of temporary roads. Planned ground skidding operations should have moderate to low direct, in-direct and cumulative impacts based on the implementing BMP's and mitigation measures. Mitigations include skid trails planning, slope restrictions and prompt revegetation of disturbed sites on roads to protect soil resources.

Primary soil concerns are potential rutting, disturbance and erosion associated with harvest operations and site preparation. To control erosion, maintain soil productivity, and promote conifer regeneration, BMP's and site-specific mitigation measures would be implemented to minimize the area and degree of soil effects associated with harvest operations. Mitigations include skid trail planning, limiting season of use to dry or frozen conditions and installing drainage and woody debris on trails to control erosion. Ground effects of harvest operations will be closely monitored. Use moderate erosion rating for SMZ delineation along streams.

No cumulative effects are expected.

(See Attachment D – Soil and Geology Assessment)

**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.*

Portions of the proposed Bear Bottom Limited Access Timber Sale are located within the watershed areas of Frying Pan Creek (Section 22), Trapper Creek (Sections 27 & 28) and Bear Creek (Sections 26 & 36). Trapper Creek is a perennial Class I tributary to Frying Pan Creek. Both Bear Creek and Frying Pan Creek are perennial Class I tributaries to Trail Creek. Trail Creek is a tributary to Horse Prairie Creek within the Beaverhead River Basin.

The Missouri River drainage, including tributaries to the Beaverhead River, is classified as B-1 in the Montana Surface Water Quality Standards. The B-1 classification is for multiple use waters suitable for domestic use after conventional treatment, growth and propagation of cold-water fisheries, associated aquatic life and wildlife, agricultural, and industrial uses. Among other criteria for B-1 waters, no increases are allowed above naturally occurring concentrations of sediment, which will prove detrimental to fish or wildlife. Naturally occurring includes conditions or materials present from runoff on developed land where all reasonable land, soil, and water conservation practices have been applied. Reasonable practices include methods, measures, or practices that protect present and reasonably anticipated beneficial uses. 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.

Downstream beneficial uses in the affected watersheds include: domestic, irrigation, livestock watering, wildlife, and cold-water fisheries. There are several water rights for domestic use of surface water from Trail Creek at a location approximately 8 miles downstream (Section 9, R10S, T14W) of the proposed timber harvest activities. Frying Pan Creek, Trapper Creek, and Bear Creek have not been identified on the State's 303(d) list of impaired bodies of water in need of TMDL development. Current and historic grazing practices have led to widespread levels of bank trampling, increased stream channel instability, and increased levels of in-stream sedimentation.

The proposed levels of timber harvest are not expected to contribute to adverse cumulative watershed impacts due to modified stream flow regimes. The existing and proposed levels of harvest within the three watershed areas are well below those levels normally associated with detrimental increases in water yield, peak flow, or duration of peak flows. Subsequently, no direct, indirect, or cumulative impacts to water quality or beneficial uses are anticipated to result from bank destabilization and in-stream sedimentation. No direct, indirect, or cumulative impacts to water quality or beneficial uses within the three watershed areas are expected to result from the proposed actions.

(See Attachment C – Watershed Assessment)

## **6. AIR QUALITY:**

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

The project includes piling and burning 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.

## **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 proposed project is located on the east side of the Beaverhead Mountains in the upper reaches of the Trail Creek drainage. Forested stands are primarily located on northerly aspects. Ridgelines and exposed southerly aspects are essentially rangeland and are either nonforested or sparsely stocked with noncommercial timber stands. Slopes range from 10-40% with an elevation range of 7,000-7,400 feet.

Forested acres within the State parcels are dominated by lodgepole pine as a seral species, generally even aged from 90-120 years old and the habitat type is subalpine fir/grouse whortleberry (Abla/Vasc). Douglas-fir is a major seral species found in all ages and is present in almost every stand. Small stands and pockets of pure Douglas-fir are found throughout the proposed project area and are presently exhibiting bark beetle infestation with mortality. Subalpine fir is the climax species in all units but is present in minor amounts along with Engelmann spruce. Regeneration is poor with moderate understory vegetation. Coarse woody debris is light to moderate and cattle use is heavy in all stands. 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. There is currently more total forest cover in Beaverhead County than in prior historical conditions.

There is evidence of past low-level selective harvest within most of the proposed harvest units and is likely from old homesteading activities in the area. Commercial timber harvesting has occurred on the State lands periodically from 1987 to the present in Sections 21, 22, 27, 28 and 36. Patches of old growth Douglas-fir trees do occur within the proposed units but are generally small (<5 acres) and scattered with most occurring in Section 36. More commonly found are scattered individuals and small clumps of old relic trees. Historically, these remnants were typically naturally fragmented, open-park like communities maintained by frequent low intensity fires. The present percentage of old growth cover types on State lands is nearly twice the estimated percentage that is likely to have historically occurred on State lands in Beaverhead and Madison Counties. 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 within the harvest units.

Overall health and growth of all the lodgepole pine is poor to fair and are generally suppressed due to overstocking with dwarf mistletoe present in all stands. Growth in the Douglas-fir stands and scattered individual trees has been good but are presently exhibiting beetle infestations with high mortality.

The following harvest prescription would be implemented on the State lands, which is based on the harvest prescription employed on the adjoining private ownership and is a requirement for allowing access to the State lands:

Healthy Douglas-fir trees, exhibiting no outward signs of beetle infestation, would be selectively harvested on an approximated 30 foot x 30 foot spacing with Douglas-fir trees greater than 24 inches in diameter at stump height given retention priority over Douglas-fir trees less than 24 inches in diameter at stump height. Douglas-fir beetle killed and/or infested trees occurring within the harvest units would be salvaged where encountered. Engelmann spruce and lodgepole pine trees would be selectively harvested on an approximated 25 foot x 25 foot spacing. Douglas-fir would have the highest retention priority, lodgepole pine the second and Engelmann spruce the third. Sub-merchantable trees would be protected where possible.

Of the 20,911 total acres within the three watersheds (Frying Pan, Trapper and Bear Creeks) encompassing the proposed project area, ~10,850 acres (51.9%) are forested. ~434 acres (4% of the total forested acres) have

been previously harvested within the past 25 years. The proposed harvest of 135 acres represents 0.6% of the total watershed acres and 1.2% of the total forested acres within the watersheds.

Harvesting an estimated 655 MBF of timber would alter the forest cover on approximately 135 acres. Harvest design is intended to promote forest health and productivity, address Douglas-fir beetle and dwarf mistletoe infestations while maintaining a semblance of historic conditions through emulating mixed severity fires. Natural regeneration would be expected.

No rare plants or cover types have been noted or observed within the project area.

The DNRC requires the washing of equipment, seeding of grass and monitoring of disturbed areas to minimize the potential of noxious weeds being introduced.

#### **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 potentially use this area. Frying Pan, Trapper and Bear Creeks have several cold-water fisheries, including mottled sculpin, brook and westslope cutthroat trout.

The project area lies within the Tendoy Elk Management Unit. Elk security, bull elk vulnerability and potential reductions in hunter opportunity are a primary concern expressed by DFWP in this hunting district. 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 wildfires.

Although security cover is limited in the proposed project area, no significant impacts to wildlife are anticipated due to the type of silvicultural prescription, and the size and scattered nature of the proposed harvest units. Entry through main access route is limited due to private ownership, which would help minimize any potential increase in elk vulnerability.

Due to the size, season, duration and harvest method of the proposed project, minimal road reconstruction and construction and additional recommended mitigation measures, no impacts are expected to wildlife and fisheries habitats.

(See Attachment C, E, F & G – Watershed Assessment; Fisheries Assessment; Checklist for Endangered, Threatened and Sensitive Species; Montana Natural Heritage Program/ Montana Fisheries Information System)

#### **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.*

No threatened or endangered species are known to have been documented within the proposed project area. Preferred habitat for grizzly bear and bald eagles is not present or marginal within the project area. Occasional use of the area from these species could potentially occur but is generally considered outside of their normal occupied habitat.

The proposed project lies within the Central Idaho Nonessential Experimental Wolf Recovery Area. The nearest packs in the vicinity of the project area are the Moyer (Idaho) and Gravelly (Montana) packs. Individuals from these packs or transients from other packs could occasionally use portions of the project area, however, due to the size, nature and location of the proposed project, activities associated with this proposal are not expected to effect wolves or recovery efforts.

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 (>50 acres) of dense conifer regeneration at high elevations that are preferred for foraging are more prevalent to the south and west of the project area but can be found within the project area. Lynx habitat is marginal within the proposed project area due to the lack of highly desirable habitat conditions for lynx and their primary prey, snowshoe hares. Adverse direct, indirect or cumulative impacts to lynx as a result of this project are expected to be minimal.

Of the cold-water fisheries within the project area, the primary species of interest is westslope cutthroat trout (WCT). WCT are listed as a Class-A Montana Animal Species of Concern and identified by the Department of

Natural Resources and Conservation (DNRC) as a sensitive species. WCT have been documented in Frying Pan, Trapper and Bear Creeks within the proposed project area. No direct or indirect effects to the fisheries within these watersheds are expected from the proposed action.

No other sensitive species/species of special concern have been documented or observed within the proposed project area.

Due to the size, season, duration and harvest method of the proposed project, minimal road reconstruction and construction and additional recommended mitigation measures, no impacts are expected to occur to any endangered, threatened or sensitive species.

(See Attachments C, E, F & G – Watershed Assessment, Fisheries Assessment, Checklist for Endangered, Threatened and Sensitive Species; Montana Natural Heritage Program/Montana Fisheries Information System)

**10. HISTORICAL AND ARCHAEOLOGICAL SITES:**

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

There are no cultural resource concerns within the proposed project area. No additional archaeological investigative work is recommended prior to harvest activities.

**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 not visible to any populated area but is visible from Forest Service and BLM access roads. Due to the gentle topography and proposed harvest design impacts concerning aesthetics are not expected.

**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.*

NONE

**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.*

DNRC adopted the Administrative Rules for Forest Management on March 13, 2003, applicable to management activities on forested State lands.

In June 2000, the Frying Pan Rail Permit EA checklist was prepared. ~58 MBF has currently been harvested from ~25 acres in Sections 21 and 28-T10S-R15W. In June 1990, the South Frying Pan Timber Sale EA was prepared. 1,003 MBF of sawtimber was harvested from 92 acres in Sections 21, 22, 27 and 28-T10S-R15W. In December 1987, the South Frying Pan Timber Permit EA checklist was prepared. 42 MBF of sawtimber was harvested from 8 acres in Section 28-T10S-R15W. In August 1987, the Frying Pan Timber Permit EA checklist was prepared. 182 MBF of sawtimber was harvested from 13 acres in Section 36-T10S-R15W.

Range evaluations were conducted in October 2001, September 2002 and October 2003 on the various sections within the proposed project area.

No cumulative impacts are expected.

#### 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.*

NONE

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

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

NONE

##### 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. 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:

*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 will be no measurable 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 will be no measurable 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.*

In March 2003, DNRC adopted the Administrative Rules for Forest Management ARM 36.11.401 through 36.11.450 (the "Rules"). This project is planned under the requirements of the Rules.

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

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

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

**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 will be no measurable 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.*

NONE

**23. CULTURAL UNIQUENESS AND DIVERSITY:**

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

NONE

**24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:**

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

The estimated return to the trust would be \$96,547.00 (655 MBF of tractor sawtimber @ \$147.40/MBF) Income from grazing license's of \$1,260.40/year for 230 AUM of use would continue with or without the harvest proposal.

<b>EA Checklist Prepared By:</b>	<b>Name:</b> Chuck Barone	<b>Date:</b> December 14, 2004
	<b>Title:</b> Dillon Unit Forester	

**V. FINDING**

**25. ALTERNATIVE SELECTED:**

After review, I have selected the proposed Action Alternative B, to harvest approximately 655 MBF of overstocked and insect damaged timber from an estimated 135 acres of School Trust land. Utilizing a limited access opportunity from an adjacent landowner will require reconstruction of only 500 feet of existing road and the construction of only .3 miles of minimum standard new road to access the harvest units. 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, minimizing road construction and reconstruction, and generating revenue for the school trust from timber harvest.

**26. SIGNIFICANCE OF POTENTIAL IMPACTS:**

I conclude all identified potential impacts will be avoided or mitigated by the project size, minimal road construction, short duration, winter harvesting, timber sale design, contract provisions, project administration, and BMP compliance, and 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) and Streamside Management Zone (SMZ) laws. Protect all draws, springs and wet areas with marked equipment restriction zones (ERZ) as needed.
- 2) Limit equipment operations to periods when soils are dry, frozen or snow covered to minimize soil compaction, rutting and vegetative disturbance. Limit equipment operations to less than 45% slopes.
- 3) Retain five to ten tons per acre of woody material larger than 3 inches diameter to be left scattered throughout the sale units. Slash should be left in the harvest units where feasible, and distributed on skid trails and road surfaces upon completion of use for erosion control and nutrient cycling.
- 4) Construct cut slopes at stable angles of 1:1 (run/rise) for common material 3/4:1 for talus or as will stand for bedrock. Install proper and adequate road drainage such as drain-dips to control erosion from roads. Install and maintain all road surface drainage concurrent with harvest activities, reconstruction, construction and reconditioning. Provide effective sediment filtration along drainage features located in areas with inadequate buffer capacity to channel.
- 5) All road construction and logging equipment will be power washed and inspected prior to being brought on site. Sale area will be monitored for weeds following harvest and a treatment plan will 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, will be retained where applicable. Cull live trees and cull snags will be retained where applicable.
- 8) Existing road segment in the SW1/4 Section 27 is a potential sediment source, located adjacent to a stream. Where the road is nearest the stream, a short segment of slash filter will be installed to trap any road sediment. Following harvest use, the road will be stabilized and closed. The existing culvert on the access road will be replaced and the fill depth increased to insure drainage away from the culvert.

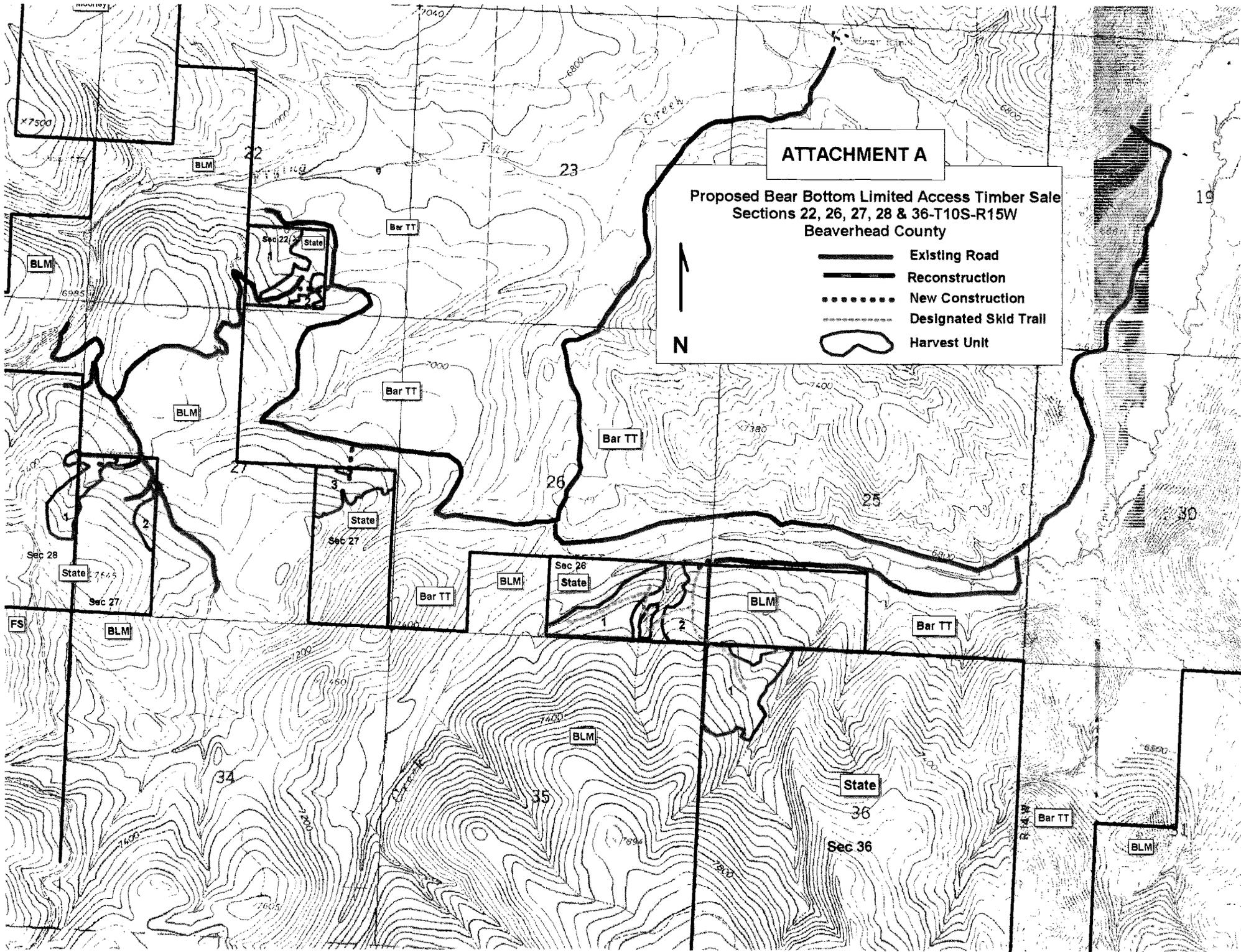
**27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:**

EIS                     
 More Detailed EA                     
 No Further Analysis

<b>EA Checklist Approved By:</b>	<b>Name:</b> Richard A. Moore
	<b>Title:</b> Dillon Unit Manager
<b>Signature:</b>	<i>Richard A. Moore</i>
	<b>Date:</b> 12/17/2004

## ATTACHMENTS

- A – Site Specific Map
- B – Vicinity Map
- C – Watershed Assessment
- D – Soils and Geology Assessment
- E – Fisheries Assessment
- F – Checklist for Endangered, Threatened and Sensitive Species
- G – Montana Natural Heritage Program/  
Montana Fisheries Information System
- H – List of Individual Scoping Notices

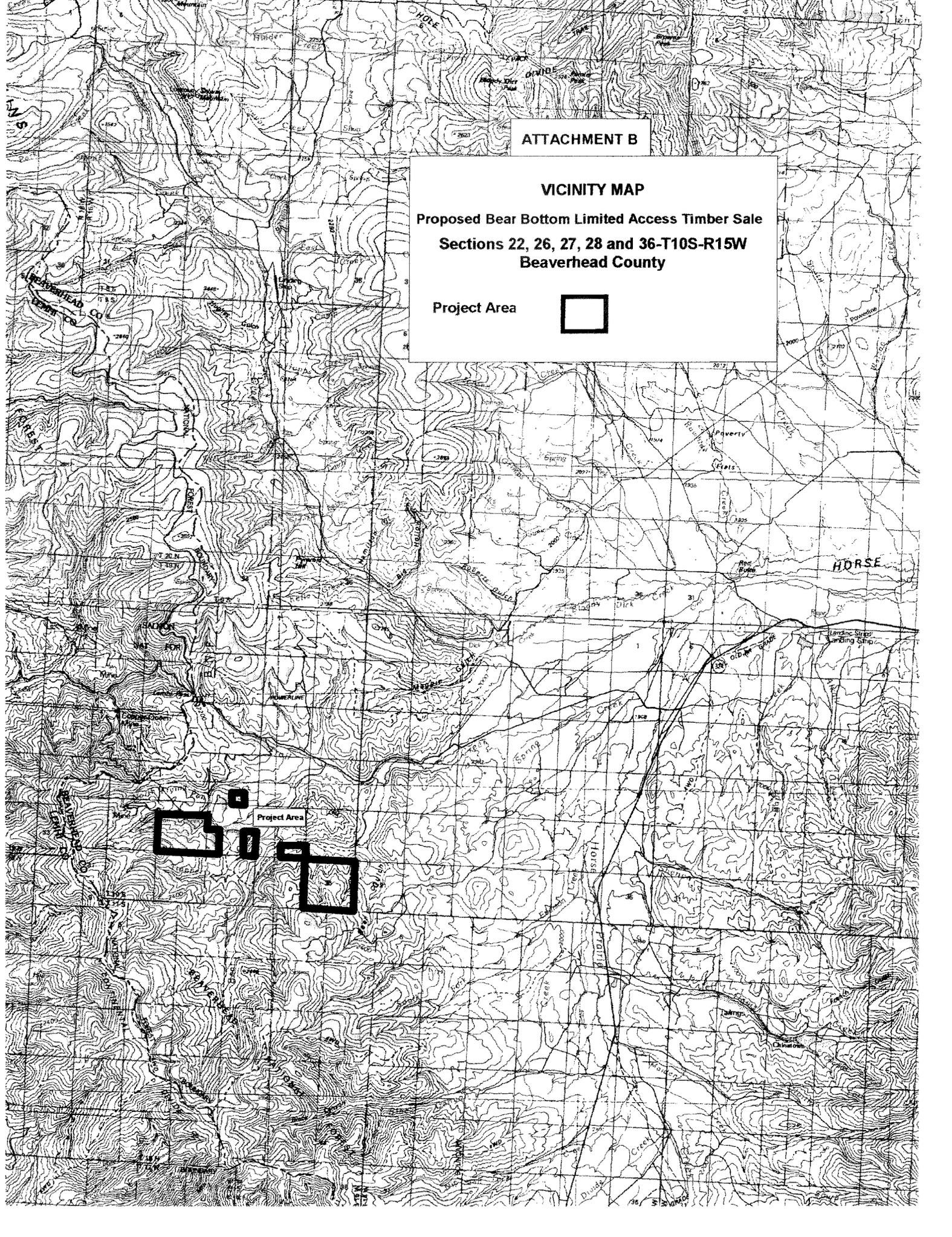


ATTACHMENT B

VICINITY MAP

Proposed Bear Bottom Limited Access Timber Sale  
Sections 22, 26, 27, 28 and 36-T10S-R15W  
Beaverhead County

Project Area



# ATTACHMENT C

## WATERSHED ASSESSMENT

### PROPOSED BEAR BOTTOM LIMITED ACCESS TIMBER SALE

#### Sections 22, 26, 27, 28 and 36, T10S, R15W

GARY FRANK, Resource Mgmt Section Supervisor, FMB

ELIZABETH SPEAKER, Watershed Intern, FMB

December 14, 2004

#### AFFECTED WATERSHEDS – EXISTING CONDITIONS

Portions of the Bear Bottom LA TS are located within the watershed areas of Frying Pan Creek (Section 22), Trapper Creek (Sections 27 & 28) and Bear Creek (Sections 26 & 36) (See attached map - Watershed Analysis Area). Trapper Creek is a perennial Class I tributary to Frying Pan Creek. Both Bear Creek and Frying Pan Creek are perennial Class I tributaries to Trail Creek. Trail Creek is a tributary to Horse Prairie Creek within the Beaverhead River Basin.

The Missouri River drainage, including tributaries to the Beaverhead River, is classified as B-1 in the Montana Surface Water Quality Standards. The B-1 classification is for multiple use waters suitable for domestic use after conventional treatment, growth and propagation of cold-water fisheries, associated aquatic life and wildlife, agricultural, and industrial uses. Among other criteria for B-1 waters, no increases are allowed above naturally occurring concentrations of sediment, which will prove detrimental to fish or wildlife. Naturally occurring includes conditions or materials present from runoff on developed land where all reasonable land, soil, and water conservation practices have been applied. Reasonable practices include methods, measures, or practices that protect present and reasonably anticipated beneficial uses. 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.

Downstream beneficial uses in the affected watersheds include include: domestic, irrigation, livestock watering, wildlife, and cold-water fisheries. There are several water rights for domestic use of surface water from Trail Creek at a location approximately 8 miles downstream (Section 9, R10S, T14W) of the proposed timber harvest activities. Frying Pan Creek, Trapper Creek, and Bear Creek have not been identified on the State's 303(d) list of impaired bodies of water in need of TMDL development.

#### Existing Conditions - Frying Pan Creek

The proposed harvest units within Section 22 of the project area lie entirely within the watershed of Frying Pan Creek. The main stem of Frying Pan Creek is a perennial third order tributary to Trail Creek. Frying Pan Creek drains a watershed area of approximately 4,366 acres.

Based on aerial photo analysis, there appears to be a low level of road density, as well as past timber harvests, within the Frying Pan watershed. The estimated harvested area in this watershed is 103 acres, or 2% of the total watershed. Of the total acres that are forested in this watershed, 4% of the total volume has been harvested. The total estimated road miles in the Frying Pan watershed are 13.6 miles. These levels are well below the levels of forest crown removal that are normally associated with increased water yields. Therefore, it is unlikely that there are measurable effects on stream flow regimes (water yield, magnitude, and duration of peak flows) due to vegetation manipulation in the Frying Pan Creek drainage.

Several segments of existing road within the watershed do not currently meet BMP requirements, and they are likely contributing low levels of direct sediment to Frying Pan Creek. Several stream crossing sites were evaluated on FS #3907 (and an unnumbered spur road) and were determined to have inadequate road surface drainage with road surface runoff concentrated at the crossing sites. Current levels of erosion are low at both sites, but risk of chronic low levels of sediment delivery are apparent. The culvert located on the South Fork of Frying Pan also has inadequate length. This resulted by an over-steepened road fill, which increases subsequent risk of erosion and sediment delivery at this site.

Existing impacts due to livestock grazing are apparent throughout the lower portions of the Frying Pan Creek watershed. Current and historic grazing practices have led to widespread levels of bank trampling, increased stream channel instability, and increased levels of in-stream sedimentation.

#### Existing Conditions -Trapper Creek

The proposed harvest units within Sections 27 and 28 of the project area lie entirely within the watershed of Trapper Creek. Trapper Creek is a perennial second order tributary to Frying Pan Creek. Trapper Creek drains a watershed area of approximately 3,411 acres.

Based on aerial photo analysis, it appears that road densities and the level of past timber harvest within the Trapper Creek watershed are low. Existing levels of timber harvest represent approximately 2% of the total watershed area and only 4% of the forested area within the watershed. The approximate number of road miles in this watershed is 5.5 miles. These levels are well below the levels of forest crown removal that are normally associated with increased water yields. Therefore, it is unlikely that there are measurable effects on stream flow regimes (water yield, magnitude, and duration of peak flows) due to vegetation manipulation in the Trapper Creek drainage.

Several segments of existing low standard road within the watershed do not currently meet BMP requirements and are likely contributing low levels of direct sediment to Trapper Creek. These include an unimproved ford stream crossing and several sustained steep road grades with inadequate road surface drainage (both are located on BLM ownership in section 34), and a culvert crossing of a small unnamed Class 2 tributary to Trapper Creek that is in extremely poor condition (located on DNRC ownership in section 27). Current levels of erosion are low at the ford site and high on both of the steep road grades. The 12" culvert crossing of the unnamed tributary is undersized and almost completely plugged due to high levels of livestock trampling and subsequent sediment deposition around the inlet. The road fill at the culvert site has poor bearing capacity and is seasonally saturated. Unregulated use of this crossing site has caused high levels of rutting and erosion.

Current and historic grazing practices throughout the lower portions of the watershed have led to widespread levels of bank trampling, increased stream channel instability, and increased levels of in-stream sedimentation. The levels of impact occurring on the unnamed tributary located in Section 27 are severe.

#### Existing Conditions – Bear Creek

The proposed harvest units within Sections 26 and 36 of the project area lie entirely within the watershed of Bear Creek. The main stem of Bear Creek is a perennial fourth order tributary to Trail Creek. Bear Creek drains a watershed area of approximately 13,134 acres.

Based on aerial photo analysis, it appears that road densities and the levels of past timber harvest within the Bear Creek watershed are low. Existing levels of timber harvest represent approximately 2% of the total watershed area and only 4% of the forested area within the watershed. The total number of road miles in this watershed is approximately 18 miles. These levels are well below the levels of forest crown removal that are normally associated with increased water yields. Therefore, it is unlikely that there are measurable effects on stream flow regimes (water yield, magnitude, and duration of peak flows) due to forest management activities within the Bear Creek drainage.

The existing road system that has been planned for use, which is one of the primary access and haul routes for the proposed timber sale, is located in the Bear Creek Watershed. This road system is located on private ranch land and was not evaluated during my field review with the exception of an existing ford crossing of Bear Creek located in Section 25. The existing ford crossing has caused short segments of channel widening and aggradations on Bear Creek.

Current and historic grazing practices throughout the watershed have led to widespread bank trampling, channel widening, and channel instability in Bear Creek. Impacted areas include a small perennial class 1 tributary to Bear Creek located in Section 36. Downstream sediment delivery to Bear Creek is likely during high-flow runoff events in this tributary. These grazing related effects have likely caused low to moderate direct and indirect impacts to water quality and temperature regimes in Bear Creek.

The proposed harvest area in Section 26 contains a small isolated reach of a perennial Class 2 stream channel. The spring feed stream is discontinuous with flows either going subsurface or discharging into a down slope ephemeral draw that does not exhibit evidence of a stream channel or recent scour due to concentrated runoff. However, there is potential for direct delivery concentrated surface flow to the floodplain or the main stem of Bear Creek during peak runoff or flood events.

## ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTIONS

### Frying Pan Creek

The proposed activities in Section 22 would result in approximately 23 acres of timber harvest and approximately 518' of new road construction within the Frying Pan Creek watershed.

Harvest activities would occur on gentle to moderate slopes ranging from 5 to 30%. No streams are located within the immediate vicinity of the proposed harvest units. Timber harvest and road activities would implement all applicable forestry BMP's to avoid or minimize the risk of soil erosion and potential for sediment delivery. No direct, indirect, or cumulative impacts to water quality in Frying Pan Creek due to accelerated rates of sediment delivery are expected to result from the proposed actions. Since no streams or streamside riparian timber harvest are proposed in this watershed, no direct or indirect effects to stream temperatures or channel form and function is anticipated.

The proposed levels of timber harvest in Section 22 are not expected to contribute to adverse cumulative watershed impacts due to modified stream flow regimes. The existing and proposed levels of harvest are well below the levels normally associated with detrimental increases in water yield, peak flow, or duration of peak flows. Subsequently, no direct, indirect, or cumulative impacts to water quality or beneficial uses are anticipated to result from bank destabilization and in-stream sedimentation. No direct, indirect, or cumulative impacts to water quality or beneficial uses in Trapper Creek are expected to result from the proposed actions.

### Trapper Creek

The proposed activities in Section 27 and 28 would result in approximately 37 acres of timber harvest and approximately 490' of existing road reconstruction in the West ½ of Section 27, and 430' of new road construction in the East ½ of Section 27. The proposed harvest activities would occur on gentle to moderate slopes ranging from 5 to 30%. Timber harvest and road activities would incorporate all applicable forestry BMP's designed to avoid or minimize the risk of soil erosion and potential sediment delivery.

Timber harvest and road use planned immediately adjacent to the discontinuous perennial Class 2 tributary to Trapper Creek would comply with the SMZ law and all applicable Watershed Forest Management Rules. Improvements would be made to existing road segments located in close

proximity to this stream. These improvements are expected to reduce the risk of erosion and sediment delivery from those occurring under existing conditions. Additional improvements to the existing crossing site of this stream are also expected to reduce current risk of erosion and subsequent sediment delivery.

Except for limited potential timber harvest adjacent to the disconnected perennial Class 2 stream, no timber harvests are planned within the streamside / riparian management zones. Therefore, no direct or indirect effects to stream temperatures or channel form and function is anticipated.

The proposed levels of timber harvest in Section 27 and 28 are not expected to contribute to adverse cumulative watershed impacts due to modified stream flow regimes. The existing and proposed levels of harvest in Trapper Creek are well below those levels normally associated with detrimental increases in water yield, peak flow, or duration of peak flows. Subsequently, no direct, indirect, or cumulative impacts to water quality or beneficial uses are anticipated to result from bank destabilization and in-stream sedimentation. Furthermore, no direct, indirect, or cumulative impacts to water quality or beneficial uses in Trapper Creek are expected to result from the proposed actions.

### Bear Creek

The proposed activities in Section 26 and 36 would result in approximately 75 acres of timber harvest. The proposed harvest activities would occur on gentle to moderate slopes ranging from 5 to 40%. The sale access and haul route would utilize an existing road system located on private ranchland. Approximately 340' of new road construction would occur on State land in Section 26. All timber harvested in Section 26 and 36 would be skidded to a landing located at the end of this road. Timber harvest and road activities would incorporate all applicable forestry BMP's designed to avoid or minimize the risk of soil erosion and potential sediment delivery.

A new bridge located just downstream of the existing ford site will be utilized for sale access and hauling across Bear Creek. The existing ford crossing of Bear Creek will not be utilized for the proposed timber sale. The use of a new bridge crossing on Bear Creek will reduce the risk of sediment delivery posed by the existing ford crossing.

No timber harvests are proposed within the SMZ / RMZ of Bear Creek or any tributaries with direct surface connectivity to Bear Creek. Therefore, no anticipated direct or indirect effects to stream temperatures, large woody debris recruitment or channel form and function in Bear Creek are expected.

The proposed harvest in Section 26 includes plans to skid logs harvested from Unit 1 across a discontinuous, perennial class II tributary to Bear Creek. This proposed activity would require a site-specific alternative practice as specified under SMZ Rules (ARM 36.11.304(6a) and 36.11.310). The alternative practice will be requested to eliminate the need to construct a segment of new road across a steep slope located immediately adjacent to the Bear Creek SMZ. Construction of this new road segment would likely result in delivery of side-cast road fill material into the SMZ and adjacent wetlands delineated for Bear Creek. These practices are prohibited under SMZ Rules (36.11.306(2) and 36.11.308).

The proposed alternative to building this road segment would be to utilize a designated skid trail crossing of a small spring fed Class II stream channel. The stream is a discontinuous tributary to Bear Creek with a bank-full width of approximately 18 inches. There is no direct surface delivery from this stream to Bear Creek itself. The stream disappears with all concentrated surface flow going subsurface just a short distance down slope of the proposed crossing site. There is no discernable stream channel, that is no evidence, recent scour, or defined banks, in the ephemeral draw feature that is located down slope of the proposed crossing site.

The proposed alternative practice would meet the intent of the SMZ Law and Rules by conserving the integrity of the stream channel and stream banks and by preventing excessive rutting of the soil. The proposed skid trail crossing would be conducted in winter under frozen and/or snow covered conditions. The stream channel and stream banks at the crossing site would be protected with a mat of slash and tree boles. The crossing would only be utilized for the skidding of approximately 120 MBF from 2.1 acres. It is estimated that this would require about 200-300 passes or crossings by skidding equipment. Impacts to the stream channel, stream banks, and SMZ are expected to be minimal due to frozen and/or snow covered conditions anticipated at this high elevation site. Any soil or stream channel disturbance that occurs is expected to be localized and temporary. All disturbed areas would be rehabilitated and seeded. No downstream impacts to Bear Creek or downstream beneficial uses are anticipated due to the subsurface and discontinuous flow regime immediately downstream of the alternative practice-crossing site.

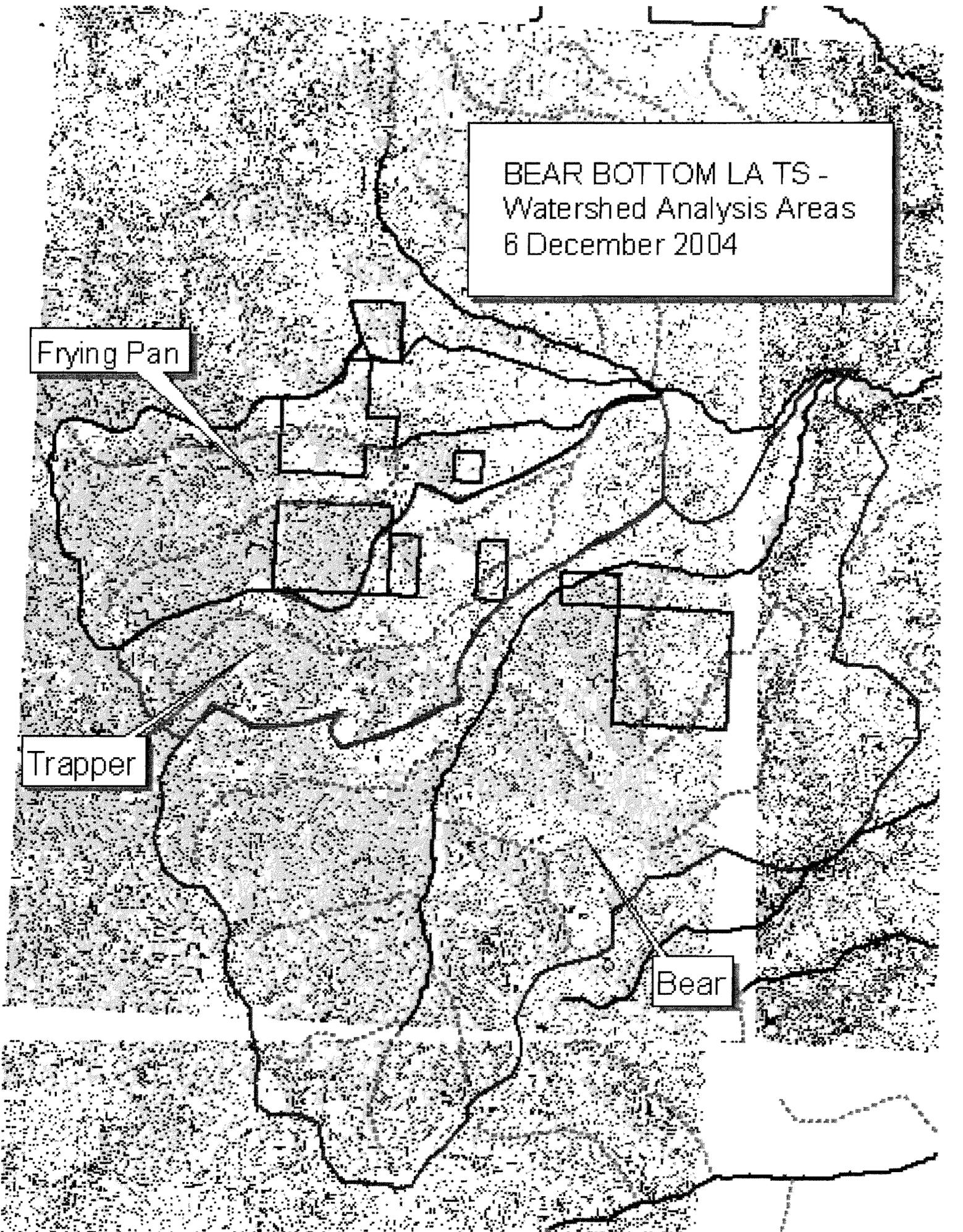
The proposed levels of timber harvest in Section 26 and 36 are not expected to contribute to adverse cumulative watershed impacts due to modified stream flow regimes. The existing and proposed levels of harvest in Bear Creek are well below those levels normally associated with detrimental increases in water yield, peak flow, or duration of peak flows. Subsequently, no direct, indirect, or cumulative impacts to water quality or beneficial uses are anticipated to result from bank destabilization and in-stream sedimentation. No direct, indirect, or cumulative impacts to water quality or beneficial uses in Bear Creek are expected to result from the proposed actions.

BEAR BOTTOM LA TS -  
Watershed Analysis Areas  
6 December 2004

Frying Pan

Trapper

Bear



# ATTACHMENT D

## SOIL & GEOLOGY ASSESSMENT

### PROPOSED BEAR BOTTOM LIMITED ACCESS TIMBER SALE Parts of Sections E ¼ 22, SW ¼ 26, 27, SE ¼ 28, W ½ 36 T10S, R15W

JEFF COLLINS, Soil Scientist

December 8, 2004

#### **Existing Conditions- Geology & Soils**

The Bear Bottom Project area is located on alpine glacial deposits and alluvium derived from primarily volcanic bedrock and some belt argillites. The Challis volcanics are rhyolite flows that are fairly weakly fractured. Bedrock is common at shallow depth, mainly along ridges and convex slopes. The grey, tan and pink porous rock can be ripped, but may bring up rough boulders that make the roads difficult to grade, slow and bumpy. Several passes across road surface with dozers can help break down the larger rock. No especially unique or unstable geology/soils occur in the proposed harvest areas. Localized tertiary age, landslide deposits occur in the area, but are not located within proposed harvest units. There are Thorium mineral deposits and exploratory surface excavations in the area.

Predominant forest soils on convex slopes of 20 to 45%, and ridges in area of proposed units are shallow to moderate depth, cobbly loams and cobbly clay loams. Topsoils are 4-6 inches cobbly loams and sandy loams with ½ to 1 inch of duff. These soils are well drained and droughty. Cold climate and moisture availability limit plant growth potential. Erosion potential for disturbed soils is moderate, except for steeper sideslopes. Soils have a relatively long dry or frozen season of use when operability should not cause adverse effects. Slopes up to 45% are well suited to ground based harvest methods. Primary concern for soil productivity is maintaining the shallow topsoils, by minimizing displacement and retaining a portion of woody debris for long term nutrient cycling. Steep road cut-slopes are subject to sloughing and can be slow to stabilize by revegetation.

Concave terrain, swales and draw terrains of 15-35% slope, have deeper soils with higher clay contents and better site quality. These finer textured cobbly clay loam soils were noted adjacent to streams in the SE ¼ Section 26, SW ¼ Section 27, and the NW ¼ Section 36. Timber productivity is estimated as moderate and cold climate limits tree growth. Erosion potential for disturbed soils is moderate. Erosion can be controlled by installing standard drainage features and grass seeding of trails where needed. Low soil bearing strength and compaction/rutting hazard is a concern in spring/early summer, when soils are wet.

#### **Harvest Effects of the Proposed Action**

Primary soil concerns are potential rutting, disturbance and erosion associated with harvest operations and site preparation. To control erosion, maintain soil productivity, and promote conifer regeneration, BMP's and site-specific mitigation measures would be implemented to minimize the area and degree of soil effects associated with harvest operations. Mitigations include skid trail planning, limiting season of use to dry or frozen conditions and installing drainage and woody debris on trails to control erosion. Ground effects of harvest operations will be closely monitored. Use moderate erosion rating for SMZ delineation along streams.

Sections 26 and 36 skidding options are limited by steep terrain. We field reviewed the harvest areas and located a main skid trail route on stable ground with the most favorable slopes. The proposed skid trail location would excavate a trail segment down to a temporary stream crossing into Unit 1 (see hydro report). Soils at crossing site are soft clay loams and will require winter skid or drifting in better fill material for crossing from upslope. Standard drainage features and grass seeding would be implemented to control erosion. The material is relatively stable, but would be slow to revegetate and may require follow-

up seeding after use.

**Cumulative Effects:**

Cumulative effects could occur from repeated entries into a harvest area. Most proposed harvest units have not been previously entered. Some past harvest by selective logging has left minimal effect on soils. Skidding and slash disposal mitigation measures will limit the area impacted and therefore presents low risk of cumulative effects.

**Roads**

Existing road access is mainly from 2 track pickup roads across range and forested sites with minimal road drainage. Some existing road segments in sections are too steep for log truck traffic and require an alternate access route. Sun Mountain Logging has recently constructed/reconstructed an alternate access road system across the Bar TT ranch, using suitable segments of existing roads and constructing new road to relocate segments that are too steep do not meet BMP's. The alternate access road locations would avoid steep grades and use suitable segments of the existing roads that can be adequately drained. Segments of existing access roads with inadequate drainage would be improved to reduce erosion and provide adequate drainage to meet BMP's.

The proposed access route includes two recent bridges to avoid unimproved crossings and use of an old ford. Construction of all stream crossings will implement mitigation measures to control sediment (refer to mitigations in hydro/fish memos). Proposed new roads on State would be very limited in extent and of low standard, with shallow cut and fill-slopes and temporary in design. After completion of harvest, temporary roads will be closed with long-term drainage features installed and reseeded with site-adapted grass. Where feasible, slash road segments at forested sites to limit unauthorized use.

**Recommended harvest mitigation measures for the proposed project:**

Implement Forestry BMP's as the minimum standard for all operations with the proposed timber sale.

Ground-based logging systems (tractor, skidders, and mechanical harvesters) would be limited to slopes less than 45% to prevent excessive soil impacts. Some steeper slopes may be winched or mechanically harvested and decked on more moderate slopes for skidding. The contractor and sale administrator would agree to a skidding plan prior to equipment operations.

Use minimum SMZ width based on moderate erosion as required by law and as located in the field. No high erosion risk soil types were noted in the proposed harvest units. Protect all draws, springs and wet areas with marked equipment restriction zones (ERZ) as needed.

Limit equipment operations to periods when soils are relatively dry, (less than 20%), frozen, or snow covered, to minimize soil compaction and rutting, and maintain drainage features. Check soil moisture conditions prior to equipment start-up.

Down Woody Material: Harvest operations should retain five to ten tons per acre of woody material larger than 3 inches diameter to be left scattered throughout the sale units. Slash should be left in the harvest units where feasible, and distributed on skid trails upon completion of use for erosion control and nutrient cycling.

**Recommended road mitigation measures:**

Install proper and adequate road drainage such as drain-dips to control erosion from roads. Install and maintain all road surface drainage concurrent with harvest activities, reconstruction, construction and reconditioning. Provide effective sediment filtration along drainage features located in areas with inadequate buffer capacity to channel.

On all sites reviewed, slopes are relatively stable. Slope stability can be maintained by constructing cut slopes at stable angles of 1:1 (run/rise) for common material 3/4:1 for talus or as will stand for bedrock.

Leave all temporary or abandoned roads in a condition that will provide adequate drainage and will not require future maintenance. Install water bars at regular intervals and breaks in grade to insure effective surface drainage. Where it is available, scatter slash across the road surface. Complete seeding of site adapted grasses.

An existing road segment in the SW1/4 Section 27 is a potential sediment source, located adjacent to a stream (refer to hydro memo). Where the road is nearest the stream, a short segment of slash filter should be installed to trap any road sediment. Following harvest use, the road would be stabilized and closed, which would be an improvement over current conditions. The existing culvert on the access road should be replaced and the fill depth increased to insure drainage away from the culvert. Low bearing strength at crossing will require blading in suitable fill from adjacent area.

### **Weed Management**

No noxious weeds were observed. The following prevention measures would be implemented to limit the possible introduction of noxious weeds into the project area.

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

All newly disturbed soils on road cuts and fills will be promptly reseeded to site adapted grasses to reduce weed encroachment and stabilize roads from erosion.

DNRC would review the proposed harvest area for weeds following the sale. If any weeds were identified, a weed management plan would be developed and implemented with the lessee.

### REFERENCES

Geach, Robert, D. 1966 *Thorium deposits of the Lemhi Pass District, Beaverhead County, Montana*, Special Publication 41, Montana Bureau of Mines and Geology.

### RECOMMENDED SEED MIX for BROADCAST APPLICATION

"Revenue or Primar" Slender Wheatgrass		6#
"Durar or Whitmar" hard Fescue		4#
Pubescent Wheatgrass		5#
"Bromar" Mountain Brome		3#
"Rueben's" Canada Bluegrass		3#
TOTAL	LBS./ACRE	21#
	PURE LIVE SEED	

**Recommended Checklist format for Soils and Noxious Weeds**

II IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES N = Not present or No Impact will occur. Y = Impacts may occur (explain below)
<p>4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactable 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?</p>	<p>[Y] Geology is fractured Challis Volcanic bedrock at shallow to moderate depth, which are suitable for construction. No unstable slopes or unique geology features are present. Typical soils on forest sites are shallow to mod. Deep, very cobbly loams and cobbly clay loams. Erosion risk is moderate and can be controlled with standard drainage features and grass seeding temp. roads. Planned ground skidding operations should have moderate to low direct, in-direct and cumulative impacts based on the implementing BMP's and mitigation measures. Mitigations include skid trails planning, slope restrictions and prompt revegetation of disturbed sites on roads to protect soil resources.</p>
<p>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?</p>	<p>[N] Vegetation Analysis, Stand conditions, Old growth analysis etc.....</p> <p><b>WEEDS PORTION</b></p> <p>No noxious weeds infestations were noted in the project area. To prevent introduction of new weeds, DNRC will require that off-road equipment will be cleaned and inspected prior to entry into harvest areas, and grass seeding of new disturbed areas along roads. There is low risk of in-direct or cumulative impacts from noxious weeds.</p>

**ATTACHMENT E**  
**FISHERIES ASSESSMENT**  
**BEAR BOTTOM LIMITED ACCESS TIMBER SALE (LA TS)**  
**Sections 22, 26, 27, 28 and 36, T10S, R15W**

JIM BOWER, Fisheries Program Specialist

December 8, 2004

The following memo is the fisheries assessment for Bear Bottom LA TS and is a supplemental to hydrology and soils assessments for the same project. Maps 1 and 2 at the end of this memo display the project area and are referenced throughout this memo. Due to the relatively small scope of the proposed activities and associated distances from sensitive fisheries, this assessment is primarily qualitative in nature.

Project

The Bear Bottom LA TS project area involves proposed timber harvest of ~23 acres within the Frying Pan Creek watershed (Section 22), ~37 acres within the Trapper Creek watershed (Sections 27 and 28), and ~75 acres within the Bear Creek watershed (Sections 26 and 36). All three watersheds are known to provide habitat for westslope cutthroat trout (*Oncorhynchus clarki lewisi*) (WCT), a species listed as a Class-A Montana Animal Species of Concern. DNRC has also identified WCT as a sensitive species (ARM 36.11.436.)

Fisheries related issues and concerns raised during scoping include: the proximity of proposed harvest units to stream corridors, SMZ and other riparian harvest, additional new roads within the different watersheds, cumulative effects associated with past timber harvest and road construction, sedimentation, channel stability, and increases in stream temperature.

Existing Conditions – Frying Pan Creek

The proposed harvest units within Section 22 of project area lie entirely within the watershed of the mainstem Frying Pan Creek. Fish species native to this creek include WCT and mottled sculpin (*Cottus bairdi*). Genetic analysis by Montana Fish, Wildlife and Parks indicates that WCT populations within this watershed are approximately 94% pure (MFISH).

Road/stream crossing structures (corrugated metal pipes (CMP)) on public access roads (FS Rd 3907 and spur from FS Rd 3907) upstream of the project area were observed on both the North Fork and South Fork Frying Pan Creeks during a field review of the project area on 10/6/04. Both structures appear to provide limited connectivity to most adult native fish during most flows. Several additional road/stream crossings on federal lands exist further upstream on both creeks, but the status of connectivity at these crossings is unknown. There is likely a low existing direct and indirect impact to fisheries connectivity in the Frying Pan Creek watershed due to road/stream crossing structures.

Current and historic grazing throughout the watershed has likely led to some level of widespread bank trampling, in-stream sedimentation, channel widening, and associated adverse impacts to stream temperature regimes. These grazing associated factors likely constitute a low to moderate existing direct and indirect impact to fisheries in the Frying Pan Creek watershed.

The Hydrology Assessment for Bear Bottom LA TS indicates that there are negligible existing direct and indirect effects due to modifications of the flow regime component of fisheries habitat within this watershed.

Based on aerial photo analysis very low levels of past riparian timber harvest may have occurred in the watershed. However, this likely constitutes a negligible direct and indirect effect to large woody debris (LWD) recruitment, stream temperatures, and other associated fisheries habitat characteristics. Due to the moderate erosion risks of some area soil types (see Soil Assessment for Bear Bottom LA TS)

sedimentation related to past upland and riparian timber harvest has likely had a very low to low direct and indirect impact to fisheries in this watershed.

#### Existing Conditions – Trapper Creek

The proposed harvest units within Sections 27 and 28 of project area lie entirely within the watershed of the Trapper Creek. Fish species native to this creek include WCT and MS. Eastern brook trout (*Salvelinus fontinalis*) (EBT) is a nonnative species that can also be found in Trapper Creek. Genetic analysis by Montana Fish, Wildlife and Parks indicates that WCT populations within this watershed are approximately 94% pure (MFISH).

Road/stream crossing structures were not observed on Trapper Creek during a field review of the project area on 10/6/04. Several road/stream crossings exist on this creek upstream of the project area, but the status of connectivity at these crossings is unknown. Nonetheless, there is likely a low existing direct and indirect impact to fisheries connectivity in the Trapper Creek watershed due to road/stream crossing structures.

Current and historic grazing throughout the watershed has led to some level of widespread bank trampling, in-stream sedimentation, channel widening, and associated adverse impacts to stream temperature regimes. These grazing associated factors likely constitute a low to moderate existing direct and indirect impact to fisheries in the Trapper Creek.

There is a disconnected, perennial Class 2 stream to Trapper Creek that originates in Section 27 within the project area (see Map#1). Based on direct field observation, this tributary to Trapper Creek is experiencing severe bank trampling, in-stream sedimentation, channel widening, and adverse impacts to stream temperature regimes related to overuse by cattle. The bankfull width of this stream prior to grazing impacts was likely 1-2', and the current bankfull width ranges from 4-15'. Just downstream of proposed unit 28/27-1 (see Map #1) at a road/stream crossing of this tributary and a public access road, an (undersized) 12" CMP is contributing to erosion of the adjacent road prism and, consequently, in-stream sedimentation. However, as this stream (1) exhibits low energies, (2) is seasonally disconnected from Trapper Creek, and (3) likely does not contribute a detectable, adverse amount of in-stream sediment to Trapper Creek, the existing conditions of this stream are likely a low direct and indirect impact to fisheries in this watershed.

The Hydrology Assessment for Bear Bottom LA TS indicates that there are negligible existing direct and indirect effects due to modifications of the flow regime component of fisheries habitat within this watershed.

Based on aerial photo analysis very low levels of past riparian timber harvest may have occurred in the watershed. However, this likely constitutes a negligible direct and indirect effect to LWD recruitment, stream temperatures, and other associated fisheries habitat characteristics. Due to the moderate erosion risks of some area soil types (see Soil Assessment for Bear Bottom LA TS) sedimentation related to past upland and riparian timber harvest has likely had a very low to low direct and indirect impact to fisheries in this watershed.

#### Existing Conditions – Bear Creek

The proposed harvest units within Sections 26 and 36 of project area lie entirely within the watershed of the Bear Creek. Fish species native to this creek include WCT and MS. EBT is a nonnative species that can also be found in Bear Creek. Genetic analysis by Montana Fish, Wildlife and Parks indicates that WCT populations within this watershed are approximately 99% pure (MFISH).

Within the project area, Bear Creek exhibits characteristics of both 'C' and 'E' Rosgen channel morphological types. Stream gradients range from 0.5% to 3.0%, and the primary stream habitat classes are pool/riffle intermixed with areas of glide associated with beaver dam complexes.

Substrates are generally: 20% silts, 10% coarse sand (0.5-2.0 mm), 20% fine gravel (2-8 mm), 30% gravel (8-16 mm), 10% coarse gravel (16-64 mm), and 10% cobble (64-256 mm).

Road/stream crossing structures were not observed on Bear Creek during a field review of the project area on 10/6/04. An existing ford crossing of the creek is near the project area and identified on Map #2. The existing ford crossing has caused the Bear Creek channel to widen considerably, which has created a small but inconsequential zone of sediment aggradation. The existing ford does not inhibit adult or juvenile fish passage during most flows. At least one other upstream road/stream crossing on federal lands exists on this creek, but the status of connectivity at the crossing(s) is unknown. Nonetheless, there is likely a low existing direct and indirect impact to fisheries connectivity in the Bear Creek watershed due the potential road/stream crossing structure(s).

Current and historic grazing throughout the watershed has led to some level of widespread bank trampling, in-stream sedimentation, channel widening, and associated adverse impacts to stream temperature regimes. These grazing associated factors likely constitute a low to moderate existing direct and indirect impact to fisheries in the Bear Creek.

There is a disconnected, perennial Class 2 stream to Bear Creek that flows north through Section 26 within the project area. Based on direct field observation, this stable stream exhibits very low energies, is disconnected from Bear Creek year-round, and does not have any existing direct and indirect impacts to downstream fisheries.

There is a perennial Class 1 stream to Bear Creek that flows north through Section 36 within the project area. Based on direct field observation, this tributary to Bear Creek is experiencing severe bank trampling, in-stream sedimentation, channel widening, and adverse impacts to stream temperature regimes related to overuse by cattle. During annual peak flows this stream likely contributes a detectable, adverse amount of in-stream sediment to Bear Creek, and this existing condition likely constitutes a low to moderate direct and indirect impact to fisheries in Bear Creek.

The Hydrology Assessment for Bear Bottom LA TS indicates that there are negligible existing direct and indirect effects due to modifications of the flow regime component of fisheries habitat within this watershed.

Based on aerial photo analysis very low levels of past riparian timber harvest may have occurred in the watershed. However, this likely constitutes a negligible direct and indirect effect to LWD recruitment, stream temperatures, and other associated fisheries habitat characteristics. Due to the moderate erosion risks of some area soil types (see Soil Assessment for Bear Bottom LA TS) sedimentation related to past upland and riparian timber harvest has likely had a very low to low direct and indirect impact to fisheries in this watershed.

#### Environmental Effects of the Proposed Actions – Frying Pan Creek

The Bear Bottom LA TS project area involves proposed timber harvest of ~23 acres within the Frying Pan Creek watershed (Section 22). Timber harvest activities within Section 22 would take place on sideslopes ranging from 1% to 27%, and approximately 520' of new road would be constructed in the section. Timber harvest related activities would take place at least 550' from the mainstem Frying Pan Creek. Considering these variables and the projected environmental effects from the Soil Assessment for Bear Bottom LA TS, there are not expected to be any direct and indirect effects to fisheries in the Frying Pan Creek watershed through upland sedimentation beyond those described in the existing conditions.

Any modifications to flow regimes within the watershed as a result of the proposed activities are expected to be negligible (see Hydrology Assessment for Bear Bottom LA TS). Consequently, there are not expected to be any direct and indirect effects to fisheries in Frying Pan Creek through bank destabilization and in-stream sedimentation beyond those described in the existing conditions.

No riparian timber harvest is proposed in this watershed, so there is not expected to be any direct and indirect effects to fisheries in Frying Pan Creek through loss of LWD recruitment or increased maximum annual stream temperatures beyond those described in the existing conditions.

*[Cumulative effects are the collective impacts on the human environment of a proposed action when considered in conjunction with other past, present, and future actions related to the proposed action by location or generic type (MCA 75-1-220). Future related actions are state-sponsored actions that are under concurrent consideration by any State agency through environmental analysis or permit processing procedures. In this memo, a low risk of cumulative effects would imply there is a low likelihood that an adverse cumulative effect could be foreseen and detected. A high risk of cumulative effects would imply there is a high likelihood that an adverse, unacceptable cumulative effect could be foreseen and detected.]*

Concurrent timber harvest on private land between proposed unit '22-1' and Frying Pan Creek is expected to occur on slopes up to 31% and involve approximately 10 acres of harvest. The concurrent timber harvest on private land is expected to occur within 160' of Frying Pan Creek and not include any riparian harvest. The concurrent timber harvest also involves the construction of approximately 3,000' of new road on private land. Existing levels of grazing and recreation throughout the project area are expected to continue in the future. Considering the scope and expected direct and indirect effects of the proposed project in conjunction with past forest management activities, other present related actions, and expected concurrent timber harvest activities on private land, a low risk of cumulative effects to fisheries is anticipated in the Frying Pan Creek watershed.

#### Environmental Effects of the Proposed Actions – Trapper Creek

The Bear Bottom LA TS project area involves proposed timber harvest of ~37 acres within the Trapper Creek watershed (Sections 27 and 28). Timber harvest activities within Sections 27 (west half) and 28 would take place on sideslopes ranging from 7% to 29%, and timber harvest activities within Section 27 (east half) would take place on sideslopes ranging from 12% to 30%. Within the watershed, approximately 490' of existing road would be reconstructed (west half Section 27) and approximately 430' new road would be constructed (east half Section 27). Timber harvest would not take place within 430' of Trapper Creek. Any timber harvest adjacent to the disconnected, perennial Class 2 stream to Trapper Creek that originates in Section 27 would comply with SMZ laws. Additionally, the road/stream crossing site of the disconnected, perennial Class 2 stream would also be brought up to BMP's. Considering these variables and the projected environmental effects from the Soil Assessment for Bear Bottom LA TS, there are not expected to be any direct and indirect effects to fisheries in Trapper Creek through upland sedimentation beyond those described in the existing conditions.

Any modifications to flow regimes within the watershed as a result of the proposed activities are expected to be negligible (see Hydrology Assessment for Bear Bottom LA TS). Consequently, there are not expected to be any direct and indirect effects to fisheries in Trapper Creek through bank destabilization and in-stream sedimentation beyond those described in the existing conditions.

Except for limited, potential timber harvest adjacent to the disconnected, perennial Class 2 stream, no riparian timber harvest is proposed in this watershed, so there is not expected to be any direct and indirect effects to fisheries in Trapper Creek through loss of LWD recruitment or increased maximum annual stream temperatures beyond those described in the existing conditions.

Concurrent timber harvest on private land within the Trapper Creek watershed is expected to occur on slopes up to 42% and involve approximately 52 acres of harvest. The concurrent timber harvest on private land is expected to occur adjacent to approximately 1,200' of Trapper Creek and may include riparian harvest within the Streamside Management Zone (MCA 36-11-301). The concurrent timber harvest activities on private land also involves the construction of approximately 12,150' of new road, a new road/stream crossing installation on Trapper Creek, and a new road/stream crossing installation of the disconnected, perennial Class 2 stream. The projected level of fisheries connectivity provided by a

new road/stream crossing installation on Trapper Creek is unknown. Existing levels of grazing and recreation throughout the project area are expected to continue in the future. Considering the scope and expected direct and indirect effects of the proposed project in conjunction with past forest management activities, other present related actions, and expected concurrent timber harvest activities on private land, a low to moderate risk of cumulative effects to fisheries is anticipated in the Trapper Creek watershed.

#### Environmental Effects of the Proposed Actions – Bear Creek

The Bear Bottom LA TS project area involves proposed timber harvest of ~75 acres within the Bear Creek watershed (Sections 26 and 36). Timber harvest activities within Sections 26 and 36 would take place on sideslopes ranging from 7% to 41%. Approximately 340' of new road would be constructed in Section 26. An existing ford crossing (on private land) of the perennial Class 1 stream to Bear Creek that flows north through Section 36 is expected to be utilized during frozen or snow covered conditions, and the ford crossing will be armored with native materials of sufficient bearing strength to reduce in-stream sedimentation. Timber harvest related activities would not take place within 145' of Bear Creek, which is outside of the range of site potential tree heights in adjacent riparian areas. Timber harvest adjacent to (1) the disconnected, perennial Class 2 stream to Bear Creek that flows north through Section 26 and (2) the perennial Class 1 stream to Bear Creek that flows north through Section 36 would comply with SMZ laws. Additionally, the proposed skid trail crossing site of the disconnected, perennial Class 2 stream would only be utilized after sufficient armoring and other safeguards are taken to minimize potential in-stream sedimentation. Through use of the ford crossing of the perennial Class 1 stream to Bear Creek, there is a low risk of direct and indirect impacts to fisheries in Bear Creek through in-stream sedimentation. Considering all other variables described above and the projected environmental effects from the Soil Assessment for Bear Bottom LA TS, there are not expected to be any direct and indirect effects to fisheries in Bear Creek through upland sedimentation beyond those described in the existing conditions.

Any modifications to flow regimes within the watershed as a result of the proposed activities are expected to be negligible (see Hydrology Assessment for Bear Bottom LA TS). Consequently, in respect to impacts from modifications to flow regimes there are not expected to be any direct and indirect effects to fisheries in Bear Creek through bank destabilization and in-stream sedimentation beyond those described in the existing conditions.

Except for potential timber harvest adjacent to the disconnected, perennial Class 2 stream and the perennial Class 1 stream, no riparian timber harvest is proposed in this watershed. There is not expected to be any direct and indirect effects to fisheries in Bear Creek through loss of LWD recruitment or increased maximum annual stream temperatures beyond those described in the existing conditions.

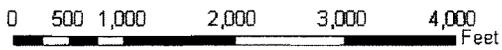
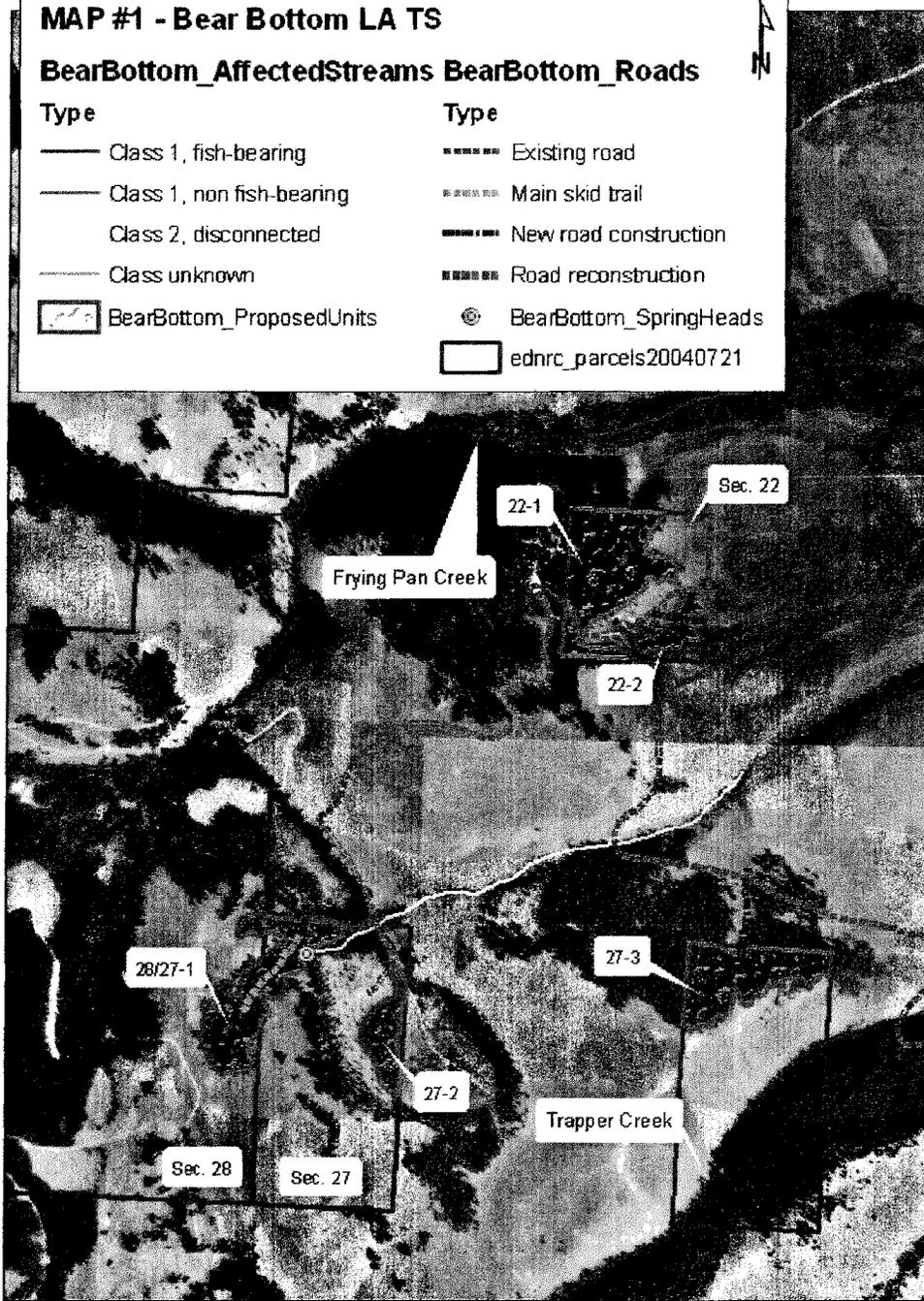
Concurrent timber harvest on private land within the Bear Creek watershed is expected to occur on slopes up to 40% and involve at least 40 acres of harvest. The concurrent timber harvest on private land is expected to occur adjacent to approximately 740' of Bear Creek and may include limited riparian harvest within the Streamside Management Zone (MCA 36-11-301). The concurrent timber harvest also involves a new bridge installation on Bear Creek on private land. Existing levels of grazing and recreation throughout the project area are expected to continue in the future. Considering the scope and expected direct and indirect effects of the proposed project in conjunction with past forest management activities, other present related actions, and expected concurrent timber harvest activities on private land, a low risk of cumulative effects to fisheries is anticipated in the Bear Creek watershed.

MFISH. Montana Fisheries Information System. 2004. Montana Fish, Wildlife and Parks, Montana Natural Resource Information System, StreamNet.

**MAP #1 - Bear Bottom LA TS**

**BearBottom\_AffectedStreams BearBottom\_Roads**

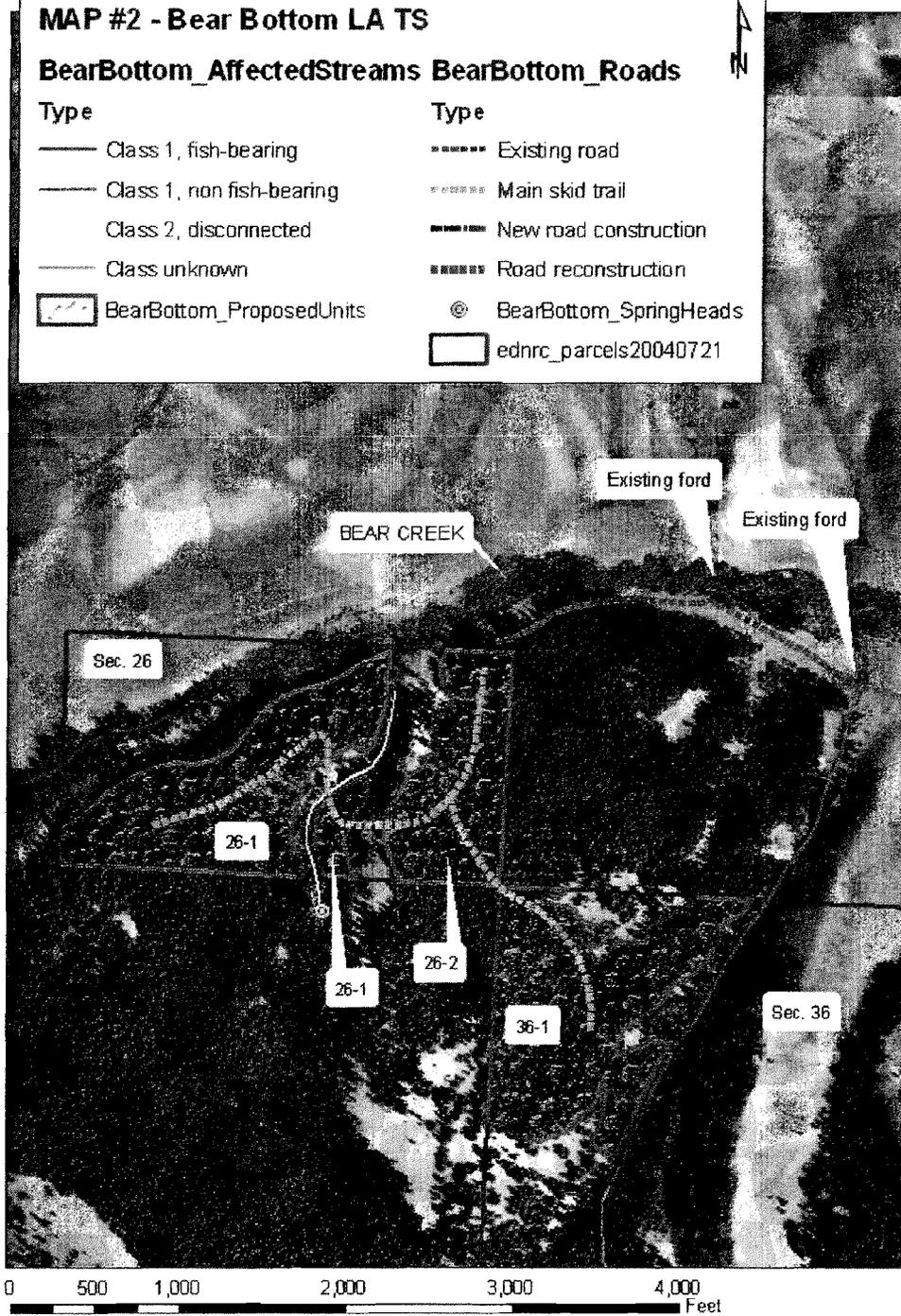
Type	Type
Class 1, fish-bearing	Existing road
Class 1, non fish-bearing	Main skid trail
Class 2, disconnected	New road construction
Class unknown	Road reconstruction
BearBottom_ProposedUnits	BearBottom_SpringHeads
	edhrc_parcels20040721



**MAP #2 - Bear Bottom LA TS**

**BearBottom\_AffectedStreams BearBottom\_Roads**

Type	Type
—— Class 1, fish-bearing	----- Existing road
—— Class 1, non fish-bearing	***** Main skid trail
—— Class 2, disconnected	----- New road construction
—— Class unknown	***** Road reconstruction
 BearBottom_ProposedUnits	⊙ BearBottom_SpringHeads
	 edhrc_parcels20040721



## ATTACHMENT F

CHECKLIST FOR ENDANGERED, THREATENED AND SENSITIVE SPECIES  
 Pertains to Section II. 9. of the DS-252 DNRC Environmental Checklist  
 CENTRAL LAND OFFICE

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>Bald Eagle (<i>Haliaeetus leucocephalus</i>)                      Habitat: late-successional forest &lt;1 mile from open water</p>	<p>[N] Bald Eagles have not been documented within the quarter latilong (L49B) that encompasses the proposed project area (Skaar 1996, MNHP 2003). No nesting habitat occurs on, or within one mile of the proposed project area, and the project area likely occurs outside of any bald eagle nesting home range. No direct, indirect or cumulative effects to bald eagles associated with this project are anticipated.</p>
<p>Gray Wolf (<i>Canis lupus</i>)                      Habitat: ample big game pops., security from human activity</p>	<p>[N] The proposed project area falls within the Central Idaho Nonessential Experimental Area for gray wolves. The nearest packs are the Moyer pack to the west in Idaho and the Gravelly pack to the east in Montana. Individuals from these packs or transients from other packs could occasionally use portions of the project area, however, due to the size, nature and location of the proposed project, activities associated with this proposal are not expected to effect wolves or recovery efforts. Should a new den be located within one mile 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 activity.</p>
<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 54 miles east of the project area. Grizzly bear use of the Beaverhead 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 occur in the project area along Frying Pan, Trapper and Bear Creeks. These creeks support relatively low levels of hiding cover, and human access levels are presently moderate due to public access. Approximately 0.3 miles of temporary new road construction would be constructed to low standard. The potential for any measurable increases in bear-human conflicts following the project activities are expected to be low. 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  &gt;5,000 ft. elev.</p>	<p>[N] 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 (&gt;50 acres) of dense conifer regeneration at high elevations that are preferred for foraging are more prevalent to the south and west of the project area but can be found within the project area. Lynx habitat is marginal within the proposed project area due to the lack of highly desirable habitat conditions for lynx and their primary prey, snowshoe hares. Adverse direct, indirect or cumulative impacts to lynx as a result of this project are expected to be minimal.</p>
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<p><b>DNRC Sensitive Species</b></p>	<p>[Y/N] Potential Impacts and Mitigation Measures  N = Not Present or No Impact is Likely to Occur  Y = Impacts May Occur (Explain Below)</p>
<p>Flammulated Owl (<i>Otus flammeolus</i>)  Habitat: late-successional ponderosa pine and Doug.-fir forest</p>	<p>[N] Flammulated owls have not been documented within the quarter latilong (L49B) that the proposed project area lies within (Skaar 1996, MNHP 2003). The parcels involved in the proposed project maintain elevations that range from about 7,000-7,400 feet and mature Douglas-fir/ponderosa pine cover types, which are preferred habitat for flammulated owls, are not characteristic of this area. Direct, indirect and cumulative effects to flammulated owls would not be expected to occur under the alternatives considered.</p>
<p>Black-Backed Woodpecker (<i>Picoides arcticus</i>)  Habitat: mature to old burned or beetle-infested forest</p>	<p>[N] Black-backed woodpeckers have not been documented within the quarter latilong (L49B) that encompasses the proposed project area (Skaar 1996, MNHP 2003). Stands found within the project area are not presently experiencing substantial insect activity, and no recent burns (<math>\leq 5</math> years old) have occurred within the State tracts or adjoining sections. Thus, foraging and nesting opportunities are presently limited. No direct, indirect or cumulative effects to black-backed woodpeckers would be expected to occur as a result of this project.</p>
<p>Pileated Woodpecker (<i>Dryocopus pileatus</i>)  Habitat: late-successional ponderosa pine and larch-fir forest</p>	<p>[N] Pileated woodpeckers have not been documented within the quarter latilong (L49B) that encompasses the proposed project area (Skaar 1996, MNHP 2003). The project area is poorly suited for use by pileated woodpeckers. 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>Northern Bog Lemming (<i>Synaptomys borealis</i>)  Habitat: sphagnum meadows, bogs, fens with thick moss mats</p>	<p>[N] No sphagnum meadows or 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>Harlequin Duck (<i>Histrionicus histrionicus</i>)  Habitat: white-water streams, boulder and cobble substrates</p>	<p>[N] Harlequin ducks have not been documented within the quarter latilong (L49B) that encompasses the proposed project area (Skaar 1996, MNHP 2003). 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>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 (L46B) that encompasses the proposed project area (Skaar 1996, MNHP 2003). 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>Mountain Plover (<i>Charadrius montanus</i>)  Habitat: short-grass prairie, alkaline flats, prairie dog towns</p>	<p>[N] 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>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>Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>)  Habitat: grasslands, short-grass prairie, sagebrush semi-desert</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>Sage Grouse (<i>Centrocercus urophasianus</i>)  Habitat: sagebrush semi-desert</p>	<p>[N] Breeding sage grouse have not been documented in the quarter latilong (L49B) that encompasses the proposed project area (MNHP 2003). However, sagebrush semi-desert habitats suitable for use by sage grouse do occur within one mile of the project area. Impacts to sage grouse are not anticipated.</p>

# Montana Natural Heritage Program

Map Label	Scientific Name	Common Name
2	<b>Oncorhynchus clarki lewisi</b>	Westslope Cutthroat Trout

## Biological Information

Species of Concern (Y)/Potential Concern (W): Y

Element Subnational ID	14899	EO Number	2	Global Rank	G4T3	State Rank	S2
USFWS Endangered Species Status		Forest Service Status		BLM Status		SPECIAL STATUS	

Observation Dates: Last First

EO Data	APPROXIMATE NUMBERS OF STREAMS: - WITH PURE POPULATIONS = 14; - WITH POTENTIALLY PURE POPULATIONS = 3; - WITH 90-99% PURE POPULATIONS = 25. IDENTIFIED 'POPULATION AGGREGATES':NONE.
General Description	POPULATIONS TESTED PURE IN: BARRETT, BEAN, BROWNS, CRAVER, N FK EVERSON, KATE, MEADOW, MUDDY, PAINTER, ROCK, SAGE, SIMPSON, & SOURDOUGH CREEKS.
General Comments	FOR INFORMATION ON SPECIFIC POPULATIONS, CONTACT MONTANA FISH, WILDLIFE & PARKS OR QUERY THE MONTANA RIVERS INFORMATION SYSTEM @ <a href="http://nris.state.mt.us/wis/mris1.html">http://nris.state.mt.us/wis/mris1.html</a> .
Directions	THIS OCCURRENCE INCLUDES ALL STREAM SEGMENTS WITHIN THE UPPER BEAVERHEAD RIVER WATERSHED THAT SUPPORT POPULATIONS THAT ARE 90% OR MORE PURE.
References	Montana Department of Fish, Wildlife & Parks. 1999. Memorandum of understanding and conservation agreement for westslope cutthroat trout ( <i>Oncorhynchus clarki lewisi</i> ) in Montana. 28pp. Montana Fish, Wildlife & Parks. 1959-to date. Montana Rivers Information System. Information Services Unit, Fisheries Division, Helena, MT. <a href="http://nris.state.mt.us/wis/mris1.html">http://nris.state.mt.us/wis/mris1.html</a> or 406-444-3345.
Specimen	

# Montana Natural Heritage Program

Map Label	Scientific Name	Common Name
4	Felis lynx	Lynx

## Biological Information

Species of Concern (Y)/Potential Concern (W): Y

Element Subnational ID 13134 EO Number 450 Global Rank G5 State Rank S3

USFWS Endangered Species Status PS:LT Forest Service Status BLM Status

Observation Dates: Last First

EO Data

General Description

General Comments

Directions

References

Specimen

# Montana Natural Heritage Program

Map Label	Scientific Name	Common Name
3	<i>Penstemon lemhiensis</i>	Lemhi Beardtongue

## Biological Information Species of Concern (Y)/Potential Concern (W): Y

Element Subnational ID	12440	EO Number	3	Global Rank	G3	State Rank	S2
USFWS Endangered Species Status		Forest Service Status		SENSITIVE		BLM Status	SENSITIVE

Observation Dates: Last 1989-06-29 First 1983

EO Data 164 PLANTS COUNTED, 3 SUBPOPULATIONS; APPROXIMATELY 90% OF THE PLANTS OCCUR ON NATIVE SAGEBRUSH SLOPES ABOVE THE ROAD; SPECIES OCCURS IN MORE OPEN, GRAVELLY AREAS.

General Description GRAVELLY LOAM SOILS, ON SOUTHWEST TO SOUTHEAST-FACING SLOPES; ARTEMISIA TRIDENTATA/FESTUCA IDAHOENSIS, WITH PHACELIA HETEROPHYLLA, BROMUS TECTORUM. LUPINUS, PHLOX, POA, ACHILLEA, ROSA, MAHONIA REPENS, GERANIUM VISCOSISSIMUM, HELIANTHELLA UNIFLORA, ERIOGONUM UMBELLATUM VAR INTECTUM AND VAR SUBALPINUM.

### General Comments

Directions NORTH SIDE OF LEMHI PASS ROAD (BEAVERHEAD N.F. ROAD 3909.2), 1.0-1.6 AIR MILES SOUTHEAST OF LEMHI PASS, ABOUT 1.4-2.0 MILES WEST OF SELWAY RANCH.

References Ramstetter, Jennifer. Department of Botany, University of Massachusetts, Amherst, MA 01003. 413/545-2238. Personal communication to the Montana Natural Heritage Program.  
Schassberger, L. A. 1989. [MTNHP Field surveys of southwest Montana, 26-30 June (PENSTEMON LEMHIENSIS).]  
Shelly, J. S. 1986. Field surveys in Beaverhead County of 18-22 June. Montana Natural Heritage Program.  
Shelly, J. S. 1990. Report on the conservation status of PENSTEMON LEMHIENSIS, a candidate threatened species: Montana. Unpublished report to the U.S. Fish and Wildlife Service, Denver. Montana Natural Heritage Program, Helena, MT. 89 pp.  
Shelly, J. S. 1990. Status review update and establishment of demographic monitoring studies: PENSTEMON LEMHIENSIS. Unpublished report to the U.S. Forest Service, Missoula. Montana Natural Heritage Program, Helena, MT. 61 pp.  
Shelly, J. Stephen. 1995. Personal communication to the Montana Natural Heritage Program regarding 1994 plant EORs.

Specimen SCHASSBERGER, L. A. (302). 1989.  
SHELLY, J. S. (1155) AND G.V. KING. 1986. MONTU

Representation Accuracy	High (>80%, <=95%)		
Size (acres): Observed	15	EO Rep. Size (acres):	6.46976
Min. Elevation (feet)	6,960	Max. Elevation (feet)	7,227
County	Beaverhead		
USGS Quadrangle Map	Lemhi Pass		
Land Owner/Manager	PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)		
Township/Range/Section	010S015W - 14, 010S015W - 15		

# Montana Natural Heritage Program

Map Label	Scientific Name	Common Name
1	<i>Brachylagus idahoensis</i>	Pygmy Rabbit

## Biological Information Species of Concern (Y)/Potential Concern (W): Y

Element Subnational ID	13601	EO Number	2	Global Rank	G4	State Rank	S3
USFWS Endangered Species Status		Forest Service Status		SENSITIVE		BLM Status	SPECIAL STATUS

Observation Dates: Last 1918-07-15 First 1918-03-25

EO Data SPECIMEN REPORTED: "A SERIES OF PYGMY RABBITS COLLECTED...FROM DONOVAN."

General Description

General Comments

Directions DONOVAN. (APPROXIMATELY 7 AIR MILES NORTH-NORTHEAST OF BANNACK PASS.)

References Hoffmann, R. S., P. L. Wright and F. E. Newby. 1969. Distribution of some mammals in Montana. I. Mammals other than bats. *Journal of Mammalogy* 50(3):579-604.

Specimen GOLDMAN (S.N.). 1918. USNM.

Representation Accuracy Low (>0%, <=20%)

Size (acres): Observed EO Rep. Size (acres): 49431.4

Min. Elevation (feet) 6,600 Max. Elevation (feet) 8,613

County Beaverhead

USGS Quadrangle Map Bannock Pass, Deadman Pass, Everson Creek, Jeff Davis Peak

Land Owner/Manager BLM: DILLON FIELD OFFICE, PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Township/Range/Section 010S013W - 16, 010S013W - 17, 010S013W - 18, 010S013W - 19, 010S013W - 20, 010S013W - 21, 010S013W - 22, 010S013W - 27, 010S013W - 28, 010S013W - 29, 010S013W - 30, 010S013W - 31, 010S013W - 32, 010S013W - 33, 010S013W - 34, 010S013W - 35, 010S014W - 13, 010S014W - 14, 010S014W - 15, 010S014W - 20, 010S014W - 21, 010S014W - 22, 010S014W - 23, 010S014W - 24, 010S014W - 25, 010S014W - 26, 010S014W - 27, 010S014W - 28, 010S014W - 29, 010S014W - 31, 010S014W - 32, 010S014W - 33, 010S014W - 34, 010S014W - 35, 010S014W - 36, 011S013W - 02, 011S013W - 03, 011S013W - 04, 011S013W - 05, 011S013W - 06, 011S013W - 07, 011S013W - 08, 011S013W - 09, 011S013W - 10, 011S013W - 11, 011S013W - 14, 011S013W - 15, 011S013W - 16, 011S013W - 17, 011S013W - 18, 011S013W - 19, 011S013W - 20, 011S013W - 21, 011S013W - 22, 011S013W - 27, 011S013W - 28, 011S013W - 29, 011S013W - 30, 011S013W - 31, 011S013W - 32, 011S013W - 33, 011S014W - 01, 011S014W - 02, 011S014W - 03, 011S014W - 04, 011S014W - 05, 011S014W - 06, 011S014W - 07, 011S014W - 08, 011S014W - 09, 011S014W - 10, 011S014W - 11, 011S014W - 12, 011S014W - 13, 011S014W - 14, 011S014W - 15, 011S014W - 16, 011S014W - 17, 011S014W - 18, 011S014W - 19, 011S014W - 20, 011S014W - 21, 011S014W - 22, 011S014W - 23, 011S014W - 24, 011S014W - 25, 011S014W - 26, 011S014W - 27, 011S014W - 28, 011S014W - 29, 011S014W - 32, 011S014W - 33, 011S014W - 34, 011S014W - 35, 011S014W - 36, 012S013W - 06, 012S014W - 01, 012S014W - 02, 012S014W - 03

# Montana Species of Concern Bear Bottom

- Search Area
- Biological Data**
- Vertebrate animal
- Community
- Nonvertebrate animal
- Nonvascular plant
- Other
- Vascular plant
- Conservation Esplanments**
- Special Designations**
- Other special areas (ACEC, RNA, PRM)
- Research Natural Areas (all agencies)
- Wilderness (all agencies)
- Wild and Scenic Rivers (all agencies)
- Land Status**
- Bureau of Land Management
- Army Corps of Engineers & US Dept of Defense
- National Park Service
- US Forest Service
- Other US Dept of Agriculture
- US Fish & Wildlife Service
- Bureau of Indian Affairs Trust
- State Trust
- Montana Fish, Wildlife, & Parks
- University & Institutions
- County & City
- Plum, Creek
- Private Conservation
- Char. private
- Water

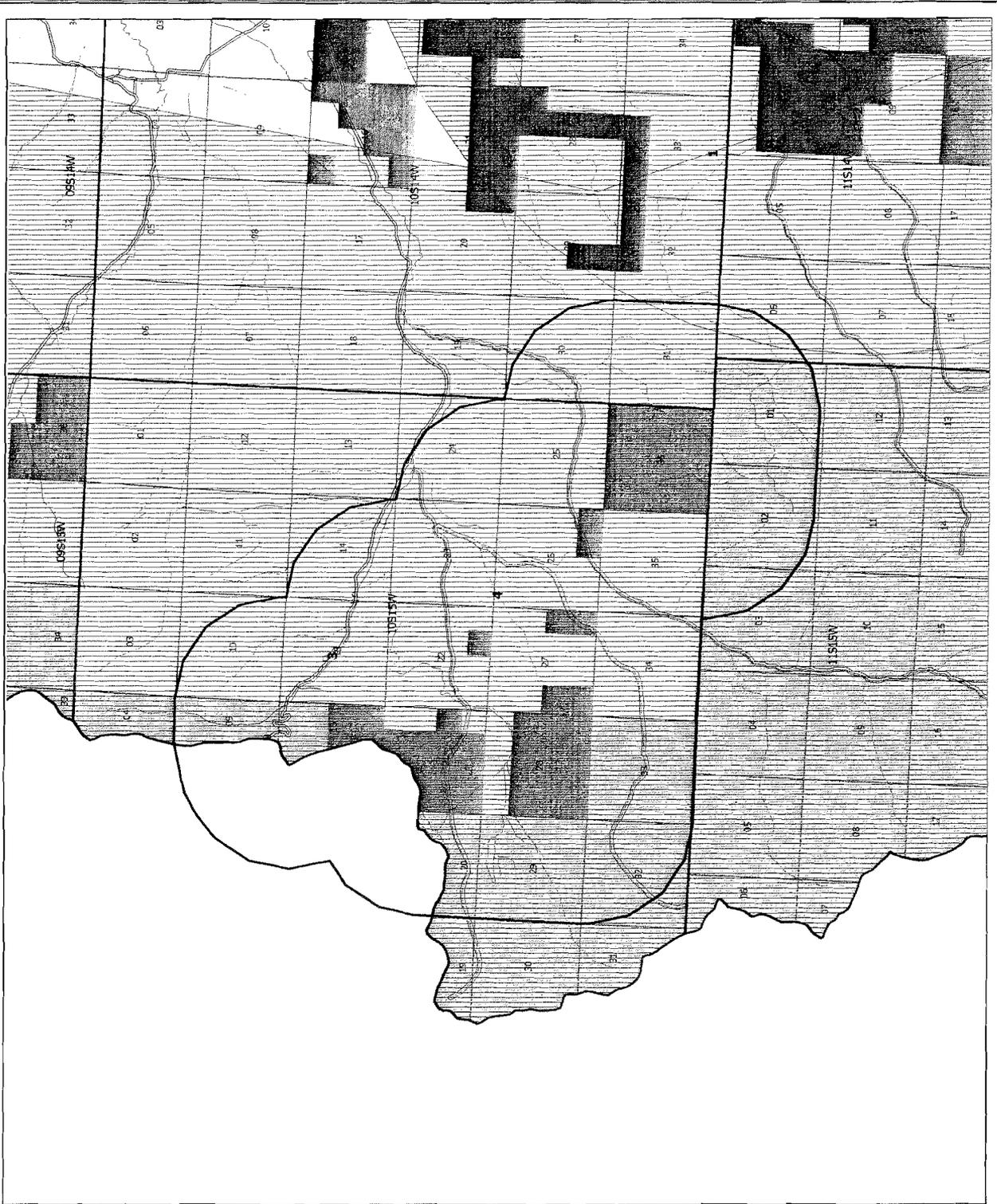


Species locations depicted outside the search area have imprecisely known locations and may actually occur within the search area

Not all legend items may occur on map

Features shown on this map do not imply public access to any lands

This map displays management status, which may differ from ownership. Refer to accompanying documentation for full explanation of map features



**MONTANA**  
**Natural Heritage**  
**Program**

Natural Resource Information System  
Montana State Library  
Helena, MT 59601-1600  
(406) 444-5354 [info@state.mt.us](mailto:info@state.mt.us)



Report 1 of 1  
Select Form

Map Waterbody

Trapper Creek Tributary Of: North Frying Pan Creek

Total Length (Mi): 5.4

Report is based on River Miles(rm): (0.0 to 5.4)

View list of tributaries to the Trapper Creek and their river miles

**Hydrologic Units:**

10020001 Red Rock,

**Counties:**

Beaverhead,

**FWP Management**

Waterbody Location	Region/Fish District	Management
From (rm 0.0) to (rm 5.4)	3 / Central	Trout Water

**Fish Species Present**

Species	Abundance	Water Use	Data Quality
<b>Brook Trout</b>			
From (rm 0.0) to (rm 5.4)	Common	Year-round resident	Extrapolated based on surveys
<b>Mottled Sculpin</b>			
From (rm 0.0) to (rm 5.4)	Common	Year-round resident	Extrapolated based on surveys
<b>Westslope Cutthroat Trout</b>			
From (rm 0.0) to (rm 4.0)	Rare	Year-round resident	Extrapolated based on extensive samples

**Population Trend Data**

From (rm 2.7) to (rm 2.8)

Date: 7/30/1982

Collector: Unknown,

Species	Method	Length-(Min-Max (In))	DQR	Total	Units
Westslope Cutthroat Trout	Peterson mark-recapture	4-7.7	Medium quality	33	per 1000 ft.

Date: 8/9/1993

Collector: Oswald, Dick

Species	Method	Length-(Min-Max (In))	DQR	Total	Units
Brook Trout	Total number captured or presence only	N/A-N/A	Medium quality	0	no estimate, counts only
Mottled Sculpin	Total number captured or presence only	N/A-N/A	Medium quality	0	no estimate, counts only
Westslope Cutthroat Trout	Total number captured or presence only	3.8-7.6	Medium quality	19	no estimate, counts only

**Genetics**

From (rm 2.7) to (rm 2.8)

Date	Collector	Agency	TR	Analyzer	Date
8/9/1993	Oswald, Dick	FWP	T10SR15W	Leary, Robb	8/30/1994
Sample #: 798					
Number of Fish: 10					
Analysis Type: Allozymes					
			Percentage	Count	Hybridization
		Westslope Cutthroat Trout	94.2	0	0
		Rainbow Trout	5.8	0	0

From (rm 3.6) to (rm 3.7)

Date	Collector	Agency	TR	Analyzer	Date
8/15/1996	Browning, Dave	FS	T10SR15W	Leary, Robb	4/7/1998
Sample #: 1154					
Number of Fish: 5					
Analysis Type: Allozymes					
			Percentage	Count	Hybridization
		Westslope Cutthroat Trout	100	0	0

**Angling Use - Days Per Year**

From (rm 0.0) to (rm 5.4)

Year	Total			Resident			Non Resident			Ranking	
	Press.	s.d.	Trips	Press.	s.d.	Trips	Press.	s.d.	Trips	State	Region
1991	175	128	5	175	128	5	0	0	0	766	170
1982	137	137	1	137	137	1	0	0	0	1043	231

Angling Use Data Source:

Data provided by a biannual Statewide Angling Use Survey conducted via mail by Montana Fish, Wildlife and Parks Information Services Unit in Bozeman.

**Fish Stocking Since 1990**

No Stocking Data Available

**Fisheries Resource Values**

From (rm 0.0) to (rm 5.4)	Habitat	Sport	Final Value
	Class	Class	
	3	4	Substantial

Fisheries Classification Data Source:

A complex series of ratings and points were assigned to various MFISH data fields and used to determine the Sport Fisheries Values and the Species and Habitat Value for all surveyed streams in Montana. The final resource was determined as the higher of the two values.

**Protected Designation**

No Protected Data Available

**FWP Dewatering Concern Area**  
 Stream not considered dewatered by MFWP

**FWP Instream Flow Protection/Quantification**

From (rm 0.0) to (rm 5.4)      **MOUTH to HEADWATERS**      Reservation Type: Water Reservation Granted

Begin	End	Flow (CFS)	Priority Date
01/01	12/31	0.7	7/1/1985

**Instream Flow Protection Data Source:**

Instream flows rights and reservations provided by Murphy Rights (passed 1969, Section 89-801 (2), RCM 1947) and Montana Water Use Act (passed 1973, Section 85-2-316, MCA).

**Stream Channel Conditions**

From (rm 0.0) to (rm 5.4)

Bank Vegetation: N/A

Riparian Vegetation: N/A

SubSurface Cover: N/A

Gradient: 0

Sinuosity: N/A

Side Channels: Nil

Data Rating: N/A

Rosgen Class: N/A

Pool Ratio: N/A    Run Ratio: N/A    Riffle Ratio: N/A    Pocket Ratio: N/A

**References**

Leary, Robb ,University of Montana, 1994

Leary, Robb ,University of Montana, 1998

Oswald, Richard A. ,Bureau of Land Management, 1982



Report 1 of 1  
Select Form

Map Waterbody

North Frying Pan Creek      Tributary Of: Trail Creek

Total Length (Mi): 5.5

Report is based on River Miles(rm): (0.0 to 5.5)

View list of tributaries to the North Frying Pan Creek and their river miles

**Hydrologic Units:**

10020001 Red Rock,

**Counties:**

Beaverhead,

**FWP Management**

Waterbody Location	Region/Fish District	Management
From (rm 0.0) to (rm 5.5)	3 / Central	Trout Water

**Fish Species Present**

Species	Abundance	Water Use	Data Quality
Mottled Sculpin			
From (rm 0.6) to (rm 5.5)	Common	Year-round resident	Extrapolated based on surveys
Westslope Cutthroat Trout			
From (rm 0.0) to (rm 5.0)	Abundant	Year-round resident	Extrapolated based on extensive samples

**Population Trend Data**

From (rm 0.6) to (rm 0.8)

Date: 7/30/1982

Collector: Unknown,

Species	Method	Length-(Min-Max (In))	DQR	Total	Units
Westslope Cutthroat Trout	Peterson mark-recapture	2.5-9.3	Medium quality	474	per 1000 ft.

Date: 8/13/1992

Collector: Oswald, Dick

Species	Method	Length-(Min-Max (In))	DQR	Total	Units
Westslope Cutthroat Trout	Total number captured or presence only	3-8.8	Low quality	19	no estimate, counts only

Date: 7/20/1993

Collector: Oswald, Dick

Species	Method	Length-(Min-Max (In))	DQR	Total	Units
Westslope Cutthroat Trout	Total number captured or presence only	3-8.8	Low quality	15	no estimate, counts only

**Genetics**

From (rm 1.9) to (rm 2.0)

Date	Collector	Agency	TR	Analyzer	Date
8/13/1992	Oswald, Dick	FWP	T10SR15W	Leary, Robb	4/12/1993
Sample #: 678					
Number of Fish: 10					
Analysis Type: Allozymes					
			Percentage	Count	Hybridization
		Westslope Cutthroat Trout	94.2	0	0
		Rainbow Trout	5.8	0	0

From (rm 1.9) to (rm 2.0)

Date	Collector	Agency	TR	Analyzer	Date
8/7/1996	Browning, Dave	FS	T10SR15W	Leary, Robb	4/7/1998
Sample #: 1157					
Number of Fish: 10					
Analysis Type: Allozymes					
			Percentage	Count	Hybridization
		Westslope Cutthroat Trout	100	0	0

From (rm 2.1) to (rm 2.2)

Date	Collector	Agency	TR	Analyzer	Date
7/20/1993	Oswald, Dick	FWP	T10SR15W	Leary, Robb	8/30/1994
Sample #: 765					
Number of Fish: 15					
Analysis Type: Allozymes					
			Percentage	Count	Hybridization
		Rainbow Trout	5	0	0
		Westslope Cutthroat Trout	95	0	0

**Angling Use - Days Per Year**  
No Stream Pressure Data Available

**Fish Stocking Since 1990**  
No Stocking Data Available

**Fisheries Resource Values**

	Habitat	Sport	
	Class	Class	Final Value
From (rm 0.0) to (rm 5.5)	2	4	High-Value

**Fisheries Classification Data Source:**

A complex series of ratings and points were assigned to various MFISH data fields and used to determine the Sport Fisheries Values and the Species and Habitat Value for all surveyed streams in Montana. The final resource was determined as the higher of the two values.

**Protected Designation**

No Protected Data Available

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**FWP Dewatering Concern Area**  
Stream not considered dewatered by MFWP

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**FWP Instream Flow Protection/Quantification**  
Instream Flows not determined.

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**Stream Channel Conditions**

From (rm 0.0) to (rm 5.5)

Bank Vegetation: Deciduous tree forms

Riparian Vegetation: Deciduous tree forms

SubSurface Cover: N/A

Gradient: 0

Sinuosity: N/A

Side Channels: Nil

Data Rating: Med - some observations

Rosgen Class: N/A

Pool Ratio: N/A Run Ratio: N/A Riffle Ratio: N/A Pocket Ratio: N/A

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**References**

Leary, Robb ,University of Montana, 1993

Leary, Robb ,University of Montana, 1994

Leary, Robb ,University of Montana, 1998

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Report 1 of 1



Report 1 of 1  
Select Form

Map Waterbody

Bear Creek Tributary Of: Trail Creek

Total Length (Mi): 9.2

Report is based on River Miles(rm): (0.0 to 9.2)

View list of tributaries to the Bear Creek and their river miles

**Hydrologic Units:**

10020001 Red Rock,

**Counties:**

Beaverhead,

**FWP Management**

Waterbody Location	Region/Fish District	Management
From (rm 0.0) to (rm 9.2)	3 / Central	Trout Water

**Fish Species Present**

Species	Abundance	Water Use	Data Quality
Brook Trout			
From (rm 0.0) to (rm 9.2)	Abundant	Year-round resident	Extrapolated based on surveys
Mottled Sculpin			
From (rm 0.0) to (rm 9.2)	Common	Year-round resident	Extrapolated based on surveys
Westslope Cutthroat Trout			
From (rm 2.0) to (rm 8.5)	Rare	Year-round resident	Extrapolated based on extensive samples

**Population Trend Data**

From (rm 0.0) to (rm 0.2) Section Name: UPSTREAM FROM LOWER RD FORD

Date: 8/5/1994

Collector: Oswald, Dick

Species	Method	Length-(Min-Max (In))	DQR	Total	Units
Brook Trout	Total number captured or presence only	N/A-N/A	Medium quality	0	no estimate, counts only
Mottled Sculpin	Total number captured or presence only	N/A-N/A	Medium quality	0	no estimate, counts only
Westslope Cutthroat Trout	Total number captured or presence only	5.8-11	Medium quality	18	no estimate, counts only

From (rm 2.1) to (rm 2.4) Section Name: LOWER SECTION

Date: 8/1/1982

Collector: Oswald, Dick

Species	Method	Length-(Min-Max(In))	DQR	Total	Units
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Brook Trout	Peterson mark-recapture	N/A-N/A	Medium quality	150	per 1000 ft.
Westslope Cutthroat Trout	Peterson mark-recapture	5.12-N/A	Medium quality	32	per 1000 ft.

From (rm 5.0) to (rm 5.2) Section Name: UPPER SECTION

Date: 8/9/1993 Collector: Oswald, Dick

Species	Method	Length-(Min-Max(In))	DQR	Total	Units
Westslope Cutthroat Trout	Total number captured or presence only	4.9-10.6	Low quality	12	no estimate, counts only

**Genetics**

From (rm 2.0) to (rm 2.1)

Date	Collector	Agency	TR	Analyzer	Date
8/9/1993	Oswald, Dick	FWP	T10SR14W	Leary, Robb	1/1/1994
Sample #: 797					
Number of Fish: 9					
Analysis Type: Allozymes					
		Percentage	Count	Hybridization	
		Westslope Cutthroat Trout	99	0	0
		Yellowstone Cutthroat Trout	1	0	0

From (rm 4.8) to (rm 4.9)

Date	Collector	Agency	TR	Analyzer	Date
8/5/1994	Oswald, Dick	FWP	T10SR15W	Leary, Robb	8/15/1994
Sample #: 983					
Number of Fish: 25					
Analysis Type: Allozymes					
		Percentage	Count	Hybridization	
		Yellowstone Cutthroat Trout	0.5	0	0
		Westslope Cutthroat Trout	99.5	0	0

From (rm 5.3) to (rm 5.4)

Date	Collector	Agency	TR	Analyzer	Date
8/5/1994	Oswald, Dick	FWP	T11SR15W	Leary, Robb	8/5/1994
Sample #: 984					
Number of Fish: 15					
Analysis Type: Allozymes					
		Percentage	Count	Hybridization	
		Westslope Cutthroat Trout	99.5	0	0
		Yellowstone Cutthroat Trout	0.5	0	0

**Angling Use - Days Per Year**

From (rm 0.0) to (rm 9.2)

Year	Total			Resident			Non Resident			Ranking	
	Press.	s.d.	Trips	Press.	s.d.	Trips	Press.	s.d.	Trips	State	Region
1989	103	103	2	103	103	2	0	0	0	1033	232

**Angling Use Data Source:**

Data provided by a biannual Statewide Angling Use Survey conducted via mail by Montana Fish, Wildlife and Parks Information Services Unit in Bozeman.

**Fish Stocking Since 1990**

No Stocking Data Available

**Fisheries Resource Values**

	Habitat Class	Sport Class	Final Value
From (rm 0.0) to (rm 9.2)	1	4	Outstanding

**Fisheries Classification Data Source:**

A complex series of ratings and points were assigned to various MFISH data fields and used to determine the Sport Fisheries Values and the Species and Habitat Value for all surveyed streams in Montana. The final resource was determined as the higher of the two values.

**Protected Designation**

No Protected Data Available

**FWP Dewatering Concern Area**

Stream not considered dewatered by MFWP

**FWP Instream Flow Protection/Quantification**

From (rm 5.1) to (rm 9.2)      **BLM BND to HEADWATERS**      Reservation Type: Water Reservation Granted

Begin	End	Flow (CFS)	Priority Date
01/01	12/31	6.5	7/1/1985

**Instream Flow Protection Data Source:**

Instream flows rights and reservations provided by Murphy Rights (passed 1969, Section 89-801 (2), RCM 1947) and Montana Water Use Act (passed 1973, Section 85-2-316, MCA).

**Stream Channel Conditions**

From (rm 0.0) to (rm 9.2)

Bank Vegetation: Mixed deciduous/conifer tree forms	Riparian Vegetation: Conifer tree forms
SubSurface Cover: N/A	Gradient: 4.9
Sinuosity: N/A	Side Channels:
Data Rating: Med - some observations	Rosgen Class: B4-Deeply entrenched/well confined; highly unstable steep slopes
Pool Ratio: N/A	Run Ratio: N/A
	Riffle Ratio: N/A
	Pocket Ratio: N/A

**References**

Leary, Robb ,University of Montana, 1994

Leary, Robb ,University of Montana, 1994

Leary, Robb ,University of Montana, 1994

Opitz, Scott T. ,Fluvial Arctic Grayling Workgroup,Beaverhead National Forest,Bureau of Land Management,American Fisheries Society-Montana Chapter,Trout Unlimited-Montana Council,U.S. Fish and Wildlife Service,Montana Dept. of Fish, Wildlife and Parks, 2000

Oswald, Richard A. ,Bureau of Land Management, 1982

## ATTACHMENT H

### JUNE 2004 LIST OF INDIVIDUAL SCOPING NOTICES

AMERICAN WILDLANDS, BOZEMAN, MT  
NATIONAL WILDLIFE FEDERATION, MISSOULA, MT  
MONTANA AUDUBON COUNCIL, DILLON, MT  
SKYLINE SPORTSMEN'S ASSOC. INC., BUTTE, MT  
GREATER YELLOWSTONE COALITION, BOZEMAN, MT  
SUN MOUNTAIN LUMBER, INC., DEER LODGE, MT  
MONTANA WILDERNESS ASSOCIATION, HELENA, MT  
MONTANA ACTION FOR ACCESS, RAMSAY, MT  
ALLIANCE FOR THE WILD ROCKIES, MISSOULA, MT  
MADISON RANGER DISTRICT, ENNIS, MT  
BUREAU OF LAND MANAGEMENT, DILLON, MT  
PINTLAR AUDUBON SOCIETY, TWIN BRIDGES, MT  
F.H. STOLTZE LAND & LUMBER, COLUMBIA FALLS, MT  
MT WOOD PRODUCTS ASSN., HELENA, MT  
CONFEDERATED SALISH & KOOTENAI TRIBES, PABLO, MT  
STUART LEWIN, GREAT FALLS, MT  
THE ECOLOGY CENTER, INC., MISSOULA, MT  
PLUM CREEK TIMBER CO., COLUMBIA FALLS, MT  
DNRC, HELENA, MT  
FRIENDS OF THE WILD SWAN, SWAN LAKE, MT  
FISH, WILDLIFE, & PARKS, BOZEMAN, MT  
R-Y TIMBER, INC., TOWNSEND, MT  
MT COALITION FOR APPROPRIATE MANAGEMENT OF STATE LAND, BUTTE, MT  
OFFICE OF THE SECRETARY OF STATE, HELENA, MT  
EVAN HUNTSMAN, DELL, MT  
RED ROCK LAKES NATIONAL WILDLIFE REFUGE, LIMA, MT  
MT SOCIETY FOR CONSERVATION BIOLOGY, MISSOULA, MT  
BEAVERHEAD COUNTY RESOURCE USE COMMITTEE, DILLON, MT  
DNRC FOREST MANAGEMENT BUREAU, MISSOULA, MT  
DILLON RANGER DISTRICT, DILLON, MT  
EDWARD MOONEY, BOZEMAN, MT  
FISH, WILDLIFE, & PARKS, DILLON, MT  
BAR DOUBLE T RANCH, INC., DILLON, MT  
O. TEMPLE SLOAN, JR., KNIGHTDALE, NC