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Final Environmental Impact Statement

Grizzly Vegetation and Transportation Management Project

Three Rivers Ranger District, Kootenai National Forest
Lincoln County, Montana

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Final Environmental Impact Statement

Grizzly Vegetation and Transportation Management Project

Three Rivers Ranger District, Kootenai National Forest
Lincoln County, Montana

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Abstract: The Grizzly Vegetation and Transportation Project Draft Environmental Impact Statement (DEIS) was released to the public for comment on June 8, 2007. The DEIS disclosed the analysis of effects related to the environmental impacts of three alternatives; no action, the proposed action, and an alternative that addressed concerns identified during the scoping of the proposed action.

This Final Environmental Impact Statement displays the status of the analysis since the release of the DEIS. *Chapter 5* discusses changes made to Alternative 2, the agency preferred alternative, since receipt of public comments on the DEIS; a summary of the analysis of the changes to Alternative 2; and errata to the DEIS. *Chapter 6* provides an update on public involvement activities, displays public comments on the DEIS and the agency responses, and finally a list of the recipients of this FEIS. The *Appendices* contain more details on the changes to Alternative 2 and analyses for the soils, hydrology and fisheries, and wildlife resources.

Grizzly Vegetation and Transportation Management

Final EIS

Chapters 5, 6, and Appendices

TABLE OF CONTENTS

I. Introduction 5-1

II. Chapter 5, Changes between Draft and Final 5-1

1. Changes to Alternative 2 5-1
2. Summary Resource Analysis of Alternative 2a 5-4
3. DEIS Errata 5-8

III. Chaper 6, Public Involvement since the Draft 6-1

1. Public Involvement since the DEIS, including Response to Comments 6-1

Letter #1, WildWest Institute 6-20

Letter #2, Alliance for the Wild Rockies 6-38

Letter #3, Yaak Valley Forest Council 6-41

Letter #4, Environmental Protectection Agency 6-46

Letter #5, Randy Beacham 6-68

Letter #6, B. Sachau 6-70

Letter #7, Robyn King and Jimmy Martin 6-71

Letter #8, Rick Bass 6-72

Letter #9, Yaak Valley Forest Council-Addendum 6-77

Letter #10, Larry Coryell 6-79

Letter #11, Sue Janssen 6-80

Letter #12, American Wildlands 6-81

2. List of Recipients 6-85

Appendix 1 – Changes from Alternative 2 to Alternative 2a A1-1

Changes from Alternative 2 to Alternative 2a Table
Design Features Comparison
Access Management Plan
Watershed Rehabilitation and BMP Work

Appendix 2 – Soils Alternative 2a Analysis A2-1

Appendix 3 – Hydrology/Fisheries Alternative 2a Analysis A3-1

Appendix 4 – Wildlife Analysis Addendum A4-1

Introduction

The Grizzly Vegetation and Transportation Project Draft Environmental Impact Statement (DEIS) was released to the public for comment on June 8, 2007. The DEIS disclosed the analysis of effects related to the environmental impacts of three alternatives; no action, the proposed action, and an alternative that addressed concerns identified during the scoping of the proposed action. This Final Environmental Impact Statement displays the status of the analysis since the release of the DEIS. *Chapter 5* discusses changes made to Alternative 2, the agency preferred alternative, since receipt of public comments on the DEIS; a summary of the analysis of the changes to Alternative 2; and errata to the DEIS. *Chapter 6* provides an update on public involvement activities, displays public comments on the DEIS and the agency responses, and finally a list of the recipients of this FEIS. The *Appendices* contain more details on the changes to Alternative 2, and analyses for the soils, hydrology and fisheries, and wildlife resources.

Chapter 5 – Changes between Draft and Final

This chapter of the Grizzly Vegetation and Transportation Management project (Grizzly project) Final Environmental Impact Statement (FEIS) highlights and discusses several changes that have been made to Alternative 2 as a result of public comments (see Chapter 6) and further refinement by the Interdisciplinary Team (IDT). Also, factual corrections to the DEIS are included in this FEIS as errata to reflect: 1) errors; 2) clarifications suggested in public comments; and 3) changes in law, regulation, or policy.

The changes to Alternative 2 are minor in nature and either reduce potential adverse effects, or have potential beneficial effects when compared to Alternative 2 as presented in the DEIS. All changes are confined to the unit vicinity and/or treatment areas analyzed under Alternatives 2 and 3 in the DEIS. Alternative 2 with changes has been labeled as Alternative 2a for ease of discussion and comparison.

Changes to Alternative 2

Alternative 2 was refined with the adjustments listed below. A more detailed display of changes is displayed in FEIS Appendix 1:

- **Less harvest.** Alternative 2a harvests approximately 400 less acres than Alternative 2. Appendix 1 contains a detailed table of changes to Alternative 2 and a comparison map of Alternative 2 & Alternative 2a Harvest Units.
- **Less grapple piling.** Alternative 2a utilizes grapple piling on approximately 400 less acres than Alternative 2, further addressing Issue #3, Grapple Piling Impacts on Soil And Weed Infestation (DEIS Chapter 2, pg. 12).
- **More grizzly bear core.** Grizzly bear core is increased by approximately 2,700 acres in Bear Management Unit (BMU) 11. This addition enlarges core in a key grizzly bear approach area and brings the BMU into full compliance of the core standard. This is accomplished with installation of barriers on Road #902B, 903, 6715B, and a portion of Road #902, which are currently closed yearlong to public motorized travel. This change addresses Issue #1, Grizzly Bear Disturbance and Displacement (DEIS Chapter 2, pg. 11).
- **Less decommissioning in core.** In response to public and U. S. Fish and Wildlife Service (USFWS) concerns about loss of grizzly bear security during decommissioning,

approximately 10 miles of decommissioning and intermittent stored service (storage) work is dropped in the Burnt Creek (Vivian Creek Road and spurs) and Little Creek watersheds. This change further addresses Issue #1, Grizzly Bear Disturbance and Displacement (DEIS Chapter 2, pg. 11).

- **Less harvest along the Burnt Dutch #472 Rd.** The harvest activities along the Burnt Dutch #472 road are reduced by 112 acres to ensure riparian protection and economic feasibility. The remaining harvest is expected to be of short duration. This change results in reduced effects in regard to Issue #1, Grizzly Bear Disturbance and Displacement (DEIS Chapter 2, pg. 11).
- **Units near Roderick Inventoried Roadless Area (IRA) dropped.** Helicopter Units 57 and 57a are dropped because recent field verification found that many of the aspen clones in that vicinity have blown down and objectives to restore aspen through helicopter harvest could not be met. This change also results in reduced effects in regard to Issue #1, Grizzly Bear Disturbance and Displacement (DEIS Chapter 2, pg. 11) and satisfies public concerns regarding Issue # 4, Effects from Units 57 and 57a activities on Potential Future Wilderness Consideration (DEIS Chapter 2, pg. 12).
- **More winter harvest required.** In addition to the required winter harvest of Units 13, 13a, 18 and 20, Alternative 2a requires winter harvest on frozen ground for Units 1, 2, 3, 4, 11, 17, and 32 to minimize soil impacts (Kuennen 2006). This change also minimizes disturbances to the grizzly bear since operations would only occur during the denning season (12/1-3/31). As compared to Alternatives 2 and 3, Alternative 2a does not necessitate a Forest Plan amendment to allow for an increase in open road densities in Management Area 12, Big Game Summer Range, since Unit 17 is changed to winter harvest and the road to this unit will not be open to public access. This change to required winter harvest further addresses Issue #1, Grizzly Bear Disturbance and Displacement (DEIS Chapter 2, pg. 11).
- **Soil standards met.** In addition to required winter harvest, preharvest, post-harvest, and post-mitigation monitoring and potential skid trail rehabilitation is included for Units 1, 2, 3, 18 and 20, where there is higher existing detrimental soil disturbance and to ensure regional soil standards are met. These units have been redesigned to make the best use of existing skid trails and temporary roads. The temporary road templates would be rehabilitated after use, leaving those areas in an improved condition. (See FEIS Appendix 2 for more information).
- **Wildlife movement corridors provided.** Units 45, 45a, 49, 50, and 50a were redesigned to ensure that wildlife movement corridors are retained, in accordance with Forest Plan standards to provide 600 feet to cover (see FEIS Appendix 4, pg. 4-6). This change results in two openings over 40 acres (52 acres and 74 acres) rather than one 126-acre opening over 40 acres. As compared to Alternative 2, this modification is an improvement in addressing public concerns regarding Issue #2, Regeneration Units greater than 40 Acres. The Regional Forester reviewed the rationale for creating these openings and granted approval for them. (See project file for Regional Office Approval for Openings Greater than 40 Acres.
- **Helicopter harvest dropped.** Since helicopter Units 57 and 57a are dropped, the remaining helicopter units, Unit 34 and 50 were reduced in size by 30 and 34 acres respectively, to accommodate ground based yarding. Temporary roads within Unit 34 (0.1 miles) and Unit 50 (0.4 miles) are analyzed. All temporary roads will be scarified, seeded, and fertilized following use. Temporary roads are minimized in this project by utilizing existing road templates whenever feasible (1.6 miles under Alternative 2a), and

obliterated after use, leaving those areas in an improved condition (see FEIS Appendix 3).

- **Design features.** Design feature are adjusted with these changes to ensure resource protection as displayed in FEIS Appendix 1.
- Other minor adjustments to fuels treatments, logging systems, and watershed rehabilitation activities (detailed in FEIS Appendix 1) are made based on additional field verification to ensure feasibility, efficiency, and resource protection.

FEIS Table 1 displays a comparison of the activities by alternative.

It is the decision maker's determination that the changes to Alternative 2 are minor and within the scope and context of the environmental effects disclosed in the EIS and project file (PF). It is sufficient and appropriate to file the DEIS (June 2007) with the FEIS (April 2009) as the final documentation for this project (40 CFR 1500.4(m)).

FEIS Table 1. Alternative activities summary

Proposed Vegetation Treatments	Alt 2 Acres	Alt 3 Acres	Alt 2a Acres
Harvest Acres/Volume	1,306 Acres 9.97 MMBF	1,124 Acres 8.38 MMBF	907 Acres 8.2 MMBF
Precommercial thinning	515	515	515
Ecosystem and Wildlife Burning	718	718	718
Proposed Logging Systems	**Acres**	**Acres**	**Acres**
Tractor/Summer Harvest	606	534	251
Tractor/Winter Harvest	158	158	412
Skyline and/or Tractor Swing	360	315	244
Helicopter	182	117	0
Proposed Fuels Treatments	**Acres**	**Acres**	**Acres**
Grapple Piling/Burn Piles	712	223	308
Underburning	191	393	402
Yard Tops/Jackpot burning	38	38	38
Lop and scatter	880	998	0
Yard tops	1,306	1,124	907
Proposed Road and Trail Management	**Miles**	**Miles**	**Miles**
Decommissioning (passive)	16.9	16.9	27.4
Intermittent Stored Service (passive & active)	22.6	22.6	18.5
Designate open to wheeled vehicle motorized use	65.5	65.5	65.5
Designate trails for nonmotorized use	38.8	38.8	38.8
Temporary road construction (Total miles)	2.1 1.6 exist/.5 new	1.9 1.6 exist/.3 new	2.3 1.6 exist/.7 new
Proposed Watershed Rehabilitation	**Miles**	**Miles**	**Miles**
Decommissioning (active)	19.5*	19.5*	15.4
Intermittent Stored Service (Active only)	11.6	11.6	9.7
Best Management Practices Applied	54.5	49.4	36

*Note: Updated miles based on additional field validation. See FEIS Ch. 6, pg. 13.

Summary Resource Analysis of Alternative 2a

An analysis of the changes listed in FEIS Appendix 1 resulted in less or very similar effects as described in the DEIS in Chapter 3. The following is a summary of the conclusions by resource (see the project file and DEIS for more information). More detailed resource reports for Soils, Hydrology/Fisheries, and Wildlife, the resources most relevant to the changes to Alternative 2, are located in the FEIS appendices.

Forest Vegetation: Alternative 2a proposes approximately 400 fewer acres of harvest as compared to Alternatives 2 and 3 to address concerns for soil, water, and wildlife. Aspen enhancement harvest in Units 57 and 57a was dropped because blowdown events of the previous winter have affected many of the trees targeted for release. The strategy for aspen release could not be implemented without extensive salvage of blown down mixed conifers not consistent with the original objectives. Roadside units 55-55K were redelineated with further ground verification to avoid RHCAs and meet salvage objectives, reducing the total acreage of these units by 112 acres. Roadside unit 55K is dominated by densely stocked mature lodgepole pine with poor crown and root development, and is beginning to open due to wind effects and loss of trees with poor vigor and affected by mountain pine beetle. Regeneration harvest and subsequent planting would allow this stand to regenerate young trees in a shorter period than under No Action. The Alternative 2a unit changes will not impact old growth habitat. Similarly, as discussed for Alternatives 2 and 3 in the DEIS on pgs. 56 and 57, Alternative 2a complies with the National Forest Management Act (1b USC 1604) and Forest Plan direction, and desired conditions for forest vegetation.

Fire and Fuels: Alternative 2a proposes fewer acres of harvest as compared to both Alternatives 2 and 3, therefore, fewer acres of fuels treatment and, potentially, fewer air quality concerns. The combined cumulative effects from past actions and the ongoing and foreseeable actions would be a reduction in fuels, trending toward a more diverse age class structure, and breaking up of vertical and horizontal continuity of the fuel bed in treated areas. If the current policy of fire suppression continues, fuels would increase in the project area overall. However, in treated stands the changes in the fuel bed from management activities would contribute to reduced fire behavior conditions. Alternative 2a complies with the Clean Air Act, the Forest Plan and desired condition for fire and fuels, and meets direction provided in the National Fire Plan and objectives of the Healthy Forest Restoration Act.

Soil Resource: See FEIS Appendix 2 for the soils resource analysis of Alternative 2a. Under all action alternatives the amount of cumulative detrimental disturbance would meet regional guidelines (USDA Forest Service 1999). Design features and unit modifications identified in FEIS Appendix 1 are specifically designed to minimize potential project disturbance to avoid long-term detrimental soil productivity. Monitoring by the Kootenai NF has shown that recent harvest units are consistently below the 15 percent cumulative detrimental disturbance (USDA Forest Service 2005). The silvicultural prescription, the timber sale contract, and the slash disposal contracts would include provisions to retain coarse woody material in the harvest units, which meet the guidelines recommended by Graham et al. (1994).

Hydrology: See FEIS Appendix 3 for the hydrology resource analysis of Alternative 2a. Alternative 2a would harvest 31% fewer acres than Alternative 2, and 25% fewer acres than Alternative 3. Because there is less harvest there would be less overall impact from harvest activities. Under Alternative 2a existing road templates are used to access units wherever possible and will be obliterated following use, which would be a benefit to the watershed. To avoid adverse skidding, short sections of temporary road is included for Units 34 and 50; all temporary roads would be recontoured as feasible, scarified, seeded, and fertilized after use which would largely restore hydrologic function. Since the watershed work in the Vivian Creek and Little Creek areas is dropped under Alternative 2a, the existing condition would be maintained as described in the DEIS pg. 91. As discussed for Alternatives 2 and 3 in the DEIS on pg. 99,

Alternative 2a would be in compliance with the Forest Plan, and federal and state laws and regulations.

Fish Populations and Habitat: See FEIS Appendix 3 for the fisheries resource analysis of Alternative 2a. The changes in acres harvested have a reduced effect, as compared to Alternatives 2 and 3, on the variables identified as considered in the DEIS fisheries analysis. The threat to fish populations in the affected streams from failed crossings at Burnt and Little Creeks is minor and consistent with the No Action Alternative as described in the DEIS at pg. 110. The differences between Alternative 2a and the other action alternatives would not result in a level of effects exceeding those discussed in the DEIS at pages 109 – 115. As discussed for Alternatives 2 and 3 in the DEIS on pg. 115, Alternative 2a would also not reduce or retard continued attainment of RMOs and is therefore consistent with INFS.

Wildlife Habitat: The refinements reduce project displacement impacts for the grizzly bear and big game while increasing grizzly bear core area in an important approach zone between BMUs. Alternative 2a would have similar or less effects to wildlife species as compared to Alternatives 2 and 3. Project design for all units ensures that unharvested corridors or timbered areas providing hiding cover are available to wildlife (se FEIS Appendix 4, pg. 6). Alternative 2a is consistent with Forest plan standards. See FEIS Appendix 4 for the wildlife resource analysis of Alternative 2a.

PTES Plants: The proposed unit changes would result in less potential for impacts to PTES plant than Alternative 2 since there would be less ground-disturbing activity. The effects are within the scope of effects discussed in the DEIS analysis at pages 175-179.

Noxious Weeds: Because Alternative 2a proposes less ground disturbing activities, this alternative would create less risk of noxious weed invasion than Alternatives 2 and 3. Design features, which include monitoring and treatment of existing infestations, would help reduce this threat (see FEIS Appendix 1, Design Features).

Recreation/Inventoried Roadless Areas: The effects of this alternative would be similar to Alternative 3, since Units 57 and 57a are dropped (DEIS pg. 191). No road construction or timber harvest would occur within the IRAs. Harvest activities may be seen and heard from areas within the IRAs, but there is no helicopter harvest under Alternative 2a. Future consideration for wilderness would not be precluded.

Cultural Resources: The modifications proposed in Alternative 2a would have no effect on cultural resources.

Scenic Resources: The combined size of units 45, 45a, 49, 50 & 50a have changed. All units are in MA11. Units 49, 50 and 50a combined total 74 acres. Units 45 and 45a combined total 52 acres. These openings are greater than that of surrounding natural openings. However, the openings would be unseen from viewing points on Highway 508 and Forest Road 472. Unit 55K is modified from salvage to a clearcut with reserves. The proposed harvest activity is screened from viewing on the Forest Road 472 since it is below the road when the viewer is driving. The other changes are within the scope of effects described on DEIS pgs 201-203. All units would meet Forest Plan Visual Quality Objectives (VQOs).

Economics: Alternative 2a would harvest 8.2 MMBF, or 16,400 CCF on 907 acres compared to Alternative 2 which would harvest 9.97 MMBF or 23,320 CCF on 1,306 acres and Alternative 3 which would harvest 8.38 MMBF or 20,444 CCF on 1,124 acres. Similar to Alternatives 2 and 3, Alternative 2a would result in a sellable sale with positive indicators. The financial efficiency values for Alternative 2a would be slightly less as those displayed in DEIS Table 43, proportionate to the volume for each alterative.

FEIS Tables 2 and 3 below display a comparison of the purpose and need and issues by alternative.

FEIS Table 2. Alternative comparison table - purpose and need

Indicator	No Action	Alt. 2	Alt. 3	Alt 2a
Vegetation Restoration				
Acres of restoration of white pine or western larch	0	543	443	540
Acres of restoration of fire regime vegetation characteristics	0	1086	986	888
Acres of aspen enhancement	0	84	0	19
Acres of ecosystem and wildlife burning	0	718	718	718
Road and Trail Management				
Miles of Intermittent stored service for Grizzly habitat improvement	0	22.6	22.6	18.5
Motorized route designation Road miles designated open motorized Trail miles designated non-motorized	 0 0	 65.5 38.8	 65.5 38.8	 65.5 38.8
Miles decommissioned (passive)	0	16.9	16.9	27
Watershed Rehabilitation				
Miles decommissioned (active)	0	19.5*	19.5*	15.4
Miles of intermittent stored service (active)	0	11.6	11.6	9.7
Miles of Best Management Practices implemented (prioritized based on funding)	0	54.5	49.4	36
Fuels Management				
Acres thinned to reduce stocking	0	898	753	863
Acres treated to reduce fuel loading	0	923	886	907
Fire hazard ratings Very High/High Moderate Low	 45% 55% 0%	 6% 25% 69%	 6% 25% 69%	 6% 25% 69%
Timber Production				
Million board feet of timber produced	0	9.97	8.38	8.2

*Note: Post DEIS field verified miles of active decommissioning work = 19.5 miles. See FEIS Ch. 6, pg. 13.

FEIS Table 3. Alternative comparison by significant issue

Indicator		No Action	Alt. 2		Alt. 3		Alt. 2a	
Grizzly Bear Disturbance and Displacement (BMU 11/14)								
Measure	**Standard**	**Existing**	**During Activity**	**Post Activity**	**During Activity**	**Post Activity**	**During Activity****	**Post Activity**
Percentage of secure core habitat	55% or greater	52/56	54/55	55/56	54/55	55/56	52*/55	56/56
Open Motorized Route Density (OMRD)	33% or less	28/28	28/29	28/28	28/29	28/28	32-31 /29	28/28
Total Motorized Route Density (TMRD)	26% or less	29/26	27/26	26/26	27/26	26/26	29-27 /26	25/26
Habitat Effectiveness (HE)	70% or greater	74/76	70/76	74/76	71/76	74/76	70-72 /76	74/76
Open Road Density (ORD)	0.75 mi/sq. mi. or less	0.44/0.57	0.48/0.58	0.48/0.57	0.48/0.58	0.48/0.57	0.58-0.57 /0.58	0.48/0.57
Regeneration Harvest Units Greater than 40 Acres								
Number and size of regeneration harvest openings greater than 40 acres		0/0	1/126		0/0		1/52 1/74	
Number and size of regeneration harvest operations in MA 11 greater than 20 acres		0/0	1/126		0/0		1/52 1/74	
Grapple Piling Impacts on Soil and Weed Infestation								
Acres treated with grapple piling		0	712		223		308	
Effects on Potential Future Wilderness Consideration								
Effects to roadless area characteristics Natural integrity Apparent naturalness Remoteness Solitude Special Features Manageability		No change No change No change No change No change No change No change	Short term impact Short term impact Short term impact Short term impact No change No change		Short term impact Short term impact Short term impact Short term impact No change No change		Short term impact Short term impact Short term impact Short term impact No change No change	
Fragmentation								
Number of units/acres treated in Units 40, 60		0/0	2/57		0/0		2/57**	
Non-Commercial Fuels Treatments along Long Meadows Roads 593, West of the Town of Yaak								
Acres treated along Long Meadows Road		0	163		189		152 (field verified)	

*If decommissioning and all other activities were active at once. This will not be the case due to timing restrictions (see FEIS Appendix 1, Alternative 2a Design Features).
**See FEIS Ch. 5, pg. 16 for more information.

DEIS Errata

Following is errata since the release of the DEIS in 2007 to reflect: 1) suggestions of clarification from public comments, 2) errors; and 3) changes in law, regulation, or policy.

Errata-DEIS Chapter 1, Purpose and Need

DEIS pg. xi, Table S-4, and Chapter 2 pg. 26, Table 4, Alternative Comparison Issue Indicators: Under issue indicator "Effects to Potential Future Wilderness Consideration," subcategories Natural Integrity and Apparent Naturalness, delete "Improved,"

Replace with "Short term impact." FEIS Table 3 above includes this correction.

DEIS Chapter 1, pg. 8, Temporal Scope: The temporal scope of the project is updated. The predicted year of occurrence is one year later than displayed in the DEIS. **Replace with:**

Temporal Scope: The action alternatives would result in timber sales which would be planned for bid in the fall of 2009. Harvest is expected to be completed by 2012, with extension possible for market-related conditions. Slash disposal and reforestation activities are predicted to be completed by 2013. Burning treatments are anticipated to be accomplished by 2015 if funding is obtained and timing restrictions allow. Typically, work on haul roads using best management practices (BMPs) would be accomplished prior to haul of timber products. Precommercial thinning activities are expected to be accomplished by 2015. The watershed rehabilitation work is dependent on timing restrictions and obtaining funds, so timing is uncertain; however, based on past experience, funding is likely. These dates are tentative, based upon anticipated budgets, work force, weather and other considerations. Actual dates and timing of implementation and accomplishment could vary.

Errata-DEIS Chapter 2, Alternatives

DEIS Chapter 2, pg. 14, Alternatives Considered but Eliminated from Detailed Study: The rationale for the alternative considered but eliminated from detailed study, "Close Burnt Dutch road (472) between Grizzly and Sheepherder trailheads, either seasonally (April 1-June 15) or close yearlong," is updated to more fully explain the existing use and rationale.

Replace with:

Close Burnt Dutch road (472) between Grizzly and Sheepherder trailheads, either seasonally (April 1-June 15) or close yearlong

This action was proposed by the public to 1) reduce disturbance and displacement of grizzly bears using a known travel corridor between Grizzly Peak and Sheepherder Peak, and 2) to improve the wilderness characteristics of this area for future wilderness consideration.

The proposed action identified specific actions to meet core habitat requirements, total motorized road density (TMRD), open motorized road density (OMRD), habitat effectiveness (HE) and linear open road density (ORD) requirements. Closure of this road is not necessary to meet grizzly bear requirements (see FEIS Appendix 4).

The Burnt Dutch Road #472 is a 16-mile road traversing the pass between Roderick and Grizzly peaks. It connects the Yaak Highway 508 with the South Fork Yaak/Pipe Creek Road NFSR 68.

The first and last 5.5 mile stretches climbing either side of the pass are aggregate surfaces maintained forpassenger car travel (maintenance level 3). The middle five-mile section cresting the pass is a native rocky surface, maintained for high clearance vehicles (maintenance level 2). In an average year, this middle section of the road is impassible to wheeled traffic due to snow from early December to mid-June. The trailheads for Grizzly Mountain Trail #182, Roderick Mountain Trail #189, and Pleasant View/Sheepherder Trail #19 are all accessed via this route. The Burnt Dutch Road is particularly appealing as a high elevation scenic loop route through forested terrain as an alternative to the main paved roads passing through the valley bottoms of the Yaak area. BMP work includes culvert replacement and drainage work to reduce sediment delivery, not surface improvements, so motorized travel isn't expected to increase due to this project (see Appendix 1, BMP Work). Although traffic is not heavy, it is a popular recreation route providing access for scenic viewing, huckleberry picking, hunting, gathering firewood, and hiking. Interdisciplinary travel analysis for this project identified this road as needed (see Transportation section of the project file).

Changing public access is controversial, and is planned to be addressed at a larger scale at a future date. Public input provided during Forest Plan Revision identifies loop road opportunities as highly valued; therefore, this is better addressed at a larger scale with opportunities for the public to comment on the proposal. Retaining current access management on this road now does not preclude the consideration of closing this road in the future.

Errata -DEIS Chapter 3, Affected Environment and Environmental Consequences

Forest Vegetation

DEIS, pg. 36, Affected Environment: The first sentence in the 4th paragraph under the heading "Fire Suppression/Timber Harvest, is edited to include the following text shown in italics.

These two extensive fire events, along with the subsequent implementation of a fire suppression policy, has resulted in *a reduction from the historic range* of an age class greater than 150-years old… .

DEIS, pg. 45, Environmental Consequences: Under Alternative 1, Consistency with 1987 LRMP, delete the following:

The No Action Alternative would not meet direction from 36 CFR 219.26 which requires forest planning to provide for diversity of plant and animal communities and tree species consistent with the overall multiple use objectives of the planning area.

Replace with: The No Action Alternative would not meet direction from 16 USC 1604(g) (3)(B) which requires forest planning to provide for diversity of plant and animal communities, and provide where appropriate, to the degree practicable, for steps to be taken to preserve the diversity of tree species similar to that existing in the region controlled by the plan.

Air Quality

DEIS pg. 66, Affected Environment: Replace DEIS Table 20 with the following table

FEIS Table 4. Montana and Federal Ambient Air Quality Standards pertinent to the project - replaces DEIS Table 20.

Pollutant	Average Time	Montana Standards	Federal Standards
Ozone	8-Hour	—	0.08 ppm
Respirable Particulate Matter (PM-10)	24-Hour	150 µg/m^3	150 µg/m^3
Fine Particulate Matter (PM-2.5)	24-Hour	—	35 µg/m^3
	Annual Arithmetic Mean	—	15 µg/m^3
Carbon Monoxide (CO)	8-Hour	9.0 ppm	9 ppm
	1-Hour	23 ppm	35 ppm
Nitrogen Oxide (NO2)	Annual Arithmetic Mean	.05 ppm	0.053 ppm
	24-Hour	0.3 ppm	---
Sulfur Dioxide (SO2)	Annual Arithmetic Mean	0.02ppm	0.030 ppm
	24-Hour	0.10 ppm	0.14 ppm
	1 Hour	0.50 ppm	0.50 ppm

Source: EPA and Montana Department of Environmental Quality.

DEIS, pg. 67, Affected Environment: The 2nd paragraph on pg. 67 is edited to include the following text shown in italics: "The Regional Haze Rule also requires states to address visibility impairment in mandatory class I areas due to emissions from fire activities. The Preamble to the Rule emphasizes the 'implementation of smoke management programs to minimize effects of all fire activities on visibility.' The Rule requires states to address visibility effects from all fire sources contributing to visibility impairment in mandatory class I areas (Dzomba and Story 2005). *In 2006 Montana DEQ announced that due to the EPA's stagnant and uncertain financial support the state returned administration of the rule back to the federal government."*

DEIS, pg. 71, Environmental Consequences: The 2nd paragraph is edited to include the following text shown in italics: "Smoke particles from the combustion of woody biomass are small, with about 80 percent of smoke particulates being less than 2.5 microns. Health problems can be caused by PM 2.5 especially for people suffering from cardiopulmonary illnesses. Federal Ambient Air Quality Standards are set at levels intended to protect public health. EPA issued official designations for the PM 2.5 standard on December 17, 2004, and made modifications in April 2005; prior to that time only PM 10 was monitored. *The 2006 standards tighten the 24-hour fine particle standard from 65 micrograms per cubic meter (µg/m^3) to 35 µg/m^3, and retain the current annual fine particle standard at 15 µg/m^3*. Currently, the State of Montana has not adopted a more stringent standard than Federal regulations recommend."

DEIS pg. 71, Environmental Consequences: Replace DEIS Table 22 with the following table:

FEIS Table 5. Visibility and PM particulates - replaces DEIS Table 22.

Categories	24 hour PM2.5 (µg/m3)	8 hour PM2.5 (µg/m3))	1 hour PM2.5 (µg/m3)	Visibility (miles
Good	0–15	0–22	0–40	> 11.25
Moderate	15–40	22–58	40–80	5.6-11.24
Unhealthy for sensitive people	40–65	58–93	80–175	2.57-5.61
Unhealthy for all people	65–150	93–215	175–300	1.5-2.56
Very unhealthy	150–250	215–358	300–500	0.9-1.49
Hazardous	>250	>358	>500	<0.9

Soils

DEIS pg. 78. Environmental Consequences: In the 1st paragraph under Direct Effects of Tractor Harvesting add the following:

"There are seven Forest landtypes that are considered 'sensitive' (102, 112, 325, 351, 365, 370, and 520). The sensitive landtypes that occur within the analysis area are landtypes 102 and 351, which comprise 177 acres, or less than 1 percent of the project area. An analysis of the proposed activities found that there is no harvest proposed on either sensitive landtypes or low productivity soils under any of the action Alternatives (see Landtypes map in FEIS Appendix 2 and soils section of the project file). No landslide risk was identified in any of the proposed units for the action alternatives (DEIS pg. 86)."

DEIS pg. 79. Environmental Consequences: In the 5th paragraph under Direct Effects of Tractor Harvesting delete the following to update predicted soil impacts utilizing the most recent KNF monitoring information:

"The prediction of proposed detrimental effects is based upon monitoring results from Kuennen (1998, 2005) for units with little past disturbance."

Replace with: "The prediction of detrimental effects for the action alternatives is based upon KNF monitoring results from 2000-2005. (Kuennen 2006)."

Note: See FEIS Appendix 2, Table 2 for these monitoring figures, and FEIS Appendix 2, Table 3 for this updated display.

DEIS pg. 80-81. Environmental Consequences: Delete DEIS Table 3-24 and replace with FEIS Appendix 2, Table 3.

DEIS pg. 82. Environmental Consequences: In the 1st bullet statement under Direct Effects of Tractor Harvesting delete the following:

"Information specific to quantifiable reductions in detrimental soil disturbance from restoration activities is unavailable (Shovic 2007, pers. Comm.), and estimates are based upon existing research (Foltz and Maillard 2004, Switalski et al 2004, Clearwater NF Monitoring, USDA Forest Service 2003) which indicate these activities will improve existing soil conditions."

Replace with: "Examples of quantifiable reductions in detrimental soil disturbance related to restoration activities are available (KNF 1997, 2002; ID Panhandle NF 2007). Such activities are expected to improve existing soil conditions with time. Existing research also indicates these activities would improve existing soil conditions (Foltz and Maillard 2004, Switalski et al 2004, Clearwater NF Monitoring, USDA Forest Service 2003)."

DEIS pg. 82. Environmental Consequences: In the 7th paragraph under Direct Effects of Tractor Harvesting delete the following:

"For example, Unit 1 has upwards of 5% predicted disturbance compared to unit 3 with 2%. Unit 3 has much higher level restrictions and reclamation activities including more skid trail/road recontouring to restore natural slope processes."

Note: The above statement is no longer applicable, because Units 1 and 3 predicted disturbance figures have been updated in accordance with Kuennen 2006. See FEIS Appendix 2, Tables 2 and 3.

Hydrology and Fisheries

DEIS pgs. 89-91, Affected Environment: Insert the 2005 fish survey monitoring data, discussed in the DEIS fisheries Watershed Existing Condition section on pgs. 106 – 108, into the Hydrology section as follows:

Insert on DEIS pg. 89: Stream monitoring conducted in 2003 and 2005 indicates improved stream channel conditions, listed below by stream, as compared to data collected in 1977 and 1980. This improvement results from the change in environmental conditions during this approximately 25 year period.

The many newly constructed roads in the 1960s and 1970s created higher amounts of sediment due to the raw unvegetated slopes and more impactive construction techniques used during that time period. Higher harvest intensity and lack of riparian buffers also have contributed to channel degradation. During this era stream crews removed many logs from the streams because logs were thought to be detrimental to stability and restrict fish migration. Lack of large woody debris further destabilized the streams.

Since that earlier era most roads have stabilized and revegetated. This recovery, as evidenced by the more recent stream data, has substantially reduced management-related sediment. Tree growth in the old harvest units has reduced water yield, allowing for more stabilized stream flows in headwater watersheds. Previously harvested riparian areas are recovering with shrubs and trees which has improved bank stability. Large woody debris has gradually been recruited back into the stream channels.

In 2003 stream monitoring sites were established throughout the Yaak River basin for the TMDL project, and four monitoring sites were established in the Grizzly project area (Burnt Creek, Grizzly Creek, Pheasant Creek, and Cool Creek). Grizzly Creek is a tributary to Burnt Creek, and considered a reference watershed. Conditions were excellent and included a particularly robust macroinvertebrate community. Burnt, Pheasant and Cool Creeks monitoring sites were all found to be in relatively good condition with respect to channel morphology, channel stability and percent fines (see project file). No macroinvertebrate data was collected in these three streams.

Insert on DEIS pgs. 90-91, by subwatershed (see DEIS Figure 2 on pg. 87 for subwatersheds):

Burnt Creek: A 2005 fish survey (USDA Forest Service, 2005c) conducted in three short reached in the lower three miles of Burnt Creek indicated very good bank stability, little to no fines on the stream bed, and little Large Woody Debris (LWD).

Cool Creek: A 2005 fish habitat survey (USDA Forest Service, 2005c) conducted on a short reach above the 593 Road showed good bank stability and little to no LWD and surface fines on stream bed.

Gus Creek: A 2005 fish habitat survey (USDA Forest Service, 2005c) conducted on a short reach above the 593 Road showed little LWD but moderate to high percentage of fines on the stream bed and fair bank stability.

Lang Creek: A fish habitat survey was conducted in 2005 (USDA Forest Service, 2005c) on a short reach near the Yaak River confluence above the 6815 Road. It showed moderate to high amounts of surface fines on the stream bed, little LWD, and poor to fair bank stability on average.

Pheasant Creek: A 2005 fish habitat survey (USDA Forest Service, 2005c) of two short reaches in the bottom of Pheasant Creek, just above the 593 Road and approximately 1.25 miles upstream

of that point, showed fair bank stability, moderate to high levels of fines on the surface of the stream bed and high levels of LWD.

DEIS pg. 94, Environmental Consequences, Watershed Rehabilitation. Further field review of the watershed work since the DEIS determined that 10.5 additional miles of road could be safely abandoned without active treatment. As a result 19.5 miles of road would have been actively decommissioned under Alternatives 2 and 3, not 30.0 miles as shown in the DEIS. The segments of road designated for passive decommissioning have minor or no stream crossings, low fills, little active erosion, little evidence of water routing, and no risk of mass failures. Abandoning these roads would not adversely affect water quality, stream channel conditions, or fisheries.

DEIS pg. 96, Environmental Consequences, Combining effects from past, present, and reasonably foreseeable actions: Add the following paragraphs as clarification of the ECA water yield analysis description:

The current Forest Plan requires the consideration of the effects of water yield increases resulting from cumulative timber harvest. Guidelines for analyses are found in the Forest Plan (USDA FS September 1987), and two subsequent letters of clarification (Johnson March 13, 1991; Solem October 2, 1995). ECA guidelines developed for the Upper Kootenai Subasin Assessment will be used in this analysis and are shown in the table below (KNF, May 15, 2002).

These guidelines were developed by the Forest hydrologists using professional knowledge of the stream channel conditions in watersheds with various ECAs. A low rating indicates a low potential for ECA to affect channel condition. A moderate rating indicates that stable stream channels are unlikely to be affected, but more unstable or sensitive channels may be affected, especially at the higher end of moderate. A high rating indicates that effects could be expected in all but the most stable channels. The following guidelines are applicable for six watersheds in the Grizzly project area over 640 acres in size (Burnt, Cool, Gus, Lang, Lucky Gulch, and Pheasant Creeks).

FEIS Table 6. Guidelines for risk of channel effects by % ECA

% ECA	RISK RATING
<15%	Low
15-30%	Moderate
>30%	High

(KNF, May 15, 2002)

Analysis of watersheds smaller than 640 acres is subject to Forest Plan guidelines for maximum allowable ECA (see table below). For the Grizzly project four subwatersheds are less than 640 acres in size (Yaak#14, 15, 21, and 23). The allowable ECA varies by watershed size, aspect, and elevation (Johnson March 13, 1991). These are guidelines and do not ensure beneficial uses are protected. The allowable ECA depends on the professional evaluation of a number of factors, including channel stability (Johnson, October 2, 1995).

FEIS Table 7. Guidelines for maximum ECA in watersheds less than 640 acres

Watershed size (acres)	Aspect	Elevation	Maximum% ECA
<300	All	> 5200 feet	40
	N, E,W	< 5200 feet	40
	S	< 5200 feet	50
300-640	N, E, W	All	40
	S	> 5200 feet	30
	S	< 5200 feet	40

(Johnson, March 13, 1991)

DEIS, pg. 107, Affected Environment: Delete the following:

5) **Substrate:** Substrate embeddedness in rearing areas has not been quantified, however based on fine sediment data it is unlikely to be an issue.

Replace with: "Substrate: Substrate embeddedness in rearing areas has not been quantified. *Although surveys conducted in 2005 found that fine sediment is high in several reaches, sediment levels are less than those found in surveys conducted in the 1980s (see DEIS pg. 106 for more information on sediment. Based on this data, substrate embeddedness is unlikely to be an issue."*

Wildlife

DEIS pg. 118, Threatened and Endangered Species: Replace this section with the following to reflect recent changes in species status:

Replace with: A current species list for the Kootenai National Forest (KNF) was obtained from the U.S. Fish and Wildlife Service (USFWS) website (http://montanafieldoffice.fws.gov) on 12/16/2008. The USFWS concurred with potential listed species distribution maps and resulting consultation areas for the KNF in 2001 (USDI FWS: Wilson). Species status in the area of the proposed project is shown in FEIS Table 8.

Table 8. Threatened, endangered and proposed species known or suspected to occur within the influence area of the proposed action - replaces DEIS Table 31.

Species	Status	Occurrence
Grizzly Bear (*Ursus arctos*)	Threatened	Known
Gray Wolf *(Canis lupus)*	Endangered*	Known
Canada Lynx (*Lynx canadensis*)	Threatened; Critical Habitat Identified	Suspected

*Gray Wolf will be delisted effective April 6, 2009

DEIS pg. 118-119, Grizzly Bear Affected Environment: Replace the affected environment section with the following paragraphs to reflect updated mortality information.

Replace with: The proposed project is in the Cabinet-Yaak grizzly bear recovery zone (USFWS 1993). Habitat conditions in the recovery zone have been improving steadily since 1987 as documented by Summerfield et al. (2004), and the annual Kootenai Forest Plan monitoring reports (monitoring item C7). The grizzly bear population for the CYE is currently estimated at 30-40 animals, with a 94% probability of a downward population trend (Kasworm et al. 2007). Causes of grizzly bear mortality have generally been due to factors beyond Forest Service control (e.g., train collision, management removal due to food attractant on private land, hunter mistaken identity or defense of life and illegal kill by a human).

Project activities would occur in two Bear Management Units: BMUs 11 and 14 (see Appendix 4 Grizzly Bear Core map). Bear activity in the impacted BMUs is summarized in FEIS Appendix 4, Table 1. The known mortality (female bear) in BMU 11 during 2005 was a case of mistaken identity by a hunter on private land along the Yaak River.

FEIS Table 9. Bear activity - replaces DEIS Table 32.

BMU	Year	Credible Sightings	Sightings of Female with Cubs	Sightings of Females with Yearlings or 2-year olds	Human Caused Mortality
BMU 11	2006	4	0	0	0
	2005	4	0	1	1
	2004	7	0	0	0
	2003	4	0	0	0
BMU 14	2006	0	0	0	0
	2005	1	0	0	0
	2004	0	0	0	0
	2003	2	0	0	0

Data compiled from annual reports from Kasworm et al. 2004-2007.

<u>DEIS pgs. 119, Grizzly Bear Habitat Standards:</u> Replace the Habitat Standards section with the following more recent information on the basis for grizzly bear habitat standards. The numerical standards displayed in DEIS Tables 33, 34, 35, and 36 have not changed.

Replace with:

Habitat Standards - The Biological Opinion (BO) for the 2004 Forest Plan Amendments for Motorized Access Management was withdrawn by the USFWS due to a court injunction (Cabinet Resources Group vs. USFWS, CV 04-236-M-DWM) on the 2004 Forest Plan Amendment. *Note: Since the BO was withdrawn, DEIS Table 39 no longer applies.*

In lieu of the 2004 Forest Plan Amendment Biological Opinion, the effects analysis is based on best science as follows:

1) Recommendations based on Wakkinen and Kasworm (1997). See DEIS Table 33 and FEIS Appendix 4, Table 1. These recommendations are percentages for core habitat, open motorized route density (OMRD), and total motorized route density (TMRD). (See DEIS pg. 119 for an explanation of these standards.) Two District Court decisions (Cabinet Resources Group and AWR vs. USFWS, CV 07-150-M-DWS) determined that Wakkinen and Kasworm (1997) represents the Best Available Science regarding the effects of motorized access on grizzly bears in the Selkirk and Cabinet-Yaak Ecosystems. Note: In Cabinet Resource Group, Judge Donald Molloy found that an information gap exists in Wakkinen and Kasworm and an environmental analysis must acknowledge (per 40 CFR 1502.22) that the study's authors were unsure whether the bears they studied had chosen optimal habitat or whether they simply chose the best habitat available from a degraded landscape. Johnson 2007, "In defense of Wakkinen and Kasworm (1997) paper as 'best science' in the Selkirk and Cabinet-Yaak Grizzly Bear Ecosystems" addresses this question.

2) Compliance with management direction for grizzly bears that was in place prior to the 2004 Forest Plan Amendment (see Johnson 2006). These requirements come from the 1987 KNF Forest Plan, consultations since 1987, the 1995 Amended Biological Opinion and Incidental Take Statement on the 1987 Forest Plan, and the Selkirk/Cabinet-Yaak Grizzly Bear Areas Interim Access Management Rule Set (12/1/1998).

<u>DEIS pg. 121, Grizzly Bear Environmental Consequences:</u> In the 2nd paragraph under Alternative 1, change the total miles of existing road in the project area from 3,115 miles to 293 miles.

DEIS pg. 124, Grizzly Bear Environmental Consequences: Replace the 2nd paragraph of the Corridors analysis with the paragraph below. This clarification more specifically addresses Unit 40 and corrects the analysis of Unit 60 regarding Road #472. Best Management Practices (BMP) work on Road #472 to access Unit 60 would be limited to culvert replacement and drainage work to reduce sediment delivery (DEIS pg. 224), not surface improvements, so motorized travel is not expected to increase due to this project.

Replace 2nd paragraph with: "The following references recognize areas that disrupt wildlife movement between blocks of habitat are either fracture zones or contribute to habitat fragmentation as synthethized below:

> Habitat fragmentation is the process of separating populations of animals and their habitats into smaller and smaller units. The main factor causing habitat fragmentation is human development, especially when development occurs in a linear fashion: highways and roads are examples. *IGBC Letter 2001 for the next source.*
>
> Habitat fragmentation is usually accompanied by habitat loss. *Servheen, C., J. Waller and P. Sandstrom. 2001. Identification and management for linkage zones for grizzly bears between the larger blocks of public land in the Northern Rocky Mountains. USFWS, U. of MT, Missoula, MT. 89 pp.*
>
> Fracture zones- highways, railroads and similar potential barriers to wildlife movement and the adjacent developed private lands, typically in mountain valleys between large tracts of public lands. *IGBC. 2004. Identifying and managing wildlife linkage approach areas on public lands. 39 pp.*

In summary, such a zone is usually linear human developments that are managed for long-term human access and denial of vegetation succession. Examples of such areas are highways, railroads and similar potential obstacles to wildlife movement between large tracts of public lands. Those known or potential wildlife crossing areas between public lands are identified as linkage zones, approach areas, or movement corridors.

Implementation of harvest in Units 40 and 60 would not fragment the movement corridors associated with these units. Both units are comprised of mature lodgepole that is susceptible to blowdown (DEIS pg. 50), neither unit is larger than 40 acres, and both are surrounded by unharvested stands or timber that is large or dense enough to provide hiding cover for wildlife. Harvest would not result in a long-term denial of vegetation, since hiding cover for the bear would return in a couple of decades. Additionally, these patches of open habitat can easily be maneuvered around by grizzly bears in adjacent stands and habitat that offer hiding cover and forage. The harvest activity planned for these units would likely increase huckleberry (*Vaccinium* spp.) production over time (DEIS pg. 123). Road #472 to Unit 60 would not be improved to a condition of providing a larger density of traffic or accommodating increased speeds for vehicles since the road is not being resurfaced. This road is normally impassable to vehicles from early December to mid-June due to snow. Any disturbances to wildlife in these units during project implementation would be temporary and short term.

DEIS pgs. 127 – 131, Canada Lynx analysis: Replace DEIS Canada Lynx analysis with the Canada lynx analysis displayed in FEIS Appendix 4. The final rule for designating critical habitat for the Canada lynx was recently published in February 2009. The updated lynx analysis presented in Appendix 4 for the action alternatives complies with this rule. Revised direction for Canada lynx critical habitat (50 CFR Part 17, Feb. 2008) required habitat surveys for winter

snowshoe hare. The required surveys were conducted in the action alternative harvest units that are located in a Lynx Analysis Unit (LAU) and shown in this updated analysis. The finding of "*may affect, but is not likely to adversely affect*" does not change.

DEIS pgs. 131 – 134, Gray Wolf analysis: Replace the DEIS Gray Wolf analysis for the action alternatives with the Gray Wolf analysis displayed in FEIS Appendix 4. This FEIS analysis corrects wolf pack information in the project area as discussed in the affected environment section, and updates the cumulative effects section. The ESA listing of the gray wolf has changed several times in recent years with court opinions and updated direction. Currently, and for purposes of this FEIS analysis, the gray wolf is considered as listed. The finding of "*may affect, but is not likely to adversely affect*" does not change.

DEIS pg. 134, Bald Eagle analysis: The bald eagle was removed from the Endangered Species list during the summer of 2007, and subsequently placed on the Kootenai NF sensitive species list. The analysis of project effects on the bald eagle in the DEIS pgs. 134 - 137 remains the same, except that the determination in the Statement of Findings on pg. 137 is changed to, "the project "*may impact bald eagle individuals and/or their habitat, but is not likely to contribute to a trend toward federal listing or loss of species viability.*" This is the case for all action alternatives, including Alternative 2a.

DEIS pg. 140, Black-Backed Woodpecker Environmental Consequences: Add the following paragraph under Alternatives 2 and 3, paragraph 4 clarifying how this project meets snag standards and recommendations:

"Some of the proposed harvest units are currently lacking the per acre quantity of snags, while other units lack the larger diameter snags. Prescribed burning may create more snags in these units, but the units may still remain deficient in snags. As mentioned in the paragraph above, the Forest Plan direction is to retain a minimum of 0.9 snags/acre to provide for bird cavity nesters. New science (e.g. Bull e.al 1997), since the Forest Plan has been incorporated into the Northern Region Snag Protocol (USDA Forest Service 2000) recommendations for minimal snag conditions of an average of 4 snags per acre. The action alternatives in the Grizzly Project would meet these recommendations by leaving current snags and recruitment snags (live trees that would die in time). All action alternatives would leave a minimum average of 4-6 snags/acre, in each harvest unit. Snags and recruitment trees would be left in units as individual trees or clumps/islands of trees. OSHA regulations require the removal of hazard trees that are perceived as a safety risk to woodworkers; however, they would be left on site for all tractor units (See FEIS Appendix 2, Design Features). All action alternatives would exceed the Forest Plan direction for average snag densities per unit. As stated on DEIS pg. 140, 91 percent of the existing general forest habitat and 100 percent of the identified high-quality habitat would remain following implementation of the action alternatives."

DEIS pg. 148, Northern Goshawk: The northern goshawk was removed from the Region One sensitive species list in 2007.

Proposed, Threatened, Endangered and Sensitive Plants (PTES)

DEIS pg. 175, Affected Environment: Delete the following sentence: "No PTES plant species are known to occur in the Kootenai NF."

Replace with: "No proposed, threatened, or endangered plant species are know to occur on the Kootenai NF."

Noxious Weeds

DEIS pg. 32, Table 9; pgs. 180 and 185: The 1997 Herbicide Weed Control Environmental Assessment and Decision Notice has been superseded by the 2007 Kootenai National Forest Invasive Plant Management Plan EIS and Record of Decision.

Inventoried Roadless Areas

DEIS pg. 189, Regulatory Authority: Delete the following sentence: "Current direction for roadless areas is provided in the Roadless Rule of January 12, 2001.

Replace with: In 2001, the USDA adopted the Roadless Area Conservation Rule (36 CFR 294), which established prohibitions of road construction and reconstruction and timber harvesting in IRAs on National Forest System lands. On August 12, 2008, the Federal District Court for the District of Wyoming, declared that the 2001 Roadless Area Conversation Rule (RACR) was promulgated in violation of the National Environmental Policy Act (NEPA) and the Wilderness Act. The court held "the roadless rule must be set aside" and that "[t]herefore, the Court ORDERS that the Roadless Rule, 36 CFR §§ 294.10 to 294.14, be permanently enjoined, for the second time." Previously, another Federal district court in California had issued an order that reinstated the 2001 roadless rule, including the Tongass-specific amendment, and specified that "federal defendants are enjoined from taking any further action contrary to the [2001] Roadless Rule....". On October 31, 2008, the United States District Court for the Northern District of California held a hearing to consider whether to modify the scope of a nationwide injunction it imposed in a 2006 decision which invalidated the 2005 State Petitions Rule and reinstated the 2001 Roadless Rule.

Chapter 6 – Public Involvement since the DEIS

Introduction

The Grizzly Vegetation and Transportation Management Project Draft Environmental Impact Statement (DEIS) disclosed the analysis of effects related to the environmental impacts of three alternatives; no action, the proposed action, and an alternative that addressed concerns identified during the scoping of the proposed action. The DEIS was released to the public for comment on June 8, 2007 with a notice in the Federal Register, as well as notice in the newspaper of record, Kalispell *Daily Interlake*, and mailings to those that responded during the initial scoping.

There were twelve responses to the request for comments on the Draft Environmental Impact Statement, listed below. Each comment letter was carefully considered by the interdisciplinary team, District Ranger and District Staff. The agency responses to these comments are included in the following section.

Letter Number, Commentor	Page number
Letter #1 – WildWest Institute	20
Letter #2 – Alliance for the Wild Rockies	38
Letter # 3 – Yaak Valley Forest Council	41
Letter #4 – Environmental Protection Agency	46
Letter #5 – Randy Beacham	68
Letter #6 – B. Sachau	70
Letter #7 – Robyn King and Jimmy Martin	71
Letter #8 – Rick Bass	72
Letter #9 – Yaak Valley Forest Council – addendum	77
Letter #10 – Larry Coryell	79
Letter #11 – Sue Janssen	80
Letter #12 – American Wildlands	81

PUBLIC INVOLVEMENT SINCE THE DEIS

Public Comments on the DEIS: The DEIS was released to the public for comment on June 8, 2007, with a notice in the *Federal Register*, as well as notice in the newspaper of record, Kalispell *Daily Inter Lake*, and mailings to those that responded during the initial scoping. There were twelve responses to the request for comments on the Draft Environmental Impact Statement. Each comment letter was carefully considered by the interdisciplinary team, District Ranger and District Staff. Agency responses are included in the Final Environmental Impact Statement (FEIS).

A public field trip was held on August 29, 2007, to visit and discuss road decommissioning proposals within the project area. Several members of the public attended along with representatives from the U.S. Fish and Wildlife Service.

Tribal Involvement: The concerns of the Kootenai and Salish tribes were solicited through project scoping. In addition, the Confederated Salish and Kootenai Tribes have provided a tribal liaison to work in partnership with the Kootenai NF to review project proposals and provide tribal input. No concerns regarding this project were expressed by tribal governments.

Other Agency Involvement: The U. S. Fish and Wildlife Service, and Montana Department of Fish, Wildlife and Parks were consulted regarding fish and wildlife habitat, and the Lincoln County Air Quality Department was consulted regarding air quality conditions. The Montana Department of Environmental Quality (MDEQ) and the Environmental Protection Agency (EPA) also received project notifications.

The Environmental Protection Agency (EPA) submitted scoping comments and DEIS comments (see FEIS, Ltr. #4). EPA and the KNF completed a total maximum daily load (TMDL) for the Yaak River basin (Yaak TMDL) in 2008. None of the streams in the Grizzly project area were found to be impaired.

Through informal consultation on the biological assessment for this project, the U. S. Fish and Wildlife Service concurred on April 17, 2009, that the project may affect but is not likely to adversely affect the grizzly bear, gray wolf, and Canada lynx (see Concurrence section of the project file). Biological assessments document that the project will have no effect on the water howellia, Spalding's catchfly, slender moonwort, white sturgeon, or bull trout.

RESPONSE TO COMMENTS

Following are public comments on the DEIS and agency responses.

WildWest Institute
P.O. Box 7998
Missoula, MT 59807
(406) 728-5733
(406) 728-5779 fax
info@wildwestinstitute.org

July 20, 2006

Mike Herrin, District Ranger
Three Rivers Ranger Districts
1437 N. Highway 2
Troy, Montana 59935

Transmitted via email--please acknowledge receipt!

Mr. Herrin,

These are comments for the DEIS Grizzly Vegetation and Transportation Management Project on behalf of the WildWest Institute and the Alliance for the Wild Rockies.

The Forest Service should clarify how the effects on potential future Wilderness consideration such as natural integrity and apparent naturalness will be "improved" (Table S-4) by the proposed actions (logging & clearcutting). Common sense would have one believe that hacking down forest in the project area would actually decrease the chances of the area being designated as wilderness – unless the Congress gets so scared that the Forest Service is going to cut the last few remaining wild places that they will be compelled to designate the areas as wilderness. We don't believe that is the case, however. ←1

Vegetation Restoration

The DEIS states that there is a need to continue management practices that reduce overall density of stands to promote large tree growth. (DEIS at 2). The hypothesis of logging old growth to enhance old growth is not scientifically verified. Is the Forest Service proposing to log any old growth? The DEIS states that it wants to log approximately 450 acres of mature to old forest through regeneration (clearcutting) and intermediate harvest. (DEIS at 149). How does "mature" and "old forest" differ from "old growth?" The FS should clarify this in the FEIS. ←2

Forest Plan Amendment – MA 12 Open Road Density

The FS needs to address how timber harvest access in unit 17 will affect grizzly core habitat in light of the fact that the road density would jump from .62 miles per square mile to .79 miles/square mile (p. 21 DEIS). Additionally, the FS needs to address how this change in road density is congruent with Forest Plan Management Area Direction ←3

Response to #1-1 - Table S-4 was incorrect (as was Table 4 on page 26). The findings should be "Short term impact" related to the sights and sounds from activities. The FEIS errata shows these changes. The selected alternative drops the harvest of Units 57 and 57a which were just outside the Roderick Mountain IRA, so those effects projected under Alternative 2 would not occur (DEIS, pg. 191). There are no proposed harvest activities or roads in either IRA. Future consideration for Wilderness would not be precluded (DEIS, page 192, FEIS Ch. 5, pg. 5).

Response to #1-2 – The definitions of mature and late-seral (also referred to as "old forest") are found on page 40, and are based upon overall age class of the stand. The discussion on page 44 identifies reasons why these stands would not succeed into historic late-seral structures. These stands differ from "old growth" in that they do not have the attributes of effective old growth suggested in "Old Growth Forest Types of the Northern Region" (Green et al. 1992, corrected 02/2005) by habitat type. Old growth was identified and validated for this project (data located at Three Rivers Ranger District) and no old growth stands (effective or replacement, designated or undesignated) are proposed for treatment (DEIS pg. 49).

Response to #1-3 – MA 12 is a management area for big game summer range. The road density referred to only applies to this MA. Alternative 2a meets road density standards for MA 12 since all units in MA 12, including Unit 17, will be harvested in the winter, with the road accessing Unit 17 closed to the public. Harvest activities in unit 17, and related road use do not occur in grizzly core habitat. Road densities in MA 12 do not affect road densities in MA 14. Post project BMU 11 would meet all grizzly bear standards as displayed in the FEIS Appendix 4.

Response to #1-4 – Determination of cumulative effects boundaries is

14, which has a goal of "[m]aintain[ing] or enhanc[ing] grizzly bear habitat, reduce grizzly human conflicts, assist in the recovery of the grizzly bear…" (Table 10 Management Area summary, DEIS p. 33). Furthermore, the FS states that the number of roads on the landscape currently does not provide a minimum of 55 percent core grizzly habitat, and does not meet standards for total motorized road densities in Bear Management Unit. How can the FS propose actions such as this when the actions won't meet grizzly bear standards?		guided by CEQ guidance "Considering Cumulative Effects Analysis under the National Environmental Policy Act (http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm) and the NEPA Handbook FSH 1909.15, Section 15.1.
The DEIS states that the area within the project boundary has historically received similar management and is large enough to allow analysis of cumulative effects for forest vegetation. Does the FS have any protocol for determining the appropriate cumulative effects analysis area. What is the formula? Has it been scientifically verified?	←4	**Response to #1-5 –** This was an incorrect statement, and should have read "resulted in a reduction from the historic range of an age class greater than 150 years old". This is supported by the discussion and table 13 on page 40 of the DEIS. Stand exam data indicates that there is approximately 4,041 acres of stands that exceed 150 years of age. The data does not specify individual tree ages. The KNF's old growth inventory in the project area identifies an existing percentage of 11% validated effective and replacement old growth (DEIS, page 42-43). Stands classified as effective or replacement old growth, both designated and undesignated, would not be affected by any proposed activities (DEIS pg. 49).
Fire Suppression/Timber Harvest The DEIS states that fire suppression and timber harvest have "resulted in the absence of an age class greater than 150 years old." (DEIS at 36). Please discuss how the absence of trees older than 150 years old affects the KNF's old growth inventory and recruitment. How old are the oldest trees in the project area? Since the project area has an absence of an age class greater than 150 years old wouldn't it be prudent to forego logging in areas that contain stands near this age class?	←5	**Response to #1-6 —** The historic conditions used for reference in this analysis are based on research conducted by Losensky, 2004, and included in the Analysis of the Management Situation (USDA Forest Service 2003), Appendix B. These conditions represent what is anticipated to be sustainable over time, given natural disturbance regimes and processes. We use this condition as a basis to determine the desired conditions that are ecologically sustainable, and also meet societal requirements for goods and services. Whether we choose a particular point in time, or span centuries in identifying the "historic conditions," this represents an approximation of what the land can sustain.
Forest Structure and Composition The DEIS states that larch was historically one of the dominant early-seral species. The FS needs to clarify what the time period is for determining historical distribution of all tree species. Is the FS simply taking a snapshot of the area from when they first started settling the land? If so, how can that data be truly representative of historic conditions? What did the land look like 300 years ago, 400 years ago?	←6	**Response to #1-7 –** The specific restoration goals for this project are to increase the percentage of those species that have been identified as species in decline from historical (DEIS, pg. 37-38). It is not the case that past regeneration has resulted in "areas that are completely denuded of trees." These regeneration stands are considered in the forest structure and composition analysis on DEIS pgs. 38-43. Based on regeneration surveys conducted since 1976, regeneration success within 5 years of harvest activity has been 91% for natural regeneration, and 96% for planted units (DEIS, pg. 57). Areas that did not regenerate within this time period were identified for replanting.
When the FS tries to claim that they are "restoring" the land to historic conditions they also need to disclose how the last 100 years of clearcutting has moved many areas away from historic conditions. The FS does not want to talk about all the areas that are completely denuded of trees. How do those areas fit into historic conditions?	←7	
The DEIS states that larch is below the desired condition as a result of fire suppression and timber harvest. (DEIS at 39). Nonetheless, the FS thinks it can log its way to a dubious "historical condition." Furthermore, the DEIS acknowledges that while timber harvest and road building are some of the major causes of deviation from historical conditions (DEIS at 5), these changes make it difficult to provide for a sustainable ecosystem. (DEIS at 5). This implies that the proposed logging will make it even more difficult to provide for a sustainable ecosystem.	←8	**Response to #1-8 –** The logging referenced here occurred in the 1930's through the early 1970's, where ecosystem function and sustainability were not well understood. The resulting species composition changes (removal of much of the ponderosa pine, white pine, western larch, typically large diameter), and subsequent increase in more shade tolerant species (what was left after the logging). In contrast, the proposed treatments are focused on reducing the shade tolerant species and increasing white pine, western larch
Snags		

The FS needs to clarify the minimum standards for snags of all sizes. How does the 0.4 snags per acre for snags 20" and greater (DEIS at 41) compare to established standards? The DEIS uses stand exams from 1996 through 2002 to estimate snag density. Has any logging occurred in the stands since the exams were taken? ←9

Insects and Disease

The DEIS states that drought can trigger major insect outbreaks which contribute to increased fire hazards. (DEIS at 41). This statement seems to be implying that the FS finds it necessary to cut to address beetle problems, however the DEIS clearly states that "[p]roposed activities are not intended or expected to reduce beetle populations." (DEIS at 47). The FS seems to be using insects and drought as a scapegoat for more logging. Has the FS considered that climate change (global warming) is only going to increase in the future, thus increasing the levels of insects in the forests via drought conditions? If one is to follow the logic of the FS regarding drought and insects, we will have to increasingly cut down more forests as insects become more abundant. Yet all the logging will move forests farther away from "historic conditions." Please explain the long term strategy the FS has for dealing with insects and drought in the context of climate change and "restoring historic conditions." ←10

Environmental Consequences

The DEIS claims that species composition is outside of the historic range of variability. Additionally, the DEIS states that in VRU 5 seventy percent of the stands have densities that are on the high end of or are exceeding historic reference conditions. (DEIS at 44). Again, the FS needs to clarify and highlight the fact that the "historic conditions" they are referring to are simply a snapshot of the land in a certain point in time. For all the FS knows, VRU 5 is actually on the low end of historic conditions for the last 300 to 1000 years. This snapshot approach taken by the Forest Service is arbitrary and capricious. Why not refer to forest conditions 50 years ago or 350 years ago? What degree of certainty does the FS have that the "historic conditions" they are using are representative of the forest for the last 1000 years? Why should we only look at the last 100 to 200 years as a reference? Moreover, if we are going to log the National Forests to make them resemble "historic conditions" shouldn't we first let the land heal from where the FS has clearcut – removing the forest from "historic conditions?" How about all the tree plantations – do those resemble what the land looked like 100 years ago? ←11

Additionally, the court in Lands Council v. Mcnair, 2007 WL 1880990, (9th Cir 2007) recently ruled against the unverified methodology of logging to restore historic conditions when sensitive species viability is a concern. The KNF should explain how their methodology of logging to restore historic conditions was scientifically verified and cite studies to prove it will not harm sensitive, threatened, or endangered species viability. ←12

and ponderosa pine, as well as reducing the density of stands that have increased as a result of fire suppression.

Response to #1-9 – The Forest Plan (1987) standards are an <u>average</u> of 0.9 snags/acre for a 40% level; 1.35 snags/acre for a 60% level; and 2.25 snags/acre for a 100%level (KNF 1987, V2). Page 140, 5th paragraph, DEIS states the minimum standards for snags. Appendix 16-4 (KNF Forest Plan 1987, V2) shows the number of snags greater than 20" dbh that will be the 100% level is 14 snags per 100 acres. 14/100 is 0.14. The last paragraph on page 139 of the DEIS shows that current status show snags at 20" dbh or greater are at at average of 0.4 snags/acre. That means an average of 40 snags/100 acres; which is well above the recommended standard of 14 snags/ 100 acres. The DEIS at pg. 115 explains that TSMRS information has been updated between 1997 and 2004. DEIS Appendix F shows past harvest. A few smaller timber sales have been harvested since 2004. DEIS pg. 29 explains that snag standards would have applied for these recent projects. Some snags were lost in these sales, and some were generated from prescribed burning or from natural events.

Response to #1-10 - Drought conditions, including those potentially brought on by climate change, affect trees by increasing stress caused by inadequate levels of moisture to support vigorous tree growth. The proposed project would reduce stand densities, which would provide increased moisture to the residual stand. This would allow for more vigorous growth, less stress, and therefore increased resilience to insect and disease, and future potential drought conditions (see DEIS pgs. 37-43).

Response to #1-11 –The historic conditions used for reference in this analysis are based on research conducted by Losensky, 2004. These conditions represent what is anticipated to be sustainable over time, given natural disturbance regimes and processes. We use this condition as a basis to determine the desired conditions that are ecologically sustainable, and also meet societal requirements for goods and services. Whether we choose a particular point in time, or span centuries in identifying the "historic conditions," this represents an approximation of what the land can sustain. The plantations resemble, to a limited extent, what would be anticipated to occur after a mixed to severe fire, where regeneration comes in, typically lodgepole pine and western larch. However, they do not resemble natural fire in that the residual woody biomass is much less in plantations. The proposed treatments for precommercial thinning would reduce overall density and move species composition towards the desired condition, increasing the representation of species that would have occurred historically

Response to #1-12 – No treatments are proposed in old-growth. The DEIS

Regeneration Harvest Units Greater than 40 Acres These large clear cuts should be dropped from the proposed actions as they violate NFMA's mandate to maintain or improve biological diversity. The DEIS admits that there will be an increase in fragmentation by implementing regeneration harvest. (DEIS at 53.) As such, the clearcutting will violate NFMA and should be dropped from the proposal. Will clearcutting improve bear viability?	←13	analyzed the effects of the proposed treatments on sensitive, threatened, and endangered species (DEIS, pages 100-178 and FEIS Ch. 5, pgs. 4 and 5, and FEIS Appendices 3 and 4). **Response to #1-13 –** The IDT took a hard look at units greater than 40 acres, and they are reduced in size for Alternative 2a. Implementation of harvest in Units 40 and 60 would not fragment the movement corridors associated with these units. Both units are comprised of mature lodgepole that is susceptible to blowdown (DEIS pg. 50), neither unit is larger than 40 acres, and both are surrounded by unharvested stands or timber that is large or dense enough to provide hiding cover for wildlife. Harvest would not result in a long-term denial of vegetation, since hiding cover for the bear would return in a couple of decades. Additionally, these patches of open habitat can easily be maneuvered around by grizzly bears in adjacent stands and habitat that offer hiding cover and forage. The harvest activity planned for these units would likely increase huckleberry (*Vaccinium* spp.) production over time (DEIS pg. 123).
Why is it that the FS can say they want to log to restore to historic conditions and then turn a blind eye to the fact that clearcutting is the antithesis of restoration? How will the 543 acres of proposed clearcuts move the units towards "historic conditions?" The FS should not say this is a restoration project when in fact you are creating tree plantations. The DEIS states that "proposed treatment areas may include the use of regeneration harvests in order to rehabilitate affected areas …" (DEIS at 56). Please explain how clearcutting rehabilitates areas in light of the fact that logging to restore historic conditions is an unverified methodology in violation of NFMA. Please explain how creating plantations will return the land to historic conditions – given there were no trees farms 200 years ago.	←14	**Response to #1-14 –** The clearcuts proposed are in stands that are dominated by more shade tolerant species that have been established on the sites due to past removal of western larch, ponderosa pine, and western white pine, and fire exclusion. The proposed treatments would restore these serial species to these sites through regeneration. Restoration in this project refers to moving species composition towards more fire-adapted, shade intolerant species.
The FS should clarify what type of treatment will be used in the "old forest" areas. Is this the area slated for clearcutting?	←15	
The DEIS does not support the contention that, essentially, clearcutting is needed to restore western larch or any conifer species.	←16	
Please disclose how much old growth, by type, has previously been clearcut, salvaged, intermediate cut, thinned, etc. in the Grizzly Vegetation project area during Forest Plan implementation. Additionally please disclose the figures from the time prior to Forest Plan adoption.	←17	**Response to #1-15 –** Both regeneration harvesting and intermediate treatments are proposed in these areas, depending on the number of desired species present (where there are sufficient western larch, ponderosa pine or western white pine, these trees would be retained). Old growth stands are not entered for harvest with this project (DEIS pg. 49).
How much funding has the KNF requested for restoration of vegetation that is not tied to timber sales? As far as we know the FS has not requested that Congress fund such restoration projects on a landscape level, instead relying on timber projects.	←18	**Response to #1-16-** The DEIS at pg. 46 discusses why regeneration harvest is the appropriate tool for some units. Determination of clearcutting as optimal to meet objectives is described in the Silviculture Diagnosis. (PR, Vol. 7, Doc. 7)
Fire and Fuels Fire Suppression – The DEIS states that "[b]y restricting fire spread through suppression, fuels that would have been reduced by wildfire have been allowed to accumulate, increasing the probability of large, more intense fires." The FS fails to mention in the cumulative effects section how past clearcutting and other logging has eliminated many of the fuels that lead to the supposed catastrophic wildfires. While the DEIS says on a smaller scale, past regeneration harvest has made incremental changes in disrupting lodgepole fuel continuity, approximately 15% of the proposed area has been clearcut in the past. Clearcutting on 15% of the proposed area hardly seems small scale.	←19	**Response to #1-17 –** Old growth is identified according to the criteria specified in Green, et.al. The analysis (DEIS pg. 42-43) shows that the project does not reduce the amount of old growth currently existing in the analysis area, which meets Forest Plan standards. **Response to #1-18 –** Timber sale advertised rates include the costs for reforestation of harvested areas. Without timber harvest, the opportunity to increase the amount of western larch, western white pine and ponderosa pine

Soil Productivity The DEIS states that the only reasonably foreseeable action would be the potential fire suppression activities… (DEIS at 85). This logging project seeks to incorporate pre-commercial thinning. Given that fact and the Forest Service's track record, it seems as though commercial logging is all but guaranteed in many of these units. The FS needs to clarify whether there will be any commercial logging or otherwise in the proposed cutting units, how the future logging will further affect soil productivity and compaction, and whether the pre-commercial thinning will occur in areas that are already experiencing high compaction/low productivity.	←20	would be limited. **Response to #1-19 –** The DEIS cumulative effects analysis refers to these past activities that "have created their own vegetative mosaics on the landscape, especially the regeneration harvests. On a much smaller scale, past regeneration harvest has made incremental changes in disrupting lodgepole fuel continuity." (DEIS, page 64). The smaller scale is relative to historic fires in the area.
The DEIS states that "[p]oor soil conditions in units 1,2,3,11,12,12a,18 and 20 require additional measures to minimize potential long term soil productivity impairment. These design features would minimize the short-term impacts, and would result in these units trending towards meeting regional policy." (DEIS at 85). This statement implies that those units are not or will not meet the regional standard. The FS needs to clarify what units will not meet soil standards.	←21	**Response to #1-20 –** Reasonably foreseeable future actions are those with a defined proposal. Precommercial thinning which occurs now does not ensure that commercial harvesting will occur in the future. Harvest activities that may be proposed in the future would be required to address impacts of those activities with a separate NEPA analysis.
The DEIS fails to disclose the implications of all landtype limitations for detrimental soil impacts. Some of the landtypes have "moderate" or "severe" soil erosion and sediment hazard potential, and soil erosion or mass wasting (a severe form of erosion) are both kinds of detrimental impacts. And the public cannot tell which proposed activity areas fall into which landtypes, and therefore might be more at risk for erosion or other detrimental impacts that decrease soil productivity. Finally, the DEIS fails to disclose the results of monitoring of past actions on these various landtypes, that would reveal the differential levels of soil impacts of the various logging activities carried out in the past (and now proposed with this new project).	←22 ←23	**Response to #1-21 –** The soils analysis for these units has been updated (see FEIS Appendix 2). Through the avoidance of additional disturbance, and the treatment of existing and new disturbance, we are reasonably certain that the total detrimental disturbance in any of these units would not exceed 15% after all activities are completed. Winter logging would be used to reduce disturbance. On average logging on frozen ground results in less than half the disturbance of logging during the normal summer season. All the units have been designed to make use of existing skid trails and temporary roads. The units would be logged following the same general skidding pattern as was used previously. This would insure that the new disturbance would not be completely additive. The units would be monitored post logging to determine what additional mitigation measures are necessary. These mitigations, such as scarifying skid trails, would be implemented after the fuels work is complete. Regardless of the results of the monitoring, existing temporary roads and landings associated with these units would be scarified, seeded, and covered with slash.
The DEIS fails to link the current and cumulative soil disturbance across thousands of acres in the project area watersheds to the impacts on water quantity and quality.		
The DEIS fails to disclose the boundaries of past activity areas (cutting units) within which the amount of detrimental soil impacts have been measured or estimated. The only way for there to be any meaning to the numerical standards in cases where logging is proposed over previously disturbed soils and where activity area boundaries are not kept constant is if a qualified soil scientist actually performs site-specific field measurements to measure the existing percentages of detrimental soil disturbance within the already-established boundaries of activity areas.	←24	**Response to #1-22 –** Sensitive Soils are identified based on one of three characteristics: 1) sensitive landtypes, 2) riparian/wetland areas; and 3) low productivity soils. There are seven Kootenai National Forest landtypes that are considered 'sensitive' (102, 112, 325, 351, 365, 370, 520). The sensitive landtypes that occur within the analysis area are landtypes 102 and 351, which comprise 177 acres, or less than 1 percent of the project area. An analysis of the proposed activities found that there is no proposed harvest on either sensitive landtypes or low productivity soils under under any of the action alternatives (see FEIS Appendix 2 and the soils section of the project file). The site-specific design criteria took the landtypes into consideration to ensure that detrimental impacts would not occur. Forest level monitoring of Best Management Practices (BMPs) is referenced throughout the soils and hydrology sections of the DEIS. This monitoring is primarily focused on
The DEIS sorely misses the issue of maintaining soil productivity. In his comments on the Bitterroot Burned Area Recovery Project, FS soil scientist Ken McBride puts it well: "…soils are the basic resource supporting terrestrial and to a significant degree, aquatic ecosystems; healthy ecosystems are not possible without healthy soils."	←25	
How accurate is the TSMRS as a record of all past logging in the analysis area?	←26	

It seem that the FS is simply dodging the entire issue of maintaining soil productivity as NFMA mandates. As indicated in the Forest Plan, FSM 2500-99-1 and FSH 2509.18, the FS assumes that maintaining soil productivity is achieved simply by limiting detrimental disturbance to no more than 15% of an activity area (cutting unit). Unfortunately, the scientific adequacy of the FS's methodology for maintaining soil productivity on has never been demonstrated. The FS's determination that it may permanently damage the soil on 15% of an activity area and still meet NMFA and planning regulations is arbitrary. There is no scientific basis for adopting 15% as a numerical limit—it is simply a number pulled out of thin air.		practices specifically designed to ensure detrimental impacts to soils and water quality do not occur. (DEIS, Appendix D). Impacts to soils from past logging is discussed on DEIS pg. 78 and FEIS Appendices 2 and 3. The lack of erosion from past harvest activities is discussed on DEIS page 77. See also Kuennen and Nielsen-Gerhardt 1995, Soil Survey of the Kootenai NF which contains the limitations or management considerations for each landtype.
The FS has essentially admitted that it is in the dark as far as doing scientific research on soil productivity changes following management activities. In response to comments on the Black Ant Salvage DEIS, Lewis & Clark NF, the FS states: Soil Quality Standards "provide benchmark values that indicate when changes in soil properties and soil conditions would result in significant change or impairment of soil quality based on available research and Regional experience" (Forest Service Manual 2500, Region 1 Supplement 2500-99-1, Chapter 2550 – Soil Management, Section 2554.1).	←27	**Response to #1-23 –** The current and cumulative impacts of activities as related to water quality and quantity are discussed in the hydrology and fisheries sections (DEIS, pgs. 86-115 and FEIS Appendix 3). **Response to #1-24 –** A map of past regeneration harvest units is included in the DEIS as M-1. A qualified soils scientist field reviewed all proposed units, and conducted site-specific surveys to determine existing soil conditions and existing detrimental disturbance, following established protocols. (DEIS pg. 75).
A formal research study, the "Long Term Soil Productivity Study," is currently being conducted by the Research Branch of U.S. Department of Agriculture, Forest Service to validate these soil quality standards. (USDA Forest Service, 2002.)		**Response to #1-25 -** TSMRS has been used to track activities since the 1980s. Past logging activities were validated through on site ground surveys conducted by a qualified soils scientist (DEIS pg. 75).
Nowhere does the DEIS disclose the results of monitoring of soil productivity reductions due to past logging and road building in project area watersheds. There is simply no watershed level analysis of soil impacts. The DEIS ignores the larger issue of soil productivity and watershed impacts. Thus, for example, there is a disconnect between the soil productivity impacts of the proposed temporary roads and the activity area standards.	←28	**Response to #1-26-** NFMA does not mandate maintenance of soil productivity. Instead NFMA specifies that guidelines for land management plans "insure that timber will be harvested from National Forest System lands only where soil, slope, or other watershed conditions will not be irreversibly damaged - 16 ISC 1604(g)(3)(E)(i). The 15% is a standard that the Forest is required to meet by the Regional Supplement to Forest Manual 2500. The validity of this standard is the responsibility of the Regional Forester, and outside the scope of this project analysis. See response to #1-31.
The DEIS's narrow interpretations of FSM 2500-99-1 and the Forest Plan mean the FS never has to even consider, during project planning and review such as for Grizzly Vegetation, the soil conditions in old cutting units or in areas that have experienced soil damage from other causes such as natural or prescribed fire, cattle grazing, natural or management-induced landslides, off-road vehicle use, or even from a high density of roads in a given watershed. The full meaning of "cumulative impacts" on soil productivity is missing from the DEIS.	←29	**Response to #1-27 –** See response to 1-31, 1-32, and 1-33. **Response to #1-28 –**Cumulative watershed level effects, including past activities such as logging and roadbuilding are considered in FEIS Appendix 3 (see response to #1-23). The soils analysis looks at cumulative effects to soil productivity on the actual sites that will be impacted by the proposed project as directed by R-1 Supplement 2500-99-1. The effects related to the temporary roads is disclosed in the DEIS, pg. 84 and FEIS Appendix 2.
The meaning of "soil productivity" in the terminology of NFMA is largely ignored. In FSM 2500-99-1 the FS claims that "Soil quality is maintained when erosion, compaction, displacement, rutting, burning, and loss of organic matter are maintained within defined soil quality standards." But even if the FS were to meet the 15% Standard in all Activity Areas forestwide, and even if the soil conditions of land outside proposed	←30	**Response to #1-29 –** These effects were analyzed as they related to the site-specific impacts of proposed activities where there was the potential for cumulative impacts (DEIS, pgs. 75-86, FEIS Appendix 2).

activity areas could reasonably be ignored, the FS still cannot assume that there has been no "significant or permanent impairment of the productivity of the land" as NFMA requires. For example, the DEIS fails to consider the high road density on the roaded portions of the project area.		**Response to #1-30** – Soils analysis was conducted according to established policy and guidelines. All of the proposed units would meet standards for soils disturbance (DEIS pg. 86 and FEIS Appendix 2). Cumulative effects on infiltration are discussed in the DEIS pg. 82 and FEIS Appendix 3.
Also, soil productivity can only be assumed to be maintained if it turns out that the soil Standards work. To determine if they work, the FS would have to undertake objective, scientifically sound measurements of what the soil produces (grows) following management activities. But the FS has never done this on the KNF.	←31	**Response to #1-31 –** See also Response to #1-26. The effects of soil disturbance from logging activities on future soil productivity is being addressed by a cooperative research study called the North American Long Term Soil Productivity program (LTSP). The five year results were recently published (Page-Dumeroese, et. Al. 2006; Flemming et.al., 2006: Sanchez et.al.2006). These studies are following control and managed sites over a forest rotation. To date there has been no reduction in tree growth noted as a result of compaction or organic removal in plots of fine grained soils typical of the project area.
It is reasonable to expect that in order for the FS to assure that soil productivity is not or has not been significantly impaired, to assure that the forest is producing a sustained yield of timber, for one example, tree growth must not be significantly reduced by soil-disturbing management activities. Grier and others (1989), in a Forest Service General Technical Report, adopted as a measure of soil productivity: "the total amount of plant material produced by a forest per unit area per year." (P. 1.) And they cite a study finding "a 43-percent reduction in seedling height growth in the Pacific Northwest on primary skid trails relative to uncompacted areas" for example. And in another Forest Service report, Adams and Froehlich (1981) state: Measurements of reduced tree and seedling growth on compacted soils show that significant impacts can and do occur. Seedling height growth has been most often studied, with reported growth reductions on compacted soils from throughout the U.S. ranging from about 5 to 50 per cent. Adams and Froehlich (1981) also provide reasons why impacts beyond the directly compacted 15% of an area must be considered in any reasonable definition of soil productivity: Since tree roots extend not only in depth but also in area, the potential for growth impact also becomes greater as compaction affects more of the rooting area. In a thinned stand, for example, you can expect the greatest growth impacts in residual trees that closely border major skid trails or that have been subject to traffic on more than one side of the stem."	←32	**Response to #1-32 –** Although research is not yet conclusive (see Response to #1-31), possible adverse effects of compacted and displaced soils on forest productivity is a concern addressed in that the extent of allowed detrimental disturbance is limited to 15% of an activity area so that overall soil quality is maintained.
In other words, when an Activity Area reaches 15% detrimentally impacted soils via compaction, tree growth outside the skid trail, or beyond the 15% compacted area, is affected. This is ignored in the Regional Policy and the DEIS. The Northern Region recognizes that the Standards must be validated. FSM 2500-99-1 requires that Forest Supervisors must: • Assess … whether (soil quality standards) are effective in maintaining or improving soil quality; • Evaluate the effectiveness of soil quality standards and recommend adjustments to the Regional Forester; and • Consult with soil scientists to evaluate the need to adjust management practices or apply rehabilitation measures.	←33	**Response to #1-33 –** Forest Plan monitoring has been conducted from 1990 to the present on BMP monitoring, as well as soil quality monitoring conducted from the 1980s through the late 1990s all indicate that the practices that have been implemented have been effective in meeting soil quality standards (see soil and water reference sections in the project file).

This all implies that monitoring must be undertaken. Furthermore, FSM 2500-99-1 recognizes that soil productivity is defined not merely in terms of the absence of meeting the 15% standard. "Soil Function" is defined thus: Primary soil functions are: (1) the sustenance of biological activity, diversity, and productivity, (2) soil hydrologic function, (3) filtering, buffering, immobilizing, and detoxifying organic and inorganic materials, and (4) storing and cycling nutrients and other materials. And "Soil Quality" is defined as "The capacity of a specific soil to function within its surroundings, support plant and animal productivity, maintain or enhance water and air quality, and support human health and habitation." Neither soil function nor soil quality, as FSM 2500-99-1 defines it, have ever been monitored on the KNF following management activities. Unfortunately, the FS seems to have only interpreted monitoring requirements in terms of maintaining no more than 15% of activity areas in a detrimentally disturbed condition. The Forest Management Handbook at FSH 2509.18 directs the FS to do validation monitoring to "Determine if coefficients, S&Gs, and requirements meet regulations, goals and policy" (2.1 – Exhibit 01). It asks what we are asking: "Are the threshold levels for soil compaction adequate for maintaining soil productivity? Is allowing 15% of an area to be impaired appropriate to meet planning goals?" The FS has no answers to these questions.	←**34**	**Response to #1-34 –** Monitoring soil quality and function is an objective of the annual forest plan soil monitoring program. See the Forest Plan Monitoring and Evaluation Reports (Monitoring Item F-4) for Fiscal Years 2002 and 1997 (project file) which address monitoring changes in site quality due to soil disturbance. Validation monitoring of the soil quality standards is the responsibility of the Regional Office, and is ongoing. See response to 1-31 above.
As discussed above, FSM 2500-99-1 superceded similar directives issued in 1994. Both versions of these Regional directives have required implementation and effectiveness monitoring, as described in FSH 2509.18., to provide a basis for assuming the Regional Soil Standards actually protect soil productivity. Page-Dumroese et al. 2000 emphasize the importance of validating soil quality standards using the results of monitoring:	←**35**	**Response to #1-35 –** The DEIS cites the results of numerous monitoring activities over the past 25 years on the Kootenai. (DEIS, pages 75-86). See also Kuennen 2006 in the soils references.
Research information from short- or long-term research studies supporting the applicability of disturbance criteria is often lacking, or is available from a limited number of sites which have relative narrow climatic and soil ranges. …Application of selected USDA Forest Service standards indicate that blanket threshold variables applied over disparate soils do not adequately account for nutrient distribution within the profile or forest floor depth. These types of guidelines should be continually refined to reflect pre-disturbance conditions and site-specific information. (Abstract.)	←**36**	**Response to #1-36 –** Refer to response to #1-31. These efforts are continuing, and to date have not shown a need to adjust guidelines.
The FS's methodology might approach adequacy if the FS were to have actually validated it by performing objective, scientifically adequate measures of compaction such as measures of bulk density. Adams and Froehlich (1981) state: "While general field observations can be useful in recognizing severe compaction problems, measurement of actual changes in soil density permits the detection of less obvious	←**37**	**Response to #1-37 –** See Kuennen 2006 in the project file, "Average

levels of compaction." It is these "less obvious levels of compaction" that are missed by the kind of monitoring the FS has performed on the KNF. For a study done on the Kootenai NF and the adjacent Flathead NF in Montana, soil scientists measured soil bulk densities, macropore porosities, and infiltration rates using paired observations of disturbed vs. undisturbed soils. They discovered that although "the most significant increase in compaction occurred at a depth of 4 inches… some sites showed that maximum compaction occurred at a depth of 8 inches… (and) "Furthermore, ... subsurface compaction occurred in glacial deposits to a depth of at least 16 inches." (Kuennen, Edson, and Tolle, 1979.) There is simply no way that the FS has enough soil bulk density and other compaction monitoring data collected at the adequate soil depths and in enough sites to be able to assure that the use of heavy machinery, as prescribed by the Grizzly Vegetation project, will not significantly or permanently impair the productivity of the soil.		Disturbance by Activity for Years 1988 – 2005." On site surveys were conducted in every treatment unit by a qualified soils scientist. Sufficient evidence of previous harvest activities was apparent to determine how much disturbance had occurred, without the need for more intensive testing.
In interpreting the requirements of NEPA, the federal courts have evaluated the adequacy of mitigation measures that EISs and EAs rely upon. Relying upon inadequate mitigation measures to protect soils fails to meet this judicially specified test of compliance with NEPA regulations. Following a study by Cullen and others (1991) which was carried out on the Kootenai NF and the adjacent Flathead NF, the authors concluded: "This result lends support to the general observation that most compaction occurs during the first and second passage of equipment." And Page-Dumroese (1993), in a FS research report investigating logging impacts on volcanic ash-influenced soil in the adjacent IPNF, states, "Moderate compaction was achieved by driving a Grappler log carrier over the plots twice." She also cited other studies that indicated: "Large increases in bulk density have been reported to a depth of about 5 cm with the first vehicle pass over the soil." Williamson and Neilsen (2000) assessed change in soil bulk density with number of passes and found 62% of the compaction to the surface 10cm to come with the first pass of a logging machine. In fine textured soils Brais and Camire (1997) demonstrated that the first pass creates 80 percent of the total disturbance to the site. Adams and Froehlich (1981) state, "Unfortunately, little research has yet been done to compare the compaction and related impacts caused by low-pressure and by conventional logging vehicles." From Grier and others (1989): The potential productivity of a site can be raised or lowered by management activities causing a permanent or long-term increase or decrease in the availability of nutrients essential for plant growth. (P. 27.) …Any time organic matter is removed from a site, a net loss of nutrients from that site also occurs. In timber harvesting or thinning, nutrient losses tend to be proportional to the volume removed. (P. 27.)	**←38**	**Response to #1-38** – Kootenai Forest Plan monitoring (Kuennen 2006) results show that winter harvest is effective in reducing average detrimental disturbance from 8% to 4%. An additional mitigation is that use of existing roads, landings and trails would be required for Units 1, 2, 3, 4, 18, and 20. In these units it is likely that the required use of existing trails and landings would result in lower new disturbance rates because new detrimental disturbance would coincide with existing detrimental disturbance. The total disturbance would therefore likely be less than the sum of the existing disturbance plus the average disturbance rate found with Forest Plan monitoring. In addition post-harvest/pre-fuels treatment monitoring would be conducted in the units most at risk of exceeding the 15% standard (Units 1,2,3, 18,20) and additional mitigation and restoration would be implemented if needed. The soil restoration measures designed into this project have been shown to improve soil conditions (see references on page 79, 82 in Soils section of the DEIS and Soil Restoration Monitoring in the soils section of the project file). The most directly relevant monitoring on soil restoration was recently done on a sale in similar soils and geology (Rone, 1997). Compacted soils on skid trails were successfully decompacted using an excavator.

…Slash burning is a common site preparation method that can affect soil chemical properties tremendously. A great deal of controversy is often associated with using fire because of the wide variety of effects, some of which are definitely detrimental to site quality and some of which are beneficial. (P. 30.) The DEIS also fails to cite monitoring results showing the FS has been able to correctly implement the coarse woody debris guidelines on the KNF. The FS must evaluate the adequacy of such required mitigation measures. An environmental impact statement must present a "reasonably complete discussion of possible mitigation measures." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 351 (1989).	←39	
The KNF has never attempted to put in place a scientifically sound definition of "soil productivity" that can be measured and compared to baseline conditions. Harvey et al., 1994 state: The ...descriptions of microbial structures and processes suggest that they are likely to provide highly critical conduits for the input and movement of materials within soil and between the soil and the plant. Nitrogen and carbon have been mentioned and are probably the most important. Although the movement and cycling of many others are mediated by microbes, sulfur phosphorus, and iron compounds are important examples. The relation between forest soil microbes and N is striking. Virtually all N in eastside forest ecosystems is biologically fixed by microbes... Most forests, particularly in the inland West, are likely to be limited at some time during their development by supplies of plant-available N. Thus, to manage forest growth, we must manage the microbes that add most of the N and that make N available for subsequent plant uptake. (Internal citations omitted.)		**Response to #1-39 –** Coarse woody debris amounts are regularly monitored post harvest by fuels and silviculture specialists in order to determine if coarse woody debris and fuels objectives have been met, and whether additional fuels treatment is warranted. These post harvest exams are documented and located at the district office. Data results from KNF district coarse woody debris monitoring is located in the project file.
The Forest Plan also never anticipated nor disclosed the degree to which land management activities, including timber production grazing, and management of recreational activities, would lead to vast areas of the Forest being infested with noxious weeds. The Sheep Creek Salvage FEIS (Beaverhead-Deerlodge NF, 2005) states at p. 173: Noxious weed presence may lead to physical and biological changes in soil. Organic matter distribution and nutrient flux may change dramatically with noxious weed invasion. Spotted knapweed (Centaurea biebersteinii D.C.) impacts phosphorus levels at sites (LeJeune and Seastedt, 2001) and can hinder growth of other species with allelopathic mechanism. Specific to spotted knapweed, these traits can ultimately limit native species' ability to compete and can have direct impacts on species diversity (Tyser and Key 1988, Ridenour and Callaway 2001). The FS has no idea how the productivity of the land been affected in the project area and forestwide due to noxious weed infestations, nor how that situation is expected to change. This is reflected in recent Forest Plan Monitoring and Evaluation Reports, and also in the adoption of the Herbicide Weed Control Project, itself a decision that should	←40	**Response to #1-40 –** Noxious weeds are addressed in the DEIS (pages 179-185). Specific design features have been incorporated to minimize impacts from noxious weeds.

have been a Forest Plan Amendment rather than deceivingly having been labeled a ten-year "project" with completely open-ended levels of weed spraying.		
Fisheries		
Westslope Cutthroat & Redband Trout The FS needs to clarify whether surveys have been conducted for westslope cutthroat & redband trout at specific streams or whether modeling was used. While the DEIS states that surveys were conducted in the planning area, it does not state how many surveys, at what streams, the results, etc.	←41	**Response to #1-41 –** The DEIS on page 104 lists the specific streams where surveys were conducted, and which species were present. Surveys conducted by Forest Service were specific to the streams, MFWP survey information was extrapolated.
Temporary Road Construction The DEIS acknowledges that short-term increases in sediment from disturbed areas are possible because of the risk of rain events occurring before the vegetation is established. The FEIS needs to address this concern in the context of species viability for the westslope cutthroat and all other fish species that would be affected. The DEIS admits that "[b]ecause increasing sediment production can decrease habitat diversity, degrade spawning and rearing habitat, and reduce aquatic insect production, the proposed roadwork could involve short-term effects to fish." (DEIS at 112). NFMA requires timber be harvested from National Forest lands only where: (iii) protection is provided for streams, stream banks, and shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temps, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat.	←42	**Response to #1-42 –** As you state, NFMA requires that "protection is provided for streams, stream banks, and shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temps, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat." These protections have been built in to the design criteria to apply RHCA buffers and BMPs (FEIS Appendix 1) for all actions, supporting the findings in the DEIS.
Since this provision of NFMA extends to logging road construction, the FEIS should clarify how road building will not "adversely affect water conditions or fish habitat," given the FS admits that the proposed roadwork could involve "short-term effects" to fish. Is it possible that the project would seriously and adversely affect water conditions or fish habitat, even if it "short-term"? Please cite scientific evidence to support any conclusions. Just because monitoring has found that the increase in turbidity and sedimentation is of very short duration does not necessarily mean that species viability is being ensured. Without citing science to support the claim that short-term effects won't kill fish, at what rate, etc., the FS has made a conclusory statement when they say "the proposed activities may impact individual westslope cutthroat trout and redband trout or their habitat but would not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species." (DEIS at 114 to 115).	←43	**Response to #1-43 –**The analysis discloses the potential effects, as well as the long term benefits of the proposed watershed improvement projects (which are the actions that cause the short-term effects). Monitoring of these activities on the adjacent Libby District indicates the short-term effects did not result in deleterious effects to fish mortality. (USDA, FS – Wegner, 1998).
The DEIS notes that fisheries habitat conditions measured during the 2005 field season currently are near or meet INFS standards. (DEIS at 114). Please clarify what habitat conditions are near INFS standards but are not being met.	←44	**Response to #1-44 –** Table 30, page 108 of the DEIS displays the standards for INFS, and the current conditions.

The DEIS does not demonstrate compliance with road density standards adopted to protect elk and other big game species' habitats, and by extension habitat for grizzly bears and wolves. Since road densities would exceed standards during project implementation, there will be a negative impact on big game, grizzly bears, and wolves.	←45	**Response to #1-45 –** The DEIS discusses open road density standards for big game on pgs. 159, 161, and 163. Alternative 2a was redesigned and meets ORD standards in MA 12. Grizzly bear and wolf standards are also met as discussed in FEIS Appendix 4.
The DEIS does not disclose the economic commitment that would be necessary to maintain and upgrade the "decided upon" road system so that adverse watershed would be minimized.	←46	**Response to #1-46 –** An interdisciplinary travel analysis (see project file) was conducted to identify the potential minimum road system necessary to support management needs while minimizing ecological effects on the land. Recognizing limited budgets, priorities are identified for providing user safety and resource protection. Although travel analysis does not produce a "decided upon" road system, some of the opportunities for reducing deferred maintenance costs while minimizing adverse risks to the watershed were brought forward in this NEPA proposal. This includes placing some roads in intermittent stored service status and decommissioning others.
Wildlife		
More logging in such a heavily overcut area is not consistent with NFMA's requirements that the FS maintain viable populations (including minimum populations and proper distribution of individuals and habitat) of MIS, Sensitive, and ESA-listed species.	←47	**Response to #1-47 –** NFMA requires that the Forest Service provide for the diversity of plant and animal communities (16 USC 1604(g)(3)(B)). Compliance with this requirement is demonstrated in the DEIS (pages 115-178) and FEIS Appendix 4 and the Biological Evaluations and Biological Assessments (see Project File).
How does the KNF quantify the edge effect from logging next to old growth, in terms of effectiveness of OG species' habitat?	←48	**Response to #1-48 –** The design feature of buffering existing old growth from proposed regeneration harvest is based on the edge effect model (Johnson, 2006).
Since the 2005 conservation assessment for northern goshawk, black-backed woodpecker, flammulated owl, and pileated woodpecker was created using FIA data that didn't not survey the specific sites/proposed logging units, this data should not be regarded as credible as it is not ground truthed. Any management activities for this proposed project should be field verified through ground surveys in each proposed cutting unit. Modeling wildlife habitat without ground surveys is not enough either.	←49	**Response to #1-49 –** FIA data is collected from ground surveys, from plots randomly distributed over the landbase. This system is a statistically valid sample design. Ground surveys were conducted for wildlife species prior to the project (DEIS, page 115). In addition, site-specific stand information from TSMRS was used to evaluate habitat for the project area. (DEIS, page 116, Forest Vegetation section of Project File)
Logging, roadbuilding and other disturbance associated with the project and other cumulative impacts could affect goshawk nesting, post-fledging family habitat, alternative nesting, foraging, competitors, prey and potential habitat, including areas far from cutting units. Research in the Kaibab National Forest found that goshawk populations decreased dramatically after partial logging, even when large buffers around nests were provided (Crocker-Bedford, 1990).	←50	**Response to #1-50 –** Fragmentation can occur naturally from fire, wind events, floods, landslides and avalanches in this area. Approximately 48% of the project areas contains suitable nesting habitat for the goshawk. Project activities would reduce this by an estimated 1% (see DEIS pg. 149). Region One has been gathering data and assessing habitat availability for the Northern Goshawk since it was added to the Sensitive Species list. Based on this assessment (Samson, F. B. 2005. A Conservation assessment of the northern goshawk, blacked-backed woodpecker, flammulated owl, and pileated woodpecker in the Northern Region), the Region decided that (1) habitat exists to support reproductive individuals on each Forest; (2) habitat is well-distributed; and (3) individual goshawks can interact with one another across the Region. As a result of these findings, the Region will no longer include the Northern Goshawk on the Sensitive Species list (Tidwell,
The DEIS's analysis of goshawks seems to reflect a very poor understanding of northern goshawk habitat requirements. Reynolds, et al. 1992 provide a basis for a northern goshawk conservation strategy that could be implemented if forestwide habitat considerations were to be truly taken into account. Reynolds et al. (1992) suggest that it is essential to viability of goshawks that 20-50% of old growth within their nesting areas be maintained, yet nothing in the DEIS seems to recognize that (see also Suring et al. 1993). Graham, et al. 1999, USDA Forest Service 2000b, Iverson et al. 1996, and Suring et al. 1993 are more examples of northern goshawk conservation strategies the FS might adopt for this Forest or Region, if emphasis was more appropriately placed on species conservation and insuring viability rather than justification for resource extraction.		

USDA Forest Service, 2000b recommends that forest opening greater than 50-60 acres be avoided in the vicinity of goshawks. At least five years of monitoring is necessary to allow for effective estimates of habitat quality (Id.). Research suggests that a localized distribution of 50% old growth should be maintained to allow for viability of goshawks (Suring et al. 1993). Goshawks are often associated with a thick overstory cover and areas with a large number of large trees. For example, Hayward and Escano (1989) recommend an overstory canopy between 75 and 80%. According to the BE/BA for the Keystone Quartz EIS in the Beaverhead-Deerlodge NF, "Goshawks prefer vegetation structure that permits them to approach prey unseen and to use their flight maneuverability to advantage (Widen, 1989, Beier and Drennan 1997)…"		1380-3 letter, July 17, 2007) (Wildlife section of project file). Although this species is no longer considered a Sensitive Species, analysis indicates that the proposed activities would not cause this species to decline in population viability (DEIS, pg. 150, FEIS Appendix 4)
The issue of fragmentation should have been more thoroughly considered with respect to goshawks. Other edge-adapted species may compete with the goshawk and displace the goshawk if adequate amounts of forest interior habitat is not provided. Crocker-Bedford (1990) recommends that a foraging area of >5000 acres of dense forest, in which no logging is permitted, be designated for goshawks, with additional areas of 2500-5000 acres of more marginal habitat designated beyond this 5,000 acre foraging area. The flammulated, boreal owl and the great gray owl are species of concern that are sensitive to logging and other management activities. The KNF provides inadequate management strategies to insure their viability. See, for example, Hayward and Verner, 1994.	←51	**Response to #1-51 –** A sensitive species is any species the Regional Forester has made a determination there is a concern for population viability within the state, as evidenced by a significant current or predicted downward trend in populations or habitat. An analysis of the flammualted owl is included in the DEIS on pgs. 145-148. Both boreal and great grey owls have been observed on the ranger district and no known threats or declines in the species have been reported. The boreal and great gray owls are not considered sensitive species on the KNF. The sensitive species analysis concluded that all actions would meet Forest Plan standards and guidelines, meeting habitat needs for these species. (DEIS, pages 145-148, 152-155, FEIS Appendix 4).
The KNF continues to ignore the fact that Bull et al., 1997 essentially nullify the KNF's snag habitat retention and management strategies. The high density of snags and defective trees within old-growth (Green et al. 1992) would likely be substantially eliminated with the planned logging. Bull, et al., 1997 state: This document presents new information on the retention and selection of trees and logs most valuable to wildlife. …Current direction for providing wildlife habitat on public forest lands does not reflect this new information. Since the publication of Thomas and others (1979), new research suggests that to fully meet the needs of wildlife, additional snags and habitat are required for foraging, denning, nesting, and roosting. Although we do not suggest specific numbers or snags to retain by forest type, tow recent studies indicate that viable woodpecker populations occurred in areas with about four snags per acre.	←52	**Response to #1-52 –** Bull et al. 1997 is incorporated into the Northern Region Snag Protocol; recommending a minimum of 4 snags/acre. This project does not enter or affect old growth (DEIS pg. 49). FEIS Appendix 1 identifies specific design features for snag retention. These require the retention of all existing snags, and replacement tree retention where there are inadequate existing snags (less than 6 snags per acre).
We suggest that the next step in snag management should involve creating a model that incorporates the new information on woodpecker foraging substrates (live trees, snags, and logs), home range sizes, number and characteristics of roost trees, multiple occupancy of snags, and needs for other habitat structures. Once this information is incorporated, the model may suggest changes to guidelines that specify numbers of snags and other habitat features by forest type and geographic area. Additional	←53	**Response to #1-53 –** Until the new Forest Plan is adopted, the Forest must at least meet the 1987 Forest Plan Standards. The Forest Plan does not require that snags be managed at the "optimal" conditions. New science since the 1987 Forest Plan has been incorporated into the Northern Region Snag Protocol (USDA, Forest Service, 2000). This protocol recommends the use of local data to fine tune the protocols, which the Kootenai has completed (Johnson, 2005). These guidelines were followed in this project, and are reflected in the design features listed in Appendix 1 of the FEIS.

information on fall rates of snags, foraging needs of black-backed and three-toed woodpeckers, relation of the density of woodpeckers to that of secondary cavity nesters, and relation of snag density to woodpecker density would greatly improve the model. The adjacent IPNF (USDA Forest Service, 2000c) has also recently called for updated snag guidelines: "Apply snag and down woody material guidelines from the Upper Columbia River Basin Assessment to improve marten habitat" (p. 39). Although that report doesn't state what those guidelines should be, we welcome the FS's acknowledgment of scientific evidence that reveals the IPNF's (and the similar KNF) guidelines inadequate.		
The DEIS does not adequately consider that snags may be cut down for safety reasons during logging operations (due to OSHA regulations. The DEIS fails to disclose how much snag loss would be expected because of safety concerns and also skyline corridors and other methods of log removal—the loss could be more significant that disclosed, because the DEIS doesn't provide any idea the degree of snag loss due to these concerns. The paucity of snag habitat in previously logged areas is no doubt at least partially attributed to concerns over logger safety.	**←54**	**Response to #1-54 –**A design feature is included to require any snag felled for safety reasons to be retained on site for coarse woody debris recruitment. (see FEIS Appendix 1, Design Features). Only standing dead trees may be cut for safety reasons. Actual snag loss varies, depending on the condition of the snag and injury/risk level a contractor is willing to take. Generally this is more of a concern in skyline units. The quantity of snags would be ensured by designating snags within clumps of trees, and other recruitment trees to be left unharvested.
The degree to which pileated woodpeckers prefer larger trees/snags for nesting is not recognized by the DEIS. Also, USDA Forest Service, 1990 states, "To provide suitable pileated woodpecker habitat, strips should be at least 300 feet in width…" The DEIS also ignores many structural habitat components necessary for the pileated woodpecker. USDA Forest Service, 1990 indicates that measurements of the following variables are necessary to determine quality and suitability of pileated woodpecker habitat: • Canopy cover in nesting stands • Canopy cover in feeding stands • Number of potential nesting trees >20" dbh per acre • Number of potential nesting trees >30" dbh per acre • Average DBH of potential nest trees larger than 20" dbh • Number of potential feeding sites per acre • Average diameter of potential feeding sites	**←55**	**Response to #1-55 –** The DEIS discloses the analysis related to pileated woodpeckers on pages 169-172. It refers the reader to cited references concerning the bird's ecology, biology and habitat description.
The preferred very large diameter of nesting trees for the pileated woodpecker recognized by USDA Forest Service, 1990 (and ignored by the snag retention strategy in the DEIS) is notable. McClelland and McClelland, 1999 found similar results in their study in northwest Montana, with the average nest tree being 73 cm. (almost 29") dbh. The paltry number of snags to be retained in logging units, and the failure to specify snags of adequate size, contrasts with scientifically-determined habitat needs acknowledged elsewhere by the FS. The DEIS cites the Northern Region Snag Management Protocol, which lacks peer-review and validation from post-implementation monitoring. Harris (1999) and ICBEMP DSEIS Appendix 12 also present scientific information that contrasts greatly with the DEIS on this topic. The DEIS also fails to cite the results of monitoring that indicate the FS is capable of meeting snag requirements for wildlife species.	**←56**	**Response to #1-56 –** Until the new Forest Plan is adopted, the forest must at least meet the 1987 Forest Plan Standards. The Forest Plan does not require that snags be managed at the "optimal" conditions. New science since the 1987 Forest Plan has been incorporated into the Northern Region Snag Protocol (USDA, Forest Service, 2000). This protocol recommends the use of local data to fine tune the protocols, which the Kootenai has completed (Johnson, 2005). These guidelines were followed in this project, and are reflected in the design features indicated in Response to #1-52. In reviewing Harris, 1999, the DEIS actually follows quite well with his suggested strategies to maintaining snags over the landscape, as is incorporated the design criteria referenced.

The IPNF's Forest Plan provides an example of better management directives for the pileated woodpecker than does this DEIS. IPNF's Forest Plan Wildlife Standard #10f requires "One or more old-growth stands per old-growth unit should be 300 acres or larger. Preference should be given to a contiguous stand; however, the stand may be subdivided into stands of 100 acres or larger if stands are within one mile. The remaining old-growth management stands should be at least 25 acres in size. Preferred size is 80 plus acres." IPNF Forest Plan at II-29. This and other IPNF old growth Standards are based upon what the IPNF recognizes are pileated woodpecker habitat needs: To retain a viable population of pileated woodpeckers on the IPNF … our recommendations are: 1. Retain 10 percent old-growth throughout the Forests. 2. Distribute the old-growth so that old-growth compartments with 5 percent old-growth retain at least 5 percent old-growth. All old-growth stands 25 acres should be retained in old-growth compartments containing less than 5 percent old-growth. 3. In each 10,000 acre unit at least 300 acres should be managed specifically for pileated woodpeckers. To maximize benefits to other species as well as pileateds the 300 acres should be either contiguous or divided into subunits no smaller than 100 acres. The subunits should be within approximately two square miles. 4. The areas managed for pileated woodpeckers should be at least 200 yards wide. 5. Areas selected for old-growth management for pileated woodpeckers should also be close to water. Old-growth larch stands are highly recommended for pileated woodpecker management. (Forest Plan EIS Appendix 27 at p. II-40.) Please explain the contrast between the Grizzly Vegetation DEIS's discussion of habitat needs for the pileated woodpecker with those scientific references.	←57

require habitat that may be outside the historic range of variation (HRV). (AMS Technical Report p. 49, emphasis added.) The FS has admitted that the use of database habitat information, as the Grizzly Vegetation DEIS relies heavily upon, is suspect: "Habitat modeling based on the timber stand database has its limitations: the data are, on average, 15 years old; canopy closure estimates are inaccurate; and data do not exist for the abundance or distribution of snags or down woody material…" (U.S. Forest Service, 2000c). Please state the degree of accuracy of the KNF's database, as compared to IPNF's regard of its own. According to official FS policy, the FS "must develop conservation strategies for those sensitive species whose continued existence may be negatively affected by the forest plan or a proposed project." FSM 2670.45. The FS never has. According to FS experts, population viability analysis is not plausible or logical, from a scientific standpoint, at the project level such as the scale of a timber sale(s), absent some tiering to a larger-scaled study. Distributions of common wildlife species as well as species at risk encompass much larger areas than typical project areas (often referred to as "landscape scales"). Grizzly Bears – Since grizzly bears have a 91% probability of a downward trend in the Cabinet Yaak Ecosystem, the Forest Service should drop all logging units that may negatively affect the bears, especially those in BMU 11 that do not meet TMRD or core standards (DEIS at 119) and in light of the fact that the CYE does not meet recovery goals. (DEIS at 118). Logging will no doubt destroy habitat, not improve or maintain it. Mitigation actions are just that – mitigation. Those sorts of activities will not maintain habitat, they can only try to make up for the further loss in habitat. This idea is clearly demonstrated with logging in unit 34. In that unit, half of the grizzly habitat core may become ineffective. (DEIS at 122). The Forest Service figures it can just compensate for the Lucky Point core that may be lost with a newly created core. Grizzlies that are living in the area probably don't know that the FS is creating new core for them. How can the FS say with any certainty that when the logging displaces the bears from the lucky point core that the bears will move to the newly created core. Isn't it possible that the bears won't move towards the newly created core. If that is the case, habitat isn't being maintained, it is being lost and mitigation measures may or may not work. Huckleberry regeneration – The DEIS admits that where mechanical site prep takes place, the frequency and cover of huckleberries will be reduced for several years. In effect, the forest service is eliminating bear foraging opportunities. This does not maintain bear populations but would instead force bears to forage elsewhere, possibly in habitat that is of lesser quality than the proposed units. Habitat standards – Alternative two should be dropped from consideration as opening size of units 49 and 50 would not meet direction (DEIS at 124), and there would not be a travel corridor in place. Unit 60 should be dropped from consideration as it would result in disturbance in a corridor (DEIS at 124). All proposed logging in BMU 11	←61 ←62 ←63	still reflect the general forest characteristics important to analysis. **Response to #1-61 -** FSM 2670.45 does NOT require the development of conservation strategies, but rather states that the Forest Supervisor is the responsible official to "Develop quantifiable objectives for managing populations AND/OR (emphasis added) habitat for sensitive species. The Forest Plan establishes quantifiable habitat objective for sensitive species associated with old growth as 10% of the lands below 5500 feet elevation and well distributed across the landscape. The Forest Plan also establishes the objective of "all endemic vertebrate species of wildlife will have sufficient habitat to maintain viable population levels" (FP p. II-7). Samson (2005) documents the presence of sufficient habitat for several sensitive species on the KNF. FSM 2622.01 is not referring to conservation strategies, but to Forest Plans. "A Conservation Plan Based on the 1987 Kootenai National Forest Land Management Plan as Amended" Johnson (2004), demonstrates that the KNF Forest Plan has met Forest Service policy. **Response to #1-62 –** The analysis related to grizzly bear indicates that all standards will be met after the project is completed. Although there are temporary impacts (DEIS, page 122 states "Assuming a zone of influence of 1 mile, about half of the Lucky Point core habitat may become ineffective for the two weeks it takes to harvest unit 34, but the additional core created on the north end (by berming of 6715B) would offset this and provide a displacement area." Alternative 2A would further increase core acres and merge two blocks of core into one large portion over 10,000 acres. Research has shown that grizzly bears will move away from areas of disturbance, seeking areas of little disturbance (core habitat). Upon the conclusion of the project, Unit 34 would be in Core. **Response to #1-63 –** Post harvest, the huckleberry plants would be in a recovery period from the mechanized activities. More sunlight would be available, and less competition from trees for water and other nutrients, generally the plants will produce fruit for bears and other wildlife within a few years. In time, the affected habitat in the units will provide increased forage for bears. Those unharvested areas within the project that are providing forage, would continue to offer such for bears. Bear forage habitat will not be eliminated, as inferred. **Response to #1-64 –** Alternative 2a redesigns Units 49 and 50 to ensure wildlife movement corridors are provided and smaller openings will occur.

should be dropped as that unit has been below core standards throughout most of the reporting period. (DEIS at 126). While habitat improvement actions should be lauded, they should not be coupled with destructive logging, which would seemingly lessen their effectiveness. How does the habitat provided by road decommissioning compare with that of the stands are proposed to be logged? Ostensibly, trees would provide a more quality core habitat than a decommissioned road, especially during the first few years when the road hasn't been reclaimed by alder and other species. If the decommissioned roads would not provide the same degree of quality that the forested stands would provide, the FS shouldn't claim that it is maintaining habitat.	**←64**	Harvest activities in Unit 60 would occur and may temporarily disturb bears. However, plenty of vegetative cover exists in this wildlife corridor to provide hiding cover and security for bears and other mammals. See FEIS Chapter 5, pg. 16 for more information. The decommissioning of roads provides areas with increased habitat security for bears, as motorized traffic would be denied access for the long-term. Most of road decommissioning is currently in core habitat, and is identified primarily for watershed restoration. The project would improve the overall habitat quality as measured by the parameters required by the UFSWS Biological Opinion (TMRD, OMRD, Core Habitat).
The DEIS fails to demonstrate full project compliance with the Lynx Conservation Assessment and Strategy. The conclusion that the proposed Grizzly Vegetation project, in conjunction with other ongoing or foreseeable actions, will not adversely affect lynx absent demonstrating full consistency with the LCAS, is without adequate basis. The scientific adequacy of the LCAS and its standards and guidelines for maintaining viable populations of lynx has not been demonstrated.	**←65**	**Response to #1-65 –** The FEIS Appendix 4 includes an updated lynx analysis: Appendix 4, pgs. 4-9 to 4-16. This is the most recent analysis for the lynx, and involves a more detailed analysis than the DEIS. The DEIS sufficiently addresses the standards, and existing conditions of lynx habitat in each of 3 LAUs (Table 40, page 129). Analysis disclosed on pages 129-131 displays how project alternatives will affect lynx habitat, and if the standards are still met. The LCAS is based on peer reviewed, published literature including Ruggiero et.al.2000 Ecology and Conservation of Lynx in the United States. The LCAS was developed by an Inter-Agency group of wildlife biologists knowledgeable of lynx ecology. Another interdisciplinary team reviewed the report.
The impacts of both winter and non-winter motorized route densities have not been adequately considered. The LCAS states, "the effects of open road densities on lynx are poorly understood" (LCAS at 95). From Ruggiero, et al. 1999 (cited in the LCAS): "Lynx metapopulation dynamics operate at regional scales" (p. 24). Lacking maps and adequate discussion of the connectivity issue in the DEIS, it is impossible to see the landscape features that affect connectivity and metapopulation dynamics within and between LAUs both within and outside the Grizzly Vegetation project area, a goal of the LCAS mapping requirement. Ruggiero, et al. 1994 provide guidance for reconciling the disparity between the geographic size of project analyses vs. the needs of species: "The disparity between the scale of a local management action (e.g., a timber sale) and the scale of the ecological response (e.g., species viability) is a fundamental problem in assessing population viability."	**←66**	**Response to #1-66 –** The FEIS Appendix 4 includes an updated lynx analysis and addresses these concerns. The DEIS, page 130 states: "Project planning standard 3 states: "Maintain habitat connectivity within and between LAUs." This standard would be met. Habitat connectivity within the impacted LAUs is generally good because most previous harvest activities occurred over 20 years ago and now provide cover. Newer harvest units include buffers between units that were not providing cover at that time, as well as maintained the RHCA buffers along riparian areas. There is an identified linkage corridor (USDA Forest Service 2004a, Figure 1-1) to the east of the project area but the activities proposed in this project would have no effect on that linkage."
Black-Backed Woodpecker – The FS needs to clarify whether it has completed field surveys in the specific units proposed for logging. Has the FS verified its habitat modeling by ground truthing?	**←67**	**Response to #1-67 –** Habitat modeling was based upon the conservation assessment for the Northern Region (Samson, 2005). General forest habitat and high quality habitat (recent fire areas) were both identified in the project area. Proposed units were field reviewed by the project biologists (DEIS pg. 115).
Old Growth The DEIS doesn't even state all relevant old-growth standards. Similarly, the DEIS fails to demonstrate compliance with NFMA's population viability provisions. A big problem with the DEIS's analyses for old-growth Sensitive and Management Indicator Species (MIS) is that the connection between the areas designated for old growth management and old growth species, i.e. how these acres contribute to old growth species' viability, is glossed over. As far as we're aware, the KNF has never determined minimum viable populations for any MIS or TES species as NFMA requires, nor has it specified the	**←68**	**Response to #1-68–** Refer to Response to #1-61.

amount and distribution of habitat necessary to maintain viable populations. Nor has it monitored population trends of indicator species, as NFMA requires. The DEIS does not disclose if all the areas to be logged or burned have been field surveyed for their old-growth habitat characteristics, or meet the old-growth criteria. Areas proposed for burning or logging may have old-growth characteristics that would be ignored simply because other areas have been designated for old-growth management.	←69	**Response to #1-69 –** The DEIS, pages 42-43 discloses the results of field validation of old-growth within the analysis area. Project area surveys are located at the Three Rivers Ranger District. There are currently sufficient acres of old growth to meet Forest Plan standards.
Lesica (1995) stated that the Northern Region of the FS's general goal of maintaining 10% of forests as old growth may extirpate some species. This is based on his estimate that 20-50% of low and many mid-elevation forests were in old growth condition prior to European settlement. Why does the KNF now assume that less than half that historic minimum —10%--is all that is needed to maintain viable populations of old-growth species? What is the scientific basis for the KNF's position, namely that maintaining 10% old-growth on the Forest is plenty to maintain population viability of all species needing old-growth habitat?	←70	**Response to #1-70 –**The Grizzly project maintains 11% effective old growth in the project area. The KNF Forest Plan Monitoring and Evaluation Report for FY2005 shows the total designated old growth at 11.6%. This is above the 10% minimum old growth standard for the 1987 KNF plan. The Forest Plan considers 10% old growth as a minimum for the viability of species in this habitat. The total designated and undesignated effective old growth is at 10.69% forest wide.
Restoration The DEIS fails to provide the necessary information to demonstrate, beyond a reasonable doubt, that the restoration activities will in fact balance out the adverse watershed impacts of the proposed road construction, logging, and burning in any time frame acceptable to the ecological functioning of project area streams. The DEIS did not consider the effects of not having enough funding to complete that restoration without relying on logging receipts in the near future.	←71	**Response to #1-71 –** The restoration actions that are proposed are not designed to balance out the impacts of the proposed actions. They are proposed as opportunities to pursue, if funding is available. When restoration projects have been analyzed through NEPA, the possibility of securing funding improves. Over the last ten years numerous road storage and decommissioning projects have been implemented. Although funding sources have changed over time, substantial funding continues to be available. It appears likely that funding would be available for all the proposed storage and decommissioning work proposed by this project through appropriated and partnership sources.
It is our intention that you include in the record and review all of the literature and other incorporated documents we've cited herein. Please contact us if you have problems locating copies of any of them. Please keep each organization on the list to receive all future mailings regarding this project proposal. Sincerely, John Meyer And on behalf of: Michael Garrity Alliance for the Wild Rockies	←72	**Response to #1-72 –** The resource specialists have included in their reports the analysis based upon the best available science. The literature you have cited has been reviewed (see General References section of the project file) to assure that the analysis incorporated those citations that are relevant to the site specific actions and effects identified.

July 23, 2007

Liz Sedler

Alliance for the Wild Rockies
PO Box 1203
Sandpoint, ID 83864
Mike Herrin, District Ranger
Three Rivers Ranger District
1437 N. Highway 2
Troy, MT 59935

RE: Comments on the Grizzly Vegetation and Transportation Management Project DEIS

Dear Mike,

Our review of the Grizzly Vegetation and Transportation Management Project DEIS ("Grizzly Project / Grizzly DEIS"), including the grizzly bear section in Chapter 3 of the document leads us to the conclusion that the proposed project, and more specifically Alternative 2, would be likely to adversely affect grizzly bears that utilize the project area. ←1

This would be inconsistent with the Forest Service's obligations under the ESA. Moreover, the Grizzly Project's activities will likely have significant adverse impacts on grizzlies and their habitats, and thus the agency cannot proceed with those activities unless and until US Fish and Wildlife Service ("FWS") produces a lawful biological opinion that adequately analyzes the Grizzly Project's impacts and makes a valid jeopardy conclusion, and, in the event that it lawfully claims no jeopardy will result, sets forth a lawful incidental take statement. ←2

US District Court Judge Molloy issued a ruling on December 13, 2006 that set aside the Forest Plan Grizzly Bear Access Amendment decision (2004). That ruling removed the habitat parameter standards established in that decision. The 2004 Biological Opinion for the Access Amendment was withdrawn by the US Fish and Wildlife Service as well. Therefore the Forest Service can no longer be rely upon the standards in the 2004 Biological Opinion to determine the effects of proposed actions on grizzly bears, which the Grizzly DEIS attempts to do. ←3

The Grizzly DEIS states that the standards established in Wakkinen and Kasworm (1997) (33%OMRD, 26% TMRD and 55% core) have been established as the "best science." This conclusion is based on a paper (Johnson, 2007) produced by the Kootenai NF. Grizzly DEIS at 119. The effects analysis for grizzly bears in the Grizzly DEIS also relies on outdated Forest Plan standards and guidelines and the outdated 1995 Incidental Take Statement, and the 1998 Interim Access Management Rule Set. Id. None of these previous "standards" can be legally utilized to determine the effects of a proposed action on grizzly bears. ←4

Response to #2-1 – The FEIS analysis of Alternative 2a (Appendix 4), and the DEIS (page 127) disclose that the project, including all design features "may affect, but are not likely to adversely affect the grizzly bear," based on best available science and pre-2004 recovery objectives. Concurrence with this finding was received from USFWS on April 17, 2009.

Response to #2-2 – See FEIS Chapter 5, page 15, Habitat standards erratum, for the latest information on grizzly bear analysis methodology.

Response to #2-3 – See Response to #2-2. Also refer to *Grizzly Bear Analysis Requirements in light of Judge Molloy's December 13, 2006 decision to set aside the 2002 FEIS and 2004 ROD for the Access Amendment* (Johnson 2006) *and Clarification of "Grizzly Bear Analysis Requirements in light of Judge Molloy's December 13, 2006 decision to set aside the 2002 FEIS and 2004 ROD for the Access Amendment"*(Johnson 2007) and *Rationale for Grizzly Bear Effects Analysis Process following Judge Molloy's decision (12/13/2006) to set aside the "Access Amendment" EIS and ROD.* (Johnson 2007).

Response to #2-4 – Refer to Response to #2-2 and #2-3.

The Grizzly Project may not lawfully proceed without a valid, binding biological opinion in effect that considers the impacts of the KNF's interim approach to managing motorized access within the Cabinet-Yaak Recovery Zone.	←5	**Response to #2-5 –** Consultation with the USFWS resulted in concurrence received April 17, 2009. See also Johnson 2007 described in Responses #2-2 and #2-3 above.
The outdated 1990 guidelines, 1987 Forest Plan standards and stipulations in the 1995 Amended BiOp for the KNF Forest Plan were all superceded by the 1998 Interim Access Rule Set, which was subsequently superceded by the 2004 Grizzly Bear Access Amendment, which has now been vacated due to violations of federal statute. The Forest Service cannot simply backtrack and rely on the weaker standards and guidelines in the 1987 Forest Plan, 1998 Interim Access Rule Set, or 1995 Incidental Take Statement for the KNF, or a combination of all of the above. These were all replaced by more stringent access standards, which were subsequently found by Judge Molloy to be unlawful, due to a lack of scientific integrity. Clearly the Forest Service and the USFWS cannot rely on the old standards and guidance (some of which is directly based on the flawed science) for determining effects on grizzly bears.	←6	**Response to #2-6 –** See Responses #2-2 and 2-3.
The Grizzly DEIS discusses several specific ways in which Alternative 2 is likely to adversely impact bears. See discussion under Issue 1) Grizzly Bear Disturbance and Displacement at 11. It offers 'Alternative Strategies' that would eliminate specific units that are problematic and a partial closure of the Burnt Dutch road that would reduce the potential impacts on grizzlies. Id. These and other changes that would reduce the impacts to bears and other resources were incorporated into Alternative 3.		
Minimizing disturbance and displacement (adverse) effects on grizzly bears should be a high priority for this project given the dire condition of the Cabinet-Yaak grizzly population which is in decline as acknowledged in the Grizzly DEIS. According to researchers there is a 91 % probability that the population is in decline. Grizzly DEIS at 118.		
Neither action alternative adequately minimizes impacts on grizzlies. For example, there is potential for conflicts with humans due to two currently gated roads being opened for public use during project activities. Grizzly DEIS at 123. The DEIS appears to count on project activities displacing bears (an adverse effect in and of itself) from the area of the opened roads to reduce the potential for human/ bear encounters when the roads are opened. This is a good example of impacts on bears being downplayed or ignored by the Forest Service, contrary to requirements of the Endangered Species Act.	←7	**Response to #2-7 –** This was an issue addressed in the DEIS and project design features were developed to respond to issues of disturbance and displacement to grizzly bears (DEIS pages 15-16). Alternative 2a further addresses disturbance and displacement (FEIS Chapter 5, page 1). The FEIS Appendix 4 discloses the effects of the proposed activities, including opening these two roads, and that adequate displacement areas have been provided. OMRD is below the standard of ≤33% during and after project activities are completed. Linear ORDs are well below the standard (FEIS Appendix 4, Table 1).
Adverse effects are also likely due to helicopter logging in or adjacent to core. The three helicopter units are located in or adjacent to grizzly bear core. Grizzly DEIS at 125. It has been determined that proposed helicopter logging in grizzly core in two separate timber sales on the Idaho Panhandle NF will adversely affect grizzly bears. The Grizzly DEIS claims that short duration (3 weeks) of the helicopter logging in the Grizzly Project eliminates its potential for adverse effects. There is no scientific basis for this claim.	←8	**Response to #2-8–** The effects determination for each project is evaluated based on site-specific project information. Alternatives 2 and 3 considered different levels of helicopter harvest in core as disclosed in the DEIS pgs. 122-127. All helicopter harvest has been dropped under Alternative 2a.

Table 37 lists the actions proposed in grizzly core habitat. Id. Clearly the proposed logging and temporary road construction have a high potential to disturb and displace bears, and are therefore likely to adversely affect grizzlies in BMU 14.	←9	**Response to #2-9 –** Sufficient actions to replace impacted core have been identified in the FEIS Appendix 4 grizzly bear analysis and included in the Access Management Plan (FEIS Appendix 1) to offset the projects impacts. Core standards are met in BMU 14.
We are pleased to see that the Kootenai NF has made a commitment to meeting the requirements in the 3/25/01 Settlement Agreement with the Alliance for the Wild Rockies as an interim measure. Grizzly DEIS at 119. However, the Settlement Agreement very clearly disallows actions that would adversely affect grizzly bears. It is painfully clear that the action alternatives proposed in the Grizzly DEIS would fail to comply with that stipulation.	←10	**Response to #2-10** – The Final Environmental Impact Statement (EIS) Forest Plan Amendments for Motorized Access Management within the Selkirk and Cabinet-Yaak Grizzly Bear Recovery Zones was prepared in compliance with the March 25, 2001 "Stipulation for order dismissing action" (settlement agreement) on case No. CV 00-13-M-DWM (Alliance for the Wild Rockies vs. Dale Bosworth, Bob Castaneda, and David Wright U.S. Forest Service). With the signing of the Record of Decision (ROD) (3/23/2004) the final decision was made and the amendments became effective, thus the settlement agreement expired (Molloy 2001: stipulation #8). The project determination for the Grizzly Project, which received concurrence from the USFWS, is that this project "may affect, but would not adversely affect" the grizzly bear (Refer to USFWS concurrence dated April 17, 2009 in the project file).
This concludes our comments on the Grizzly DEIS at this time. Thank you for the opportunity to comment. Regards, Liz Sedler		

Mike Herrin District Ranger, Three Rivers District 1437 N. Hwy 2 Troy, MT 59935 July 21, 2007 Dear Mr. Herrin, Please accept these comments on behalf of the Yaak Valley Forest Council in regards to the Grizzly Vegetation and Transportation Management Project Draft Environmental Impact Statement released June 8, 2007. We appreciate the modifications that were made to the proposed action to address specific resource concerns in units 41 and 48 and we are supportive of all the burning and under burning proposed in the project. Yet the document fails to thoroughly address, despite our requests from day one, the larger issues in the project area such as the disturbance that management activities will have to grizzly bears and the effects that these activities will have to lands being considered for wilderness designation. From the very beginning of the scoping process, we discussed with the team our group's needs for this EIS to address and enhance this area's wild qualities and feel as those these concerns are not reflected in the DEIS.	←1	**Response to #3-1 –** The issues of disturbance to grizzly bear and consideration for potential wilderness designations were recognized and carried throughout the project as key issues (DEIS pages 11-12), with alternatives developed to address them. Alternative 2a was further refined in response to these issues (see FEIS Ch. 5, pg. 1).
This project, located in the heart of the wild Yaak, is an area that our group seeks to protect through wilderness designation, as you well know through previous conversations. The project area encompasses two Inventoried Roadless Areas that deserve wilderness designation to protect their wild qualities and plant biodiversity as well as the valuable habitat they provide for grizzly bears and other wildlife. Grizzly Peak IRA and Roderick IRA are two of the four IRAs that create the Roderick Complex, the other two being Saddle Mountain and Zulu IRA, totaling 61,764 acres of wild country, divided only by a couple of roads of varying use. Our previous letters have emphasized the importance of maintaining and enhancing the wild qualities of this area. Any activities proposed in this area have the ability to detract from the wild qualities of this area and may detrimentally disturb the small population of grizzly bears which has historically frequented this area.	←2	**Response to #3-2 –** The effects to the qualities that you refer to are disclosed in the DEIS inventoried roadless area analysis (pages 188-192) and FEIS Ch. 5, pg. 5.
Given the current status of the Cabinet Yaak grizzly bear population as 'threatened but warranted for endangerment status' and evidence presented by local biologists that shows that the population is not recovery but struggling to maintain status quo, we ask that the district carefully consider the trade-off between the disturbance and the purpose and need for the project. The purpose and need for the project mentions grizzly bears only in the context of road and trail management, but apart from a prescribed burn on Grizzly Peak, it does not identify opportunities to improve and enhance grizzly bear habitat. Activities proposed in the project have the potential to displace bears out of this		**Response to #3-3 –** The grizzly bear has been a key component of

valuable habitat during the bear season, pushing them to less ideal habitat where there are more people and less natural food sources available. Therefore we ask the district to carefully consider whether or not this struggling population can afford the level of disturbance that the project will have on the bears.	←3	alternative development throughout this project. Alternative 2a adds 2,700 acres of core area in a key approach area, harvests a higher percentage during the non-bear year, and drops decommissioning and storage work in core that had the potential to disturb the bear in important habitat. See FEIS Chapter 5, page 1 and FEIS Appendix 4 for more information.
We are especially concerned about the level of disturbance that may occur through road decommissioning activities on the Roderick side of the drainage. We recognize the need for watershed rehabilitation yet are very concerned about the disturbance that will created if these activities are conducted with heavy machinery in grizzly bear core. We would like to work with the district to explore alternatives methods of addressing sedimentation, methods that will be less impactful and hope that we can engage in a discussion about short term impacts vs. long term impacts of the decommissioning such that we and other specialists may better understand the need for decommissioning, what is being proposed to address this need and how this will affect wildlife and especially grizzly bears in the area. We regret to say that at this time we are still gathering the necessary information and soliciting opinions from specialists to help formulate a stance on the watershed rehabilitation activities on the slopes of Roderick Peak. We hope that there may be a manner in which the watersheds can be restored and to address the sedimentation into these streams with the minimal amount of disturbance. Therefore, we reserve the right to submit an addendum to these comments once we are able to clearly weigh the issue.	←4	**Response to #3-4 –**Due to this concern, and concerns expressed by the USFWS, watershed rehabilitation work, including decommissioning, in the Vivian Creek area on Roderick Mtn. was dropped in Alternative 2a.
Our other site specific concerns with this project are focused on activities that we believe will create excessive disturbance to this wild country and the wildlife that occupies it. Beyond planning we are also very concerned about the implementation and timing of activities and urge the Three Rivers District to use the utmost caution and care in conducting the proposed activities.	←5	**Response to #3-5 –** Timing considerations to mitigate for disturbance were included in the development of Alternative 2a (see FEIS Appendix 4, and FEIS Appendix 1, Design Features Comparison).
In addition to a larger concern over the purpose and need for the project, we have identified project specific concerns that include: - The removal of unit 40 and unit 60 due to their potential impact to wildlife movement and habitat. - The removal of units 57&57a to preserve the wild qualities of the Roderick IRA as viewed from Grizzly Peak and to reduce disturbance on the south side of Burnt Creek. - Designing units 49&50 in a manner that creates large leave islands and reduces the viewing impact of a 126 acre clear cut as seen from Roderick IRA. - Emphasizing under burning over grapple piling to reduce the impacts to soils, the spread of noxious weeds, and damage to huckleberry plants. - Conducting activities in the winter to minimize disturbance to bears in the project area. - The following section will outline our concerns with these project specific activities.	←6	**Response to #3-6 –** Your concerns were specifically addressed in the development of project key issues and Alternative 3. The differences in effects between the alternatives is disclosed in Chapter 3 of the DEIS. These concerns were also considered in the development of Alternative 2a. The analysis of Units 40 and 60 regarding movement corridors and habitat is clarified on FEIS Ch. 5, pgs. 15 and 16 and concludes that activities would not contribute to fragmentation in wildlife bear corridors (FEIS Appendix 4-6) so these units remain; however, Alternative 2a drops units 57 and 57a since objectives were not able to be met with the planned harvest, Units 49 and 50 were redesigned to include leave islands and reduced opening sizes, less grapple piling is included as compared to Alternative 2, and more winter harvest is included.
Unit 40- This cutting unit lies along a bermed road between two plantations. In the		

DEIS it is described it as a "mixed stand of lodg pole and Douglas-fir with mortality in the lodgepole and plantations on two sides…" (pg. 50). The DEIS does not describe it as a high risk stand nor does it identify a need to treat this isolated unit that lies adjacent to Grizzly IRA. The wet soils found in a portion of this unit are home to a population of Botrychium minganense and have been removed from the unit at the request of the district botanist. This will significantly reduce the size of this unit and in our previous experience with harvesting small units on the Three Rivers District, the impact of tractor harvest appears to increase significantly due to lack of maneuvering space. These wet soils require the unit to be harvested in the summer and which places these activities in the middle of bear season. This unit lies in an area thick with huckleberries and has evidence of use by bears. We feel that the harvesting of this small unit will contribute to habitat fragmentation for grizzly bears and the economic value does not warrant the impact that will be created to access this stand.	←7	**Response to #3-7 –** Since the design features included in the DEIS and FEIS Appendix 1 and unit layout would avoid wet areas, the project would not contribute towards detrimental impacts (soils analysis, DEIS, pgs. 75-86). Under Alternative 2a, unit 40 was changed from grapple piling to underburning to promote forage, and sufficient displacement habitat is provided. Yes, huckleberry plants are in the unit, and by removing the overmature lodgepole pine along with prescribed burning, the actions are anticipated to produce more huckleberries (DEIS pg.123 and FEIS Appendix 4, pg. 4-7).
Unit 60- This unit lies directly between the Grizzly IRA and the Roderick IRA and is the only unit along this portion of Road 472. It is described in the DEIS as a high risk stand of lodgepole that lies adjacent to several hundred acres of high risk lodgepole that are not being harvested. Therefore this 40 acre unit will only have an impact upon the lodgepole within the stand and will do little to treat the other acres of lodgepole at risk. It is a relatively isolated unit that will require BMP work along road 472, creating additional disturbance to grizzly bear and other wildlife movement during the summer. The wildlife analysis acknowledges that: The other local movement corridor would potentially be impacted by harvest in unit 60 and the construction of temporary road to access the unit, as well as improvement of road 472 for hauling in Alternative 2. Harvest in unit 60 would result in disturbance in this corridor and could disrupt movements of bears between the Grizzly Peak and Sheepherder/Roderick Core areas during road work, harvest, and site-prep activities. Longer-term effects would be felt as a result of improving the road to access unit 60; and improved road could result in more public use in the future (pg. 124). Therefore, the harvesting of this unit creates excessive disturbance to an area that could serve as a displacement zone for wildlife during harvest activities along the Burnt Dutch drainage while road improvements would encourage increased use by the public. Both the road improvements and harvesting activities will create excessive disturbance to bears in the area.	←8	**Response to #3-8 –** The EIS wildlife analysis recognizes the activities would cause disturbance, however specific design features were incorporated to minimize these effects, including sufficient displacement habitat (FEIS Appendix 1-Design Features and Appendix 4-Wildlife analysis). The analysis did not identify "excessive" disturbance as is suggested here. The conclusions from the biological assessment were that the project "may affect, but are not likely to adversely affect the grizzly bear." See the FEIS, Ch. 5, pgs. 15 and 16, for more description of the anticipated affects from the actions proposed for units 60 and 40. Road 472 will receive some drainage improvement, but no surface improvements, so use is not expected to increase.
Unit 49&50- We have discussed at length with the district and the team a variety of options for treating this stand. The DEIS makes it clear that there are economic considerations that will affect the design of this treatment area. Our concerns include soils, the preservation of natural regrowth and the viewshed from Roderick IRA. This proposed 126 acre clear cut sits on a hill side that has already been harvested through the Dutch Oven Categorical Exclusion. The manner of implementation for this previous project created excessive soil disturbance by using a logging system that was inappropriate to the slope. We have made clear to the team that we do not want to see this type of excessive soil disturbance in the currently proposed unit. These units should		

not be harvested through a ground based system nor should grapple piling be the primary fuels treatment method to minimize damage to soils and native vegetation. These units also demonstrate natural regrowth of a variety of species and islands of other species. We would like to see large islands of regrowth protected to what ever extent possible during harvest activities. These leave islands will also help to reduce the impact of a 126 acre clearcut to the viewshed from Roderick IRA. By creating large leave islands and using a mixture of treatments to remove the lodgepole, harvesting activities can attempt to mimic natural disturbance and minimize the impact of the viewshed.	←9	**Response to #3-9 –** These units were redesigned for Alternative 2a to address these concerns. Rather than one large opening, two smaller openings are created to ensure movement corridors and leave islands are provided (FEIS Ch. 5, pg. 2). Unit 50a on the hillside you describe is a skyline unit.
Unit 57&57a- While we support aspen restoration on the Kootenai National Forest we have concerns about harvesting these units adjacent to the Roderick IRA and their potential impact to the wild qualities of this area. The majority of the project area provides an opportunity for aspen restoration and units 57 & 57a will create unnecessary disturbance on the Roderick side of the drainage that has no other proposed harvesting activities. Therefore it would be preferable if the harvesting activities would be limited to the Grizzly Peak side of the drainage.	←10	**Response to #3-10 –** Alternative 2a drops units 57 and 57a. The analysis of effects of the alternatives to the Roderick IRA are discussed on pgs. 191-192 of the DEIS.
Underburning vs. Grapple piling Over the past year we have had extensive conversations with the resource specialists on the Three Rivers District to understand when and where grapple piling is an appropriate method of fuels reduction and the alternatives available for fuels treatments. Our concerns with grapple piling are those of excessive soil disturbance due to the use of more machinery and the spreading of weeds due to the timing of excavator use. These concerns are expressed in the project resource analysis as well. The soils analysis states that "Detrimental impacts to soils are most likely to occur where fuels treatments are implemented with equipment…other fuels treatments like yarding tops/lop and scatter, hand piling and jackpot burning have either very low impact or beneficial effects to soil productivity with organic matter inputs" (pg. 83). The noxious weed analysis also states that "In general, the risk of weed infestation and spread is greater with grapple piling than with underburning, although both can contribute to weed spread" (pg. 182). Both of these statements support fuels treatments other than grapple piling to minimize the compaction of soils and spread of noxious weeds. Grapple piling also has the potential to impact wildlife through the detrimental effects that can occur to huckleberry plants. "Grapple piling may have the most impact on existing huckleberry plants, due to the disturbance to root systems from the mechanical site preparation" (pg. 123). Seeing that this is an area of importance to grizzly bears and huckleberry production, we would be concerned about the impacts of grapple piling to huckleberry production and would like to see more burning occur to encourage huckleberry regeneration. Therefore we encourage the district to utilize alternatives to grapple piling whenever appropriate and to use a variety of fuels treatment methods to accomplish their goals. The fuels analysis as well as the air quality assessment, do not report any significant differences between the two different fuels treatments in their affects to the resource or the cost of implementation and we encourage the district to consider an alternative approach to fuels treatment.	←11	**Response to #3-11 –**The IDT took a hard look at this issue in designing Alternative 2a, and excluded grapple piling as a slash treatment wherever feasible. Alternative 2a includes less than half the grapple piling as compared to Alternative 2, and much of this is expected to be spot piling. It should be noted that prescribed burning is not without its own challenges, whether it be the narrow window of weather conducive to burning, as well as the potential to cause additional stress to trees.

Winter activities- Given the level of disturbance that the project will create for bears in the area, we encourage the team to consider winter harvest on many of the units to minimize the disturbance to grizzly bears during their active season. Again, we emphasize the importance of this area to the Yaak grizzlies and would like to this to be considered in the planning and implementation of the project.	←12	**Response to #3-12 –** To protect soils, approximately 45% of the units in Alternative 2a require harvest on frozen ground, as compared to Alternative 2 for which 12% of the units have this requirement. Winter period harvest requirements would provide additional protection for the grizzly bear.
As always our organization is very concerned about the spread of noxious weeds and the manner in which harvesting activities will contribute to the distribution of seed and infestation. We ask the district to ensure that proactive measures are implemented successfully prior to harvesting and that post harvest measures further minimize the spread of weeds. Many of the roads in the project area are heavily infested and will contribute to the spread of weeds if not dealt with in an appropriate manner.	←13	**Response to #3-13 –** Specific design features to prevent the spread of noxious weeds are included in all action alternatives to respond to this concern (see FEIS Appendix 1).
These recommendations are based on ground-truthing efforts carried out during the proposed action and multiple conversations with the NEPA team and the district staff to better understand the goals of the project and the possibilities for modification. Consultation with local biologists on the needs of grizzly bears and wildlife has also helped us to identify areas of concern in the project. Yet the location of the project in the wildest country in the Yaak and the need to preserve the wild qualities of these roadless areas for Wilderness and grizzly bears is the over arching concern for our organization and we feel strongly that this should be the purpose of the Grizzly project.		
We appreciate this opportunity to comment on this project and look forward to further conversations with the team to explore ways to preserve and enhance the wild qualities of this rich landscape.		
Sincerely, Sarah Canepa Forest Watch Coordinator		

EPA COMMENTS ON THE GRIZZLY VEGETATION AND TRANSPORTATION MANAGEMENT PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT Comments: 1. We appreciate the inclusion of clear narrative descriptions and maps describing alternatives (Map Appendix), as well as tables describing and comparing important features of alternatives in Chapters 2 (Tables 1 through 4) and Appendix B and C. We particularly appreciate the identification of drainages and treatment units on the alternatives maps that allow easy understanding of locations of treatment units in relation to streams. These maps and tables facilitate improved project understanding, help define issues, and assist in evaluation of alternatives providing a clearer basis of choice among options for the decisionmaker and the public in accordance with the goals of NEPA.		
2. Since "grapple piling impacts on soils and weeds" is identified as a significant issue in the Summary of the DEIS (page vi) and early in Chapter 2 (page 12), it may be helpful to public understanding to note on pages vi and 12 that "grapple piling" is described on page 19 of Chapter 2.	←1	**Response to #4-1 –** Yes, thank you for this suggestion. The FEIS explains this at FEIS Ch. 5, pg. 1.
Water Quality/Aquatics/Soils 3. The DEIS states that in a Memorandum of Understanding (MOU) between the Forest Service and the State of Montana, the Forest Service has agreed to follow State water quality standards, primarily through best management practices (BMPs) (page 89). We want to note that BMPs need to be sufficient to protect beneficial uses and achieve Montana Water Quality Standards (WQS), with adequate monitoring to verify achievement of WQS. The Montana DEQ has issued guidance ("Requirements for Nonpoint Sources of Pollution Impacting High Quality and Impaired Waters") that differentiates BMPs from the "reasonable land, soil, and water conservation practices" required by Montana WQS (Administrative Rules of Montana 17.30 Sub-Chapters 6 and 7). This MDEQ guidance says differentiation between BMPs and "reasonable land, soil, and water conservation practices" is necessary because BMPs are largely practices that provide a degree of protection for water quality, but may or may not be sufficient to achieve WQS and protect beneficial uses. Therefore, Montana's "reasonable land, soil, and water conservation practices" generally include BMPs, but may require additional conservation practices, beyond BMPS, to achieve WQS and protect or restore beneficial uses. The key point is that the protective or restorative practices that are used must achieve WQS (i.e., protect or restore beneficial uses) to meet the Montana Water Quality Act and Federal Clean Water Act requirements; since BMPs alone may not always be sufficient.	1a	**Response to #4-1a –** In addition to BMPs, RHCA buffers and other design features listed in FEIS Appendix 1 are applied to ensure these laws are met.
4. We appreciate the inclusion of "watershed rehabilitation" among the objectives in the purpose and need statement for the proposed Grizzly Vegetation and		

Transportation Management Project (page 2). We are also pleased that the DEIS evidences recognition that roads are single largest source of management related sediment in most streams in the Yaak River Basin, and that road stabilization is needed to minimize road impacts on watershed conditions with inclusion of the statement on page 3 of the DEIS: "There is a need to stabilize roads in order to minimize their impact on the watershed condition. Specific sediment production concerns are existing unstable failures, undersized culverts, lack of cross drainage, and unstable fills. Road conditions in upper Burnt Creek present a particularly high risk for water quality. Road failures in this area are contributing sediment to Burnt Creek. Other roads with sediment sources or road/stream crossing at risk have been identified in Lang Creek, Cool Creek, Pheasant Creek, Gus Creek, Little Creek, and unnamed Yaak River tributary watersheds." We agree that sediment from roads, particularly poorly maintained roads with inadequate road drainage is a major cause of adverse water quality impacts. We fully support the proposed inclusion of activities in the Grizzly Vegetation and Transportation Management project to reduce erosion, improve road drainage, and reduce sediment production and transport from roads, including road decommissioning (27.6 miles of active decommissioning and 16.9 miles of road abandonment), placement of roads in storage (22.6 miles), and implementation of road BMPs (49.4 to 54.5 miles). Road maintenance and BMP and drainage improvements to forest roads are critical to protecting aquatic health. We especially support road decommissioning, since reductions in road density, especially road stream crossing density, has been correlated with improved aquatic health in many areas, and lower road densities are also often associated with improved wildlife habitat and security. We are particularly pleased that a reduction of 31 road stream crossings is proposed in the project area (page 114). We also want to note that there is often a relationship between higher road density and increased forest use and increased human caused fire occurrences. Reduction in road density, therefore, may also reduce risks of human caused fires, which could be important in an area with high fuels/fire risk and/or wildland/urban interface issues.		
5. We are also pleased that no new permanent roads would be constructed, and that efforts appear to have been made to minimize construction of new temporary roads (i.e., only 2 miles of new temporary roads proposed in 5 short segments, page 20). For your information and consideration, EPA's general recommendations regarding road construction are: * minimize road construction and reduce road density as much as possible to reduce potential adverse effects to watersheds; * locate roads away from streams and riparian areas as much as possible; * locate roads away from steep slopes or erosive soils;	←**2**	**Response to #4-2 –** All of your recommendations are incorporated into our standard project design and implementation practices.

* minimize the number of road stream crossings; * stabilize cut and fill slopes; * provide for adequate road drainage and control of surface erosion with measures such as adequate numbers of waterbars, maintaining crowns on roads, adequate numbers of rolling dips and ditch relief culverts to promote drainage off roads avoid drainage or along roads and avoid interception and routing sediment to streams; * consider road effects on stream structure and seasonal and spawning habitats; * allow for adequate large woody debris recruitment to streams and riparian buffers near streams; * properly size culverts to handle flood events, pass bedload and woody debris, and reduce potential for washout; * replace undersized culverts and adjust culverts which are not properly aligned or which present fish passage problems and/or serve as barriers to fish migration; * use bridges or open bottom culverts that simulate stream grade and substrate and that provide adequate capacity for flood flows, bedload and woody debris where needed to minimize adverse fisheries effects of road stream crossings. We also encourage conduct of inspections and evaluations to identify conditions on roads and other anthropogenic sediment sources in the watersheds in the project area that may cause or contribute to sediment delivery and stream impairment, and to include activities in the project to correct as many of these conditions and sources as possible. Blading of unpaved roads in a manner that contributes to road erosion and sediment transport to streams and wetlands should be avoided. It is important that management direction assures that road maintenance (e.g., blading) be focused on reducing road surface erosion and sediment delivery from roads to area streams. Practices of expediently sidecasting graded material over the shoulder and widening shoulders and snow plowing can have adverse effects upon streams, wetlands, and riparian areas that are adjacent to roads. Road use during spring breakup conditions should also be avoided. Snow plowing of roads later in winter for log haul should also be avoided to limit runoff created road ruts during late winter thaws that increase road erosion (i.e., ruts channel road runoff along roads). Forest Service Region 1 provides training for operators of road graders regarding conduct of road maintenance in a manner that protects streams and wetlands, (i.e., Gravel Roads Back to the Basics). If there are road maintenance needs on unpaved roads adjacent to streams and wetlands we encourage utilization of such training (contact	←**3**	**Response to #4-3 –** Site-specific sediment source surveys were conducted for this project, and are in the project record, Water section.

Donna Sheehy, FS R1 Transportation Management Engineer, at 406-329-3312). We also note that there are training videos available from the Forest Service San Dimas Technology and Development Center for use by the Forest Service and its contractors (e.g., "Forest Roads and the Environment"-an overview of how maintenance can affect watershed condition and fish habitat; "Reading the Traveled Way" -how road conditions create problems and how to identify effective treatments; "Reading Beyond the Traveled Way"-explains considerations of roads vs. natural landscape functions and how to design maintenance to minimize road impacts; "Smoothing and Reshaping the Traveled Way"-step by step process for smoothing and reshaping a road while maintaining crowns and other road slopes; and "Maintaining the Ditch and Surface Cross Drains"-instructions for constructing and maintaining ditches, culverts and surface cross drains).	←4	**Response to #4-4 –** Specific contract requirements are included in all work associated with road reconstruction and maintenance. Training videos have been made available to interested operators and contractors.
6. The Yaak River is identified on Montana's most recent 2006 Clean Water Act Section 303(d) list as "not assessed" (MT76B001_010, 49.3 miles, East Fork to the Mouth), while other waterbodies in the project area do not appear to be listed on the 2006 Montana 303(d) list. As noted in the DEIS (page 89), however, a Total Maximum Daily Load (TMDL) is being prepared by the EPA and the Kootenai National Forest for the Yaak River Basin. It is our understanding that a draft of this TMDL may be available for review later this year. It is important that the proposed Grizzly Vegetation and Transportation Management project be consistent with the Yaak River Basin TMDL and Water Quality Restoration Plan that is developed. It is our understanding that preliminary results of the TMDL analyses appear to indicate that the greatest water quality impairments in the Yaak River Basin may be in Seventeenmile Creek, Lap Creek and the South Fork Yaak River, all of which lie outside the Grizzly Vegetation and Transportation Management Project area. Although it is not clear if all portions of the South Fork Yaak River watershed are outside the Grizzly Vegetation and Transportation Management Project area. This should be clarified in the final EIS. Additional watershed characterization and water quality assessment may be carried out during the Yaak River Basin TMDL development process. We note that the watershed descriptions in the DEIS evidence potential water quality/aquatic habitat concerns about Cool Creek, Gus Creek, Lucky Gulch, and Pheasant Creek (pages 90, 91), although as stated above these streams are not on Montana's most recent 303(d) list. Cool Creek: "Debris jams, of large down wood is common, creating fish barriers or major obstacles to fish movement. High bank cutting or undercutting is pervasive. There is a general lack of pools for fish due to excessive deposition of fines in the channel, and a lack of good spawning gravels. Cool Creek has a high proportion of its area harvested and a very high road density. Stability ratings for the entire 2.5 miles surveyed of the main stem channel were poor." Gus Creek: "Channel stability surveys conducted in 1976 give mostly a poor rating for	←5	**Response to #4-5 –** The South Fork Yaak River watershed is not in the Grizzly project area. See FEIS Ch. 5, pg. 12, for discussion of Yaak TMDL.

reaches. Upper bank cutting is continuous in main stem. Debris jams are numerous and constitute fish barriers. Excessive deposition of fines creates lack of quality pools and spawning habitat. A large alluvial fan exists at the mouth of the channel at its confluence with the Yaak River. Gus Creek has a very high proportion of its watershed harvested and a high road density." Lucky Gulch: Stability ratings (USDA Forest Service 1977) for surveyed reaches were given a poor or fair rating. There were many down trees in the channel and associated debris. Upper bank cutting and excessive deposits of fine material were pervasive. Lucky Gulch has very high proportions of past harvest and road density. Road sediment source surveys conducted in 2005 (USDA Forest Service 2005b) describe a steep well-armored channel with stability inherent in large substrate (cobble/boulder) and tree roots, at road crossings. Pheasant Creek: "Debris jams were numerous, on average every 0.2 miles that were often fish barriers. Excessive fines were deposited in the bed, causing a general lack of quality pools or proper spawning gravels. Stability ratings were generally given a Poor with a minor proportion of fair rating due to pervasive bank cutting and deposition of fine sediment. Pheasant Creek has a high proportion of its area harvested and a high density of forest roads." We also note that the fisheries section of the DEIS indicates that fine sediment is "unlikely to be an issue" (page 107, under Substrate), which seems to be inconsistent with some of the statements in the hydrology section (identified above) in regard to "pervasive bank cutting and deposition of fine sediment," "excessive fines deposited in the bed," "lack of good spawning gravels." The fisheries section also states that project area streams provide "good fish habitat with good bank stability" (page 107, under Prime Habitat), which seems inconsistent with the "poor" channel stability ratings and "pervasive bank cutting," "lack of pools," "lack of good spawning gravels" statements in the hydrology section. These apparent inconsistencies between the fisheries and hydrology discussions in the DEIS should be further explained and/or corrected in the FEIS. 7. We are pleased that the proposed project includes activities that will help reduce sediment production/transport from roads to address problems in these surface waters, although it is not clear to what extent the problems on Cool Creek, Gus Creek, Lucky Gulch and Pheasant Creek identified in the hydrology section of the DEIS are current problems, and to what extent, if they are current, these problems will be addressed by the proposed watershed rehabilitation activities. The DEIS states that proposed road BMP implementation work would improve conditions in Burnt Creek, Little Creek, Pheasant Creek and Lucky Gulch (page 93), and Table 27 (page 95) indicates that road decommissioning and storage work would improve stream crossings on Burnt Creek, Cool Creek, Gus Creek, Lang Creek, Little Creek, and Pheasant Creek. It would be helpful if the final EIS described more fully the extent to which the water	←6	**Response to #4-6 –** This is clarified in the FEIS Chapter 5, page 14. Updated surveys were conducted indicating that sediment is still evident, however less than levels indicated in the surveys conducted in the 1980's. Recent surveys also indicate channel stability ratings have improved (see FEIS Ch. 5, pg. 12. The findings in the fisheries section were based upon the updated surveys, as indicated in the DEIS, pgs. 106-107. The statement under Prime Habitat (refugia) specifically is in relation to the habitat indicators identified in that same section.

quality problems in Cool Creek, Gus Creek, Lucky Gulch, and Pheasant Creek are current problems, and the extent to which they will be addressed by proposed watershed rehabilitation activities. We note that Cool Creek and Pheasant Creek are stated to have populations of westslope cutthroat trout, a sensitive species (page 104).		
8. It is stated that the bulk of proposed road abandonment and decommissioning identified for completion as funding becomes available for the project would occur in Burnt Creek, including most of road system that exists in the headwaters area (page 97). While we support road decommissioning and reductions in road density in the Burnt Creek drainage, we are curious as the reasoning behind proposing so much road abandonment and decommissioning in the Burnt Creek drainage, since the DEIS states that Burnt Creek has the least road density, and one of the better stream stability ratings in the project area (page 90). In contrast, Gus Creek, Lucky Gulch and Pheasant Creek are all stated to have high road density and poor channel stability ratings. While we support the proposals to address road related water quality problems in the Burnt Creek drainage, it would appear that road abandonment and decommissioning should also be prioritized for the drainages that are stated to have very high road density and poor channel stability (e.g., Gus Creek, Lucky Gulch and Pheasant Creek). We encourage consideration of additional road decommissioning opportunities within the project area, particularly in drainages with very high road density and water quality problems related to roads. We note that closures of roads near streams with many stream crossings are more likely to have water quality benefits than closure/decommissioning of roads on upper slopes and ridges.	←7	**Response to #4-7 –** An interdisciplinary travel analysis was conducted to identify the potential minimum road system based upon management need and resource impacts. All unneeded roads in the project area were identified through this process and some opportunities for road decommissioning were brought forward to the DEIS. Alternative 2A drops four miles of decommissioning in Burnt Creek (Vivian Creek drainage) because of concern for grizzly bear security (see FEIS Appendix 3). The remaining decommissioning in Burnt Creek is prioritized since there are numerous crossings with deep fills at moderate to high risk of failure, and Upper Burnt Creek supports genetically pure westslope cutthroat. There are also westslope cutthroat in Pheasant Creek, but risk of sediment delivery from roads is much less than in Burnt Creek. Based on past funding success, it appears likely that most or all of the proposed watershed work would get funded.
9. We also have concerns that much of the proposed road decommissioning and storage work appears to be unfunded (i.e., very little of the proposed road related watershed rehabilitation work shown in Table 27 has committed funding, page 95). It is also stated that road decommissioning may not start for four years (2010) due to a backlog of three seasons of work (page 117). We recommend that the final EIS include additional information or an approximate schedule of the relative anticipated time frames for implementation of all proposed activities (i.e., timber harvest, burning, road construction, road BMP upgrades, road decommissioning, etc.). Watershed rehabilitation work that is proposed which cannot be implemented on a timely basis in relation to other project activities has less value in mitigating project effects.	←8	**Response to #4-8 –** None of the proposed watershed improvements are necessary to mitigate project impacts. They are opportunities to improve existing conditions within the project area. Scheduling is discussed on DEIS pg. 8 and FEIS Ch. 5, pg. 8, and in FEIS Appendix 1, design features. Based on past funding success, it appears likely that most or all of the proposed watershed work would get funded.
10. We support proposed placement of a bridge on the existing ford crossing of Burnt Creek, and agree that long-term improvements are likely to result from this action (page 97). We support use of bridges wherever possible on road stream crossings to reduce stream channel disturbances. As noted in our discussion of roads, we recommend that bridges have spans that provide adequate capacity for flood flows, bedload and woody debris transport.		
11. The Lang Creek drainage has a high predicted ECA level of 29 (Table 28, Page 96) which causes some concern, but we are pleased that the DEIS acknowledges		

that this ECA level is near the level of concern, and explains that recent field surveys show that Lang Creek is stable and in good condition (page 97); and that 1.6 miles of road decommissioning with two stream crossing removals, and some winter harvesting is proposed in the drainage to reduce adverse effects. We also note the predicted high ECA levels of 32 (Alt. 2) and 27 (Alt. 3) in Yaak tributary #15, also near levels of concern (Table 28, Page 96), but are concerned that the DEIS states that "no changes in roads are proposed," and that "very heavy levels of harvest are proposed (19 and 15 percent of the total area)" in this drainage. Existing road densities in Yaak #15 are stated be "very high" (page 98). The failure to propose any road decommissioning in the Yaak #15 drainage which has "very high road densities," and to propose "very heavy levels of timber harvest" when the ECA's are already close to levels of concerns seems incongruous. The DEIS states that the channel conditions are not expected to be adversely affected despite the "very heavy levels of harvest" and no reduction in the "very high" road density. Some further discussion or explanation in regard to this incongruous conclusion would be helpful. We encourage consideration of additional road decommissioning in the Yaak #15 drainage to reduce the very high road densities.	←9	**Response to #4-9 –** The predicted 32% ECA under Alternative 2 and 2A does not exceed the maximum recommended ECA. According to specific guidelines developed for the Kootenai NF (KNF-Johnson, 1991), watersheds less than 640 acres and at low elevations may have up to 30% ECA on west aspects and 40% ECA on south aspects (see FEIS Ch. 5, pg. 13). The watershed is southwest aspect so a 32% maximum ECA would be appropriate if the channel conditions were stable (DEIS pg. 96 and FEIS Appendix 3). Field reconnaissance in 2006 identified the channel in this tributary to be well armored by large rocks and good to excellent channel stability. BMP work will be implemented on Road 8021 to reduce ditch water contribution to this stream (see FEIS Appendix 1, BMP work).
12. It would be of interest to identify the extent of summer tractor harvests proposed within each tributary drainage, since summer tractor harvests have greater potential to cause sediment production/transport than other timber harvest methods. We note that Alternative 2 proposes 606 acres of summer tractor harvest (Table 1) and Alternative 3 proposes 534 acres of summer tractor harvest (Table 2). Clear disclosure of the level of summer tractor harvest in each drainage would allow improved understanding of the potential effects of proposed summer tractor timber harvests on the tributary streams. The extent of summer tractor harvest in the drainages where it was reported that streams have high levels of sediment or deposition of fines would be of particular interest (e.g. Cool Creek, Gus Creek, Lucky Gulch, Pheasant Creek).	←10	**Response to #4-10 –** Sediment delivery from harvest units directly to streams is highly unlikely due to implementation of RHCAs which function effectively as buffer strips. In addition incidence of surface erosion within the timber sale units is rare and isolated due to soil types, duff layers, and heavy vegetation. Most sediment delivery related to timber sale operations occurs at road/stream crossings. Implementation of BMPs would minimize this impact. (See DEIS pg. 92.) More recent data on stream sediment levels are updated in FEIS Ch. 5, pg. 12.
13. We are pleased that modifications were made to the originally proposed timber harvests to reduce adverse effects to soils, and that site specific soils mitigation measures are proposed in particular harvest units (pages 16, 17, 21, 22, 79), and BMPs (Appendix D) and some less damaging timber harvest methods are proposed to protect soil productivity, sensitive soils, and water quality (700 acres in Alt. 2 of winter harvest, skyline cable, helicopter harvests; and 590 acres in Alt. 3). Some EIS's we review include tables that identify harvest units with particularly sensitive soils and/or landtypes with high erosive risks, that can be compared to harvest methods and mitigation measures proposed in the units to allow evaluation of adequacy of mitigations. We did not see such a table in this DEIS, although such information must be available since special mitigations appear to be included in various harvest units to protect sensitive or erosive soils. It would be of interest to identify timber harvests proposed in units with particularly sensitive soils and/or high erosion or mass failure risks.	←11	**Response to #4-11 –** Sensitive Soils are identified based on one of three characteristics: 1) sensitive landtypes, 2) riparian/wetland areas; and 3) low productivity soils. There are seven Kootenai National Forest landtypes that are considered 'sensitive' (102, 112, 325, 351, 365, 370, 520). The sensitive landtypes that occur within the analysis area are landtypes 102 and 351, which comprise 177 acres, or less than 1 percent of the project area. An analysis of the proposed activities found that there is no proposed harvest on either sensitive landtypes or low productivity soils under any of the action Alternatives (see soils section of the project file). Special mitigations are included where previous harvest has resulted in apparently higher levels of detrimental disturbance, for instance winter harvest is required for Units 1, 2, 3, 4, 18, and 20. All design criteria are based upon site-specific review by a qualified soils scientist.

We generally recommend avoidance of ground based timber harvest and road construction in areas with high risk of sediment production or erosion potential and areas highly susceptible to mass failure. We encourage use of harvest/yarding methods that reduce ground disturbance and sediment production and transport risks when harvesting timber on erosive soils or steep slopes to reduce adverse effects to soil and water quality. Do all of the units with particularly sensitive soils or landtypes with greater vulnerability or risk of detrimental soil disturbance such as erosion, compaction, and mass wasting include adequate mitigation measures and/or less damaging harvest methods to avoid detrimental soil impacts and/or higher levels of sediment production and transport? It is important that BMPs and mitigation measures effectively protect soils and avoid sediment production and transport. Measures to protect soils and reduce erosion that during ground based harvests include: -use of historic skid trails where feasible; -placing restrictions on skidding with tracked machinery in sensitive areas; -operating tracked machinery on slash mats; -ripping or scarifying skid trails and landings to decompact soils; -adding slash to ripped surfaces to trap sediment; - rehabilitating skid trails and log landings with erosion control/soil stabilization (water bars, slash placement) and seeding/planting of forbs, grasses or shrubs to reduce soil erosion and hasten recovery. Some of these measures appear to be proposed (pages 16, 17), but we did not see all such measures identified for all summer tractor units. 14. Also, it is not clear if adequate field monitoring and analysis is proposed before and after treatments to assure that the Region 1 soil quality thresholds are not exceeded (i.e., <15% detrimental soil disturbance). 15. It is important that adequate woody debris is retained on site to maintain soil productivity. We are pleased that 15-32 tons per acre of coarse woody debris consisting of 20-30 pieces per acre, 15 inches or greater in diameter and at least 12 feet long will be retained in all regeneration harvest units, and that additional woody biomass would be retained as snags (page 17). It would be helpful to clarify that this woody debris retention requirement would apply to seedtree harvests as well as clearcut harvests (i.e., Does the term "regeneration units" for this mitigation measure includes both seedtree and clearcut units?). Alternatives 16. The DEIS indicates that Alternative 3 would have lower risks to soils than Alternative 2 since Alternative 3 drops roughly 100 acres of timber harvest; converts 20	←12 ←13	**Response to #4-12 –** FEIS Appendix 2 further describes this monitoring. The DEIS identified post harvest monitoring to make this determination. The monitoring would follow regional protocols. All proposed units were site-specifically reviewed and measured according to current protocols to provide baseline existing conditions, and to identify appropriate design criteria to maintain soil productivity. **Response to #4-13 –** This requirement is for all regeneration harvest treatments, which includes seedtree and shelterwood.

acres of tractor logging to cable yarding; has less tractor harvest on steep slopes; and favors underburning over grapple pile burning; and has roughly 80 more acres of low impact treatments using lop/scatter methods (page 77). In general we favor conduct of timber harvests in a manner that poses less risk to soils, and therefore, would tend to favor Alternative 3 with use of underburning and lop/scatter methods rather than grapple piling. We also favor actions to reduce disturbance and displacement of grizzly bears, and to minimize impacts to future wilderness consideration included in Alternative 3, but favor proposed restoration of at risk tree species such as white pine, western larch, aspen, whitebark pine, and Ponderosa pine, and reduction of fire risk included in Alternative 2 (e.g., Alternative 2 includes 100 acres of white pine and western larch restoration and 84 acres of aspen restoration not included in Alternative 3, as well as additional reduction in fuel loadings, although fire hazard ratings are the same for Alternatives 2 and 3, Table 3, page 25). The EPA believes that it may be possible to optimize the environmental and resource management trade-offs by constructing a modified preferred alternative to better address project purpose and need, and the significant issues. Accordingly, we recommend that the Forest Service consider development of a modified preferred alternative for the final EIS. In general desirable features we consider worthy of including in a modified preferred alternative include: ► maintain and improve road conditions, reduce sediment production from roads, improve road drainage, upgrade road BMPs, address road failures, replace or remove undersized culverts or culverts blocking fish passage, restore/protect fisheries; ► maximizing decommissioning of unneeded roads, reduce overall road density and road stream crossings; maximize watershed and water quality improvement; ► avoid/minimize new road construction, and if roads are absolutely needed, locate roads away from streams; ► reduce fuel loadings and ladder fuels in high fire risk areas, particularly urban interface areas (including along Long Meadows Road), while retaining at risk tree species (aspen, western larch, western white pine, whitebark pine, Ponderosa pine) and protecting other resource values (e.g., soil productivity, wildlife habitat and security, particularly grizzly bear habitat and security, wildlife connectivity, options for future wilderness consideration, old growth, etc.); ► restrict motorized vehicle access adequately to protect wildlife habitat and security and ecologically sensitive resources, restore wildlife connectivity/reduce fragmentation, control noxious weeds spread by motorized vehicles, while allowing adequate access for management and recreation. We note of course that the Forest Service will need to evaluate and analyze the impacts (e.g., water yield, sediment production, air quality modeling) of any new modified	←**14**	**Response to #4-14 –** Alternative 2 was modified to respond to many of the issues raised: ➢ The travel analysis reviewed and rated every road system and non-system, by values and resource risks. Sediment surveys were conducted to identify specific needs, and to prioritize projects. Design criteria specifically address all of the resource concerns you express. ➢ Based on district workloads and funding considerations, Alternative 2a includes the practical, necessary and feasible improvement projects, including decommissioning and watershed improvement projects. ➢ The project was specifically designed to avoid new specified road construction. ➢ The project purpose and need did not identify this as a fuels reduction project, but did respond to public concerns related specifically to Long Meadows Road. The remaining objectives are included in Forest Plan Goals and Objectives. ➢ Our access management plan clearly identifies every change in roads access, meeting exactly the goal you state.

alternative, and display those impacts in the FEIS. Inclusion or discussion of additional alternative evaluation in the FEIS may also better explain to the public the trade-offs involved in making land management decisions, and may lead to improved public acceptance of decisions.		
Timber Harvests		**Response to #4-15 –** The statement you refer to is focused primarily on providing existing seed sources. Where these exist for all the species of concern, they would be retained. Whitebark pine is not mentioned because it is not present on the specific proposed treatment units.
17. It is stated that healthy larch and white pine reserve trees would be left in all regeneration units where available, and that reforestation would focus on establishment of these species (page 46). The DEIS, however, states that whitebark pine and Ponderosa pine along with western larch and western white pine are all decreasing in overall composition (page 37). It is not clear, therefore, why only western larch and western white pine are singled out for protection and reestablishment in regeneration units, since it is stated that whitebark pine and Ponderosa pine along with western larch and western white pine are all decreasing in overall composition. We suggest that all healthy larch, white pine, whitebark pine, and Ponderosa pine trees be left in all regeneration units.	←15	
18. It would also be helpful if the FEIS more clearly identified the extent to which existing large diameter trees of desired species would be harvested and/or retained. Large diameter trees (e.g., over 12 inches in diameter) are generally long lived and fire resistant, and provide important wildlife habitat. We support hazardous fuels reduction and vegetation management, generally recommending thinning from below treatments that retain the larger more vigorous trees, particularly the desirable tree species whose overall composition is declining (e.g., western larch, western white pine, whitebark pine, Ponderosa pine). We would be interested in the amount of large diameter trees, particularly western larch, western white pine, whitebark pine, and Ponderosa pine, that would be harvested and that would be retained on the landscape with the proposed harvest prescriptions. We also recognize that there may be site-specific circumstances that may require removal of individual large trees of desired species if they pose safety hazards or need to be removed for insect infestation or access (e.g., along a skid trail, although we believe skid trail layout should avoid such large at risk trees if possible).	←16	**Response to #4-16 –** The specific diameter class ranges removed by individual units is estimated based upon stand exam data, individual walk through exams, and field reviews conducted by professional resource specialists. We understand and promote the concept of retaining the larger diameter trees, and all of the proposed activities strive toward that objective.
We also note that harvest of large fire resistant trees could potentially increase fire risk by opening up the canopy and promoting more vigorous growth of underbrush and small diameter trees that would increase fuels and fire risk in subsequent years, contrary to the hazardous fuel and fire risk reduction purpose and need.		**Response to #4-17 –** Alternative 2a redesigns these units to ensure wildlife corridors are available, resulting in two smaller openings than proposed in Alternative 2. It should be noted that these units are comprised of lodgepole pine which is experiencing increasing mortality and blowdown. The harvest will provide increased forage on white-tailed deer habitat. The increased fuel loadings within the stand, adjacent to an open road and near private lands are also a primary consideration in this treatment.
19. The treatment of proposed adjacent clearcut units 49 and 40 would create an opening of approximately 126 acres, leading to public concerns about the precedent this may set for future large clearcuts (page 12). We support the proposal in Alternative 3 to change unit 49 to 20 acres with skyline yarding and log and scatter slash treatment, and changing unit 50 to two 20 acres units with 600 feet between them to provide a wildlife travel corridor (page 23).	←17	**Response to #4-18 –** Your support is noted.

20. We also support treatment of ladder fuels in unit 61 along Long Meadows Road to reduce fire risk (page 23), and have included recommendations regarding treatment of units 40, 57, 57a and 60 in our comment regarding grizzly bear impacts below (see or comment # 24).	←18	
Wetlands and Riparian Areas		**Response to #4-19 –** Your support is noted. Identifying small wet areas within timber sale units is standard protocol during implementation and sale contract preparation.
21. EPA considers the protection, improvement, and restoration of wetlands and riparian areas to be a high priority. Wetlands and riparian areas increase landscape and species diversity, support many species of western wildlife, and are critical to the protection of designated water uses. Wetlands in particular have experienced severe cumulative losses nationally. Potential impacts on wetlands include: water quality, habitat for aquatic and terrestrial life, flood storage, ground water recharge and discharge, sources of primary production, and recreation and aesthetics. Executive Order 11990 requires that all Federal Agencies protect wetlands. In addition national wetlands policy has established an interim goal of No Overall Net Loss of the Nation's remaining wetlands, and a long-term goal of increasing quantity and quality of the Nation's wetlands resource base.	←19	
The EPA evaluates land management activities proposed within the Interior Columbia Basin for consistency with the provisions of the Interagency Memorandum of Understanding between the Forest Service, BLM, EPA, USFWS, and NMFS for Forest Service implementation of the Interior Columbia Basin Strategy on National Forest lands (referred to as the ICB Strategy, http://www.icbemp.gov/html/icbstrat.pdf ; and the "A Framework for Incorporating the Aquatic and Riparian Habitat Component of the Interior Columbia Basin Strategy into BLM and Forest Service Plan Revisions," http://www.icbemp.gov/html/aqripfrm7804.pdf).		
Riparian Conservation Areas are an important management element in the ICB Strategy to maintain and restore the health of watersheds, riparian, and aquatic resources to sustain aquatic and terrestrial species and provide water of sufficient quality and quantity to support beneficial uses. It is important that proposed harvest be consistent with the riparian management objectives described in the ICB Strategy, which include: * Achieve physical integrity of aquatic ecosystems; * Provide an amount and distribution of woody debris sufficient to sustain physical and biological complexity; * Provide adequate summer and winter thermal regulation; * Provide appropriate amounts and distributions of source habitats for riparian- or wetland-dependent species; and * Restore or maintain water quality and hydrologic processes. * Restore or maintain naturally functioning riparian vegetation communities.		
We are pleased that wet areas would be avoided or excluded from harvest units (page 17); and that all wetlands are identified as RHCAs, and wetlands less than one acre		

would have RHCA width of 50 feet, and wetlands greater than one acre would have an RHCA width of 100 feet; and that no timber harvest, temporary road construction, or operation of heavy equipment would be allowed in these areas (page 99). We recommend that harvest units be reviewed in the field to determine the presence of wetlands and identify wetlands on the Sale Area Map and in the field so that timber contractors will be able to avoid them. Monitoring 22. We believe monitoring should be an integral part of land management. The EPA endorses the concept of adaptive management whereby effects of implementation activities are determined through monitoring (i.e., ecological and environmental effects). It is through the iterative process of setting goals and objectives, planning and carrying out projects, monitoring impacts of projects, and feeding back monitoring results to managers so they can make needed adjustments, that adaptive management works. In situations where impacts are uncertain, monitoring programs allow identification of actual impacts, so that adverse impacts may be identified and appropriately mitigated. The EPA particularly believes that water quality/aquatics monitoring is a necessary and crucial element in identifying and understanding the consequences of one's actions, and for determining effectiveness in BMPs in protecting water quality. The achievement of water quality standards for non-point source activities occurs through the implementation of BMPs. Although BMPs are designed to protect water quality, they need to be monitored to verify their effectiveness. If found ineffective, the BMPs need to be revised, and impacts mitigated. We encourage adequate monitoring budgets for conduct of aquatic monitoring to document BMP effectiveness and long-term water quality improvements associated with road BMP work and road decommissioning. We are pleased that the Monitoring Plan has been included in the DEIS (Appendix E), and that the Monitoring Plan states that BMP implementation and effectiveness monitoring will be conducted for timber harvests and road work, and for application of RHCAs. We generally encourage conduct of some water quality and stream channel condition monitoring to validate that water quality and stream channel conditions (aquatic habitat) were successfully protected through use of adequate BMPs and mitigation measures during project implementation. We believe it is valuable wherever possible to do monitoring to determine actual project effects on water quality and stream channels (aquatic habitat) to verify that aquatic impact predictions were accurate. We acknowledge, however, that with use of RHCA buffers and with minimal new construction of only 2 miles of temporary roads and adequate application of BMPs, water quality impacts are likely to be low, and with implementation of watershed rehabilitation work (should it be funded) water quality improvements may accrue. It would be of interest to determine the actual water quality impacts from project implementation. Perhaps there may be PACFISH/INFISH Biological Opinion (PIBO) monitoring sites in the project area that could be used to help evaluate actual project effects (http://www.fs.fed.us/biology/fishecology/emp/index.html), or perhaps a	←**20**	**Response to #4-20 –** Four stream monitoring sites were established in 2003 during the Yaak TMDL project (see FEIS Ch. 5, pg. 12). We are seeking funding to establish a PIBO site in 2009 in Burnt Creek.

monitoring station on Burnt Creek or other Yaak River tributaries could be funded to allow some determination of the extent of potential water quality improvements. Examples of potential aquatic monitoring parameters that should be considered include channel cross-sections, bank stability, width/depth ratios, riffle stability index, pools, large woody debris, fine sediment, pebble counts, macroinvertebrates, etc,. The EPA especially appreciates inclusion of biological monitoring. Monitoring of the aquatic biological community is desirable since the aquatic community integrates the effects of pollutant stressors over time and, thus, provides a more holistic measure of impacts than grab samples. For your information, the EPA encourages use of the following reference materials in designing an aquatic monitoring program: The Forest Service publication, "Guide to Effective Monitoring of Aquatic and Riparian Resources," RMRS-GTR-121, available at, http://www.fs.fed.us/rm/pubs/rmrs_gtr121.html . The Forest Service publication, "Testing common stream sampling methods for broad-scale, long-term monitoring," RMRS-GTR-122, available at, http://www.fs.fed.us/rm/pubs/rmrs_gtr122.html . "Aquatic and Riparian Effectiveness Monitoring Plan for the Northwest Forest Plan," Gordon H. Reeves, David B. Hohler, David P. Larsen, David E. Busch, Kim Kratz, Keith Reynolds, Karl F. Stein, Thomas Atzet, Polly Hays, and Michael Tehan, February 2001. Available on-line at, www.reo.gov/monitoring/watershed/aremp-compile.htm . Monitoring Guidelines to Evaluate Effects of Forestry Activities in the Pacific Northwest and Alaska; Lee H. McDonald, Alan W. Smart and Robert C. Wissmar; May 1991; EPA/910/9-91-001; "Aquatic Habitat Indicators and Their Application to Water Quality Objectives Within the Clean Water Act," Stephen B. Bauer and Stephen C. Ralph, 1999, EPA-910-R99-014. (This publication is available on-line at, http://www.pocketwater.com/reports/ahi.pdf) Western Pilot Study: Field Operations Manual for Wadeable Streams; Environmental Monitoring and Assessment Program Protocols, Edited by David V. Peck, James M. Lazorchak, and Donald J. Klemm, April 2001, available on-line at, http://www.epa.gov/emap/html/pubs/docs/groupdocs/surfwatr/field/ewwsm01.pdf . Montana DEQ's Water Quality Monitoring and Assessment information can be found on the website, http://www.deq.state.mt.us/wqinfo/monitoring/Functions.asphttp://www.deq.state.mt.us/ Rapid Bioassessment Protocols for use in Streams and Rivers; James A. Plafkin, May 1989, EPA/444/4-89-001.		**Response to #4-21 –** See response to 4-20. Funding has been requested to

"Montana Stream Management Guide; for Landowners, Managers, and Stream Users", Montana Dept. Of Environmental Quality; December 1995. The Forest Service Region 5 document entitled, "Water Quality Management for Forest System Lands in California: Best Management Practices," September 2000, is a useful reference for BMP development and BMP effectiveness monitoring. It can be found at the website, http://fsweb.r5.fs.fed.us/unit/ec/water/water-best-mgmt.pdf . "Protocol for Developing Sediment TMDLs" EPA 841-B-99-004, October 1999 http://www.epa.gov/owow/tmdl/sediment/pdf/sediment.pdf	←21	establish 10 additional PIBO sites in the Yaak, including Burnt Creek. Four sites will be reference sites so that conditions in managed watersheds can be compared to undisturbed watersheds. In addition fish distribution mapping and genetic testing is planned. The effects of a specific project probably cannot be determined from this type of monitoring, but the overall condition, and with time, the trend in conditions can be measured. The project was designed so that effects would not be sustained, or in most cases measurable.
Wildlife 23. We are pleased that old growth would not be affected by proposed timber harvest activities, and that no temporary roads are proposed with or adjacent to old growth (page 49), and that snag and live tree retention is proposed (i.e., retain existing snags and live trees to meet minimum of 6 snags per acre, page 17). The DEIS states that minor effects would occur to habitat needed for viable populations of some species that use old growth and cavity habitat (e.g., black-backed woodpecker, flammulated owl, northern goshawk, pileated woodpecker, pages 140, 147,149,172). Accordingly, while we have concerns about potential impacts to such species from proposed vegetation treatments, it appears that impacts are within acceptable thresholds and are unlikely to affect population viability.	←22	**Response to #4-22 –** Your comment is noted.
24. We are pleased that both action alternatives would meet grizzly bear core TMRD and OMRD standards upon completion of the project, and would move in a positive direction in regards to reduction of grizzly bear impacts (page 123). The DEIS states that both action alternatives "may affect, but are not likely to adversely affect the grizzly bear" (page 127). We note that modifications made to the proposed action with Alternative 3 to reduce grizzly bear disturbance and displacement involve dropping units 40, 57, 57a, and 60 (page 23). The discussion of effects to the grizzly bear indicate that helicopter units 57 and 57a are in core habitat areas and unit 60 results in disturbance to a bear travel corridor and roads to access unit 60 could result in long-term impacts. We did not see discussion of unit 40 in the grizzly bear effects discussion in Chapter 3, although it was stated in Chapter 2 that unit 40 is an isolated unit with evidence of active bear use (page 11).	←23	**Response to #4-23 –** The analysis is based upon habitat condition measures from previous USFWS Biological Opinions on access management on the Kootenai National Forest. The observed use adjacent to unit 40 was a site specific concern raised during scoping that was addressed as part of Alternative 3. The comparison of habitat condition measures indicates that there is no difference in effect based upon the habitat measures used. The effects from Unit 40 are further discussed on FEIS Ch. 5, pg. 16.
We support dropping of proposed tractor seedtree unit 60 and the associated access road improvements (Road 472) to benefit the grizzly bear, but it would appear that aspen release helicopter units 57 and 57a would only result in short-term temporary impacts to the grizzly bear while these units would benefit restoration of aspen. We would, thus, recommend retention of units 57 and 57a, although we defer to the wildlife and vegetative experts in the wildlife management and land management agencies to evaluate such trade-offs in regard to this decision. The various trade-offs in regard to	←24	**Response to #4-24 –** We evaluated the concerns for the grizzly bear with Units 40 and 60 but determined that this treatment is appropriate since these mature lodgepole stands are susceptible to blowdown and mountain pine beetle attack, thus fragmentation is likely to occur in the next 10 to 20 years regardless of harvest (see DEIS pg. 50 and). Grizzly bear habitat needs are provided for with this project (FEIS Appendix 4). Road 472 will receive some drainage improvement, but no surface improvements, so use is not

unit 40 are unclear to us (i.e., Do adverse effects of unit 40 harvest to grizzly bear outweigh beneficial effects?).		expected to increase (FEIS Chapter 5, pages 16).
25. We are pleased that the proposed project (both action alternatives) would be consistent with Lynx Conservation Assessment and Strategy (LCAS) standards (page 131). The DEIS states that the project "may affect, but is not likely to adversely affect" the threatened Canada lynx. The DEIS also states that the project may affect, but is not likely to adversely affects the threatened gray wolf and bald eagle. If it is determined that the finally selected project alternative could adversely affect any threatened or endangered species (e.g., grizzly bear, lynx, gray wolf, bald eagle) the final EIS should include the Biological Assessment and associated U.S. Fish & Wildlife Service (USFWS) Biological Opinion or formal concurrence for the following reasons: (1) NEPA requires public involvement and full disclosure of all issues upon which a decision is to be made; (2) The CEQ Regulations for Implementing the Procedural Provisions of NEPA strongly encourage the integration of NEPA requirements with other environmental review and consultation requirements so that all such procedures run concurrently rather than consecutively (40 CFR 1500.2(c) and 1502.25); and (3) The Endangered Species Act (ESA) consultation process can result in the identification of reasonable and prudent alternatives to preclude jeopardy, and mandated reasonable and prudent measures to reduce incidental take. These can affect project implementation. Since the Biological Assessment and EIS must evaluate the potential impacts on listed species, they can jointly assist in analyzing the effectiveness of alternatives and mitigation measures. EPA recommends that the final EIS and Record of Decision not be completed prior to the completion of ESA consultation. If the consultation process is treated as a separate process, the Agencies risk USFWS identification of additional significant impacts, new mitigation measures, or changes to the preferred alternative. If these changes have not been evaluated in the final EIS, a supplement to the EIS would be warranted. We also note that that the USFWS reported in the July 9, 2007 Federal Register that the bald eagle has recovered, and will be removed in the lower 48 States of the U.S. from the Federal List of Endangered and Threatened Wildlife (effective August 8, 2007).	←25	**Response to #4-25 –** The selected alternative will have been reviewed and consultation requirements met prior to the decision. Ongoing discussions related to the project have occurred with USFWS representatives throughout the development of the project.
Air Quality 26. The action alternatives include proposals for prescribed burning such as pile burning, underburning, jackpot burning, etc. EPA supports judicious and well planned use of prescribed fire to restore fire to forest ecosystems, manage vegetation and reduce hazardous fuels. Although, as you know smoke from fire contains air pollutants, including tiny particulates (PM10 and PM2.5) which can cause health problems, especially for people suffering from respiratory illnesses such as asthma or emphysema,		

or heart problems. Particulate concentrations that exceed health standards have been measured downwind from prescribed burns. In addition, prescribed fire could have impacts on Class II areas and Federally-designated Class I areas, and smoke can reduce visibility and diminish the appreciation of scenic vistas (Wilderness Areas or National Parks).		**Response to #4-26 –** Thank you for your comments. See FEIS Ch. 5, pg. 10, for this updated analysis.
We appreciate the DEIS discussion of the Federal Clean Air Act, National and State Ambient Air Quality Standards, Regional Haze and Visibility, the Interim Air Quality Policy on Wildland and Prescribed Fire, and State and Local Air Quality Regulations (pages 66-68). We note that there appear to be a couple of discrepancies in the Federal Air Quality Standards in Table 20 in regard to particulates (page 66). Please check the latest National Ambient Air Quality Standards (NAAQS) for PM10 and PM2.5 at http://www.epa.gov/air/criteria.html .	←26	
For example, we recommend adding a note to Table 20 on the one-hour National Ambient Air Quality Standard (NAAQS) for ozone. EPA revoked this standard on June 15, 2005 in all areas except the 14 eight-hour ozone nonattainment early action compact areas, none of which are in Montana. Also note that EPA revoked the annual NAAQS for PM10 effective December 17, 2006. The 24-hour NAAQS for PM2.5 (now 35 µg/m3) should be updated, and we suggest adding a row for the annual NAAQS for PM2.5 (15 µg/m3). We also suggest restoring the correct positions in the Table of the Montana standards for NO2, where the annual standard is 0.05 ppm and the 24-hour standard is 0.3 ppm, and suggest inserting the one-hour NAAQS for SO2, which is 0.5 ppm.		
In addition, we suggest revising the statements in the second paragraph of Environmental Consequences on page 71 regarding the NAAQS for particulate matter. The statements do not reflect the changes in the standards made effective last year.		
27. The DEIS (page 67) states that "Montana is developing their Regional Haze State Implementation Plan" to address visibility impairments in mandatory Class I areas. We note that the Montana DEQ has returned the clean air visibility program to EPA (see http://deq.mt.gov/AirQuality/Visibility.asp). Please call Ms. Laurel Dygkowski of EPA in Denver for latest information on visibility issues in Montana at 303-312-6144. See also, http://www.fs.fed.us/pnw/fera/research/smoke/haze/index.shtml .		**Response to #4-27 –** There was no further updated information available from the resources you provided. Although the websites no longer are available, the information is the best available.
28. We also recommend checking the Federal Land Managers operating the network for Interagency Monitoring of Protected Visual Environments (IMPROVE) to see if they have approved and released new data on standard visual range in the Cabinet Mountains and Bob Marshall Wilderness Areas. The two websites given below Table 21 (page 70), (http://www.fs.fed.us/r6/aq/natarm/r1/cabinet_mtns_ct.htm , and http://www.fs.fed.us/r6/aq/natarm/r1/bob_marshall.htm) no longer show the data indicated.	←27	
29. As indicated in the text (page 22), Table 22 should show the relationship	←28	**Response to #4-28 –** Table 22 has been updated. See FEIS Ch. 5, Table 5 for this information.

developed by the Montana Department of Environmental Quality among particulate concentrations, health effects, and visibility (see http://www.deq.state.mt.us/FireUpdates/Breakpoints.asp). Table 22 omits the information on visibility.		
30. A sentence under Analysis Methodology on the first page of the air quality section (page 65) reads, "The Smoke Impact Spreadsheet (SIS) model was used to calculate particulate matter emissions (PM2.5) and concentrations downwind of a prescribed fire proposed in both alternatives." We infer that the SIS model produced the data shown in Table 23 but the DEIS does not state this. It would help our understanding if this were clarified.	←30	**Response to #4-30 –** The SIS model was used to estimate the effects of prescribed burning, which are disclosed in Table 23 on page 74 of the DEIS.
31. We are pleased that proposed prescribed burning will be done in compliance with the burning restrictions issued by the Montana Airshed Group (page 73). Prescribed burning done in accordance with a certified State Smoke Management Plan such as the Montana Airshed Group is consistent with EPA's Interim Air Quality Policy on Wildland and Prescribed Fire. Smoke impacts from prescribed fire carried out during periods of favorable conditions for smoke dispersion are less hazardous than smoke impacts during a wildfire. Careful scheduling of the many burning activities to coincide with proper climatological and meteorological conditions helps avoid air quality problems. We also encourage use of smoke management techniques during burns to minimize smoke in populated areas as well as visibility effects. Each prescribed burn site will have unique characteristics, but smoke impacts can be minimized by burning during weather conditions with optimal humidity levels and wind conditions for the types of materials being burned. Smoke impacts can also be minimized by limiting the amount of materials and acreage burned at any one time. It is important to disclose, however, that even though prescribed burns will be scheduled during periods of favorable meteorological conditions for smoke dispersal, the weather can change causing smoke not to disperse as intended. This can be especially problematic for smoldering pile burns when a period of poor ventilation follows a good ventilation day. Smoke dispersal and ventilation climate conditions may be found at this Forest Service website, http://www.fs.fed.us/pnw/airfire/vcis/. We are pleased that notices are placed in the local newspaper at the beginning of each burn season, and additional efforts are made to contacts residents near burns by telephone to make them aware of burns and potential air quality impacts. This will help sensitive people (e.g., people suffering from respiratory illnesses such as asthma or emphysema, or heart problems) to plan accordingly (page 73).		
We also encourage efforts be made to educate home owners on the wildland-urban interface who build in fire adapted forest ecosystems regarding the need to use less flammable building materials and to manage fuel and vegetation near their homes (see websites www.firewise.org and www.firelab.org). General sound fire management practices include:	←31	**Response to #4-31 –** Your comments are noted. There has been an active public awareness campaign in this area for a number of years. Prescribed burning, as well as wildfire has been occurring in the local area for many years. Active measures are being taken on private and public lands specifically related to fuels and fire management.

* Reducing the dangerous build-up of dead trees, branches, and vegetative matter on forest floors by using prescribed fire or the selective thinning, pruning, or cutting and removal of trees by mechanical means. * Whenever possible, mechanical thinning can be used as an effective "pretreatment" to prescribed burning, although we also urge consideration of water quality, fishery, and ecological impacts along with air quality impacts when planning management actions (e.g., focusing mechanical treatments near roads to avoid or minimize new road construction). Mechanical treatments may be appropriate where the risk of the escape of prescribed burns is high and where nearby home developments may be threatened. * Implementing fire hazard awareness and mitigation programs for the public. Closure of back country roads during high fire risk periods may reduce potential for human caused fires. Noxious Weeds 32. We appreciate the analysis and discussion of noxious weed management for the proposed project (pages 179-185). Weeds are a great threat to biodiversity and can often out-compete native plants and produce a monoculture that has little or no plant species diversity or benefit to wildlife. As stated in the DEIS activities that disturb soils and increase motorized vehicle access tend to increase weed infestations (page 181), and that grapple piling, which causes more soil disturbance than underburning, is likely to increase weed infestations (page 182). Accordingly we support use of slash management methods that minimize soil disturbance, erosion and weed infestations. We are pleased that weed treatment measures are proposed (pages 16, 164), and very much agree with the statement in the DEIS prevention of weed invasions is the cheapest and best way to control weeds (page 181). We are pleased that all off-road logging equipment would be washed prior to entering the project area, and that disturbed areas would be reseeded. It will be important to seed all disturbed sites such as landings, skid trails, and along roads with weed-free grass seed. We encourage tracking of weed infestations, control actions, and effectiveness of control actions in a Forest-level weed database. Measures that we often recommend for preventing spread of weeds from source areas to uninfested areas include: □ Ensure that equipment tracks and tires are cleaned prior to transportation to an uninfested site. □ Focus control efforts at trail heads and transportation corridors to prevent tracking of seed into uninfested areas. □ Attempt to control the spread from one watershed to another to reduce water as a transport vector. □ If a localized infestation exists and control is not a viable option, consider rerouting trails or roads around the infestation to reduce available vectors for spread. □ Establish an education program for industrial and recreational users and		

encourage voluntary assistance in both prevention and control activities. □ Reseed disturbed sites as soon as possible following disturbance. Weed seeds are transported by wind and water, animal fur, feathers and feces, but primarily by people. The greatest vector for spread of weeds is through motorized vehicles-cars, trucks, ATVs, motorcycles, and even snowmobiles. Weed seeds are often caught on the vehicle undercarriage in mud and released on the Forest. A single vehicle driven several feet through a knapweed site can acquire up to 2,000 seeds, 200 of which may still be attached after 10 miles of driving (Montana Knapweeds: Identification, Biology and Management, MSU Extension Service, noted on page 181 of DEIS). An effective noxious weed control program should consider restrictions on motorized uses, particularly off-road uses, where necessary. Off-road vehicles travel off-trail, disturbing soil, creating weed seedbeds, and dispersing seeds widely. Weed seed dispersal from non-motorized travel is of lesser concern because of fewer places to collect/transport seed, and the dispersal rate and distances along trails are less with non-motorized travel. Restrictions on motorized uses may also be needed after burning and harvest activities until native vegetation is reestablished in the disturbed areas to reduce potential for weed infestation of the disturbed sites. It is particularly important to avoid motorized travel in remaining roadless areas, since roadless areas are often reservoirs of native plants, and limitations on motorized travel in such areas can protect such areas from weed invasion and avoid the subsequent need to treat weeds. Prescribed fire has the potential to stimulate weed growth (e.g., Dalmation toadflax or leafy spurge), and can destroy insects planted for biological weed control. We suggest that these considerations be evaluated for burn units. The effect of burning on the potential stimulation of noxious weeds be evaluated during site-specific project level analysis. Also, if sufficient vegetation is killed (e.g., by prescribed burning) it may warrant revegetation efforts. Where no native, rapid cover seed source exists, we recommend using a grass mixture that does not include aggressive grasses such as smooth brome, thereby allowing native species to eventually prevail. Mr. Phil Johnson, Botanist, Montana Dept. of Transportation, in Helena at 444-7657, may be able to provide guidance on revegetation with native grasses. We also note that hay can be a source of noxious weed seed. Hay/straw is used as mulch to slow erosion and encourage seed germination, and used to feed horses in hunting and recreation camps, and as wildlife feed during harsh winters. The Federal Noxious Weed Act of 1974 prohibits the interstate transport of noxious weeds or weed parts, such as seed. Montana has a weed free certification program for hay. We support Forest Service requirements to use certified weed free hay in permits or projects, since cattle that are released on grazing allotments or horses used on public lands can transport undigested weed seed and spread it in their manure. Another option for preventing the introduction of noxious weeds it to require cattle and horses, especially those coming from areas with noxious weeds, to be penned and fed weed free hay for several days prior to being released on public lands.	←**32**	**Response to #4-32 –** Your support is noted. The Forest weed management program includes all of your recommendations. This project has specific design criteria (FEIS Appendix 1) related to minimizing the potential for weed spread. **Response to #4-33 –** The project incorporates specific design criteria (FEIS

33. Although we support use of herbicides where needed to control weeds, we encourage prioritization of management techniques that focus on non-chemical treatments first, with reliance on chemicals being the last resort, since weed control chemicals can be toxic and have the potential to be transported to surface or ground water following application. Early recognition and control of new infestations is encouraged to stop the spread of the infestation and avoid wider future use of herbicides, which could correspondingly have more adverse impacts on water quality, fisheries, and biodiversity It is important that the water contamination concerns of herbicide usage be fully evaluated and mitigated. All efforts should be made to avoid movement or transport of herbicides into surface waters that could adversely affect fisheries or other water uses. Herbicides, pesticides, and other toxicants and chemicals must be used in a safe manner in accordance with Federal label instructions and restrictions that allow protection and maintenance of water quality standards and ecological integrity, and avoid public health and safety problems. Herbicide applicators should be advised of the potential for runoff of herbicides at toxic concentrations into the streams. The applicators should take precautions during spraying (e.g., applying herbicide only after careful review of weather reports to ensure minimal likelihood of rainfall within 24 hours of spraying; special precautions adjacent to the stream to reduce runoff potential; etc.). It should be unequivocally stated that no herbicide spraying will occur in streams and wetlands or other aquatic areas (seeps, springs, etc.,). Herbicide drift into streams and wetlands could adversely affect aquatic life and wetland functions such as food chain support and habitat for wetland species. Streams and wetlands in any area to be sprayed be identified and flagged on the ground to assure that herbicide applicators are aware of the location of wetlands, and thus, can avoid spraying in or near wetlands. Picloram (Tordon) is a particularly persistant, mobile and toxic herbicide. We recommend that road ditches leading to intermittent and perennial streams be flagged as no-spray zones and not sprayed with picloram based herbicides. We also recommend that picloram not be used at rates greater than 0.25 lbs/acre, and suggest that the Forest Service consider applications of persistent herbicides such as picloram only once per year.to reduce potential for accumulation in soil. Potential for persistant herbicides to accumulate in soil in harmful amounts are reduced if sites are treated only once per year (twice being the limit). Trade-offs between effective weed control and effects on soil productivity and leaching concerns may need to be considered. A second treatment application if needed should only occur after 30 days (or according to label directions). For your information, Dow AgroSciences, the manufacturer of Tordon 22K, has recently developed supplemental labeling for Tordon 22K for areas west of the Mississippi River. They have directions for wick or carpet roller applications. Tordon 22K herbicide can be applied using wick or carpet roller equipment where drift presents a hazard to	←**33**	Appendix 1) to minimize the use of herbicides for weed control. All herbicide applications within this project are authorized under a separate decision (2007 Kootenai National Forest Invasive Plant Management Record of Decision). The effects of these activities have been considered as part of the cumulative effects.

susceptible crops, surface waters, and other sensitive areas. One part Tordon 22K is mixed with 2 parts water to prepare a 33% solution. The wick method of application is more labor intensive but very effective at targeting particular noxious weeds adjacent to surface waters, wetlands, or protected plants. Most picloram products, including Tordon 22K, are Restricted Use Pesticides (RUPs) requiring pesticide applicator certification to purchase and apply. It is important that U.S. Forest Service employees be certified throughout the duration of the project. If commercial applicators will be contracted for RUP applications, we recommend checking to make sure their MT commercial RUP license is current. Please contact Montana Dept. of Agriculture at (406) 444-5400 for more information. Also, please note that registration for Access (which has picloram as an active ingredient) is cancelled. Some suggestions we have to reduce potential water quality and fisheries effects from herbicide spraying are to assure that applicators: 1) are certified and fully trained and equipped with the and appropriate personal protective equipment; 2) apply herbicides according to the label; and 3) use treatment methods that target individual noxious weed plants in riparian and wetland areas (depending on the targeted weed species, manual control or hand pulling may be one of the best options for weed control within riparian/wetland areas or close to water). The herbicide application technique of hand or manual wipe-on (especially applicable for contact systemic herbicides such as glyphosate) may be an option to control individual plants up to the existing water level adjacent to streams or sensitive aquatic sites. We also recommend that weed treatments be coordinated with the Forest botanist to assure protection to sensitive plants, and coordinated with fisheries biologists and wildlife biologists to assure that sensitive fisheries and wildlife habitat areas are protected. You may also want to consider use of a more selective herbicide (clopyralid) for use in conifer associated communities to reduce impacts on non-target vegetation. We also note that spotted knapweed, which is a prevalent noxious weed species in western Montana, is non-rhizomatous and should be relatively easy to control with lower rates of the most selective low toxicity herbicides. For your information, the website for EPA information regarding pesticides and herbicides is http://www.epa.gov/pesticides/ . The National Pesticide Telecommunication Network (NPTN) website at http://nptn.orst.edu/tech.htm which operates under a cooperative agreement with EPA and Oregon State University and has a wealth of information on toxicity, mobility, environmental fate on pesticides that may be helpful (phone number 800-858-7378). Roadless Areas 34. Roadless areas often provide population strongholds and key refugia for listed or proposed species and narrow endemic populations due to their more natural undisturbed character. EPA supports protection of the pristine character and integrity	←34	**Response to #4-34 –**Your comment is noted.

of the few remaining minimally disturbed roadless areas to prevent further fragmentation and degradation of wildlife habitat, and to maintain or restore solitude and primitive recreation characteristics in such areas. We are pleased that no road construction or timber harvest would occur in inventoried roadless areas (IRA) (page 191). We have no objections to proposed prescribed burning in the Grizzly IRA to restore fire as a natural ecosystem process and improve wildlife habitat, nor do we have objections to aspen restoration treatment units 57 and 57a that lie just outside the Roderick IRA's since we support efforts to restore aspen.		

July 23, 2007, Dear Mike Herrin, Please accept and consider my following comments regarding the Grizzly Vegetation and Transportation Management Project. First, I have some general comments I would like the ID team to consider: Grizzly bear core habitat The Grizzly project, as its name suggests, lies within what is the best remaining grizzly bear core habitat left in the Yaak Valley. Because of that I feel that the number priority should be on maintaining and enhancing core habitat for grizzly bears.	←1	**Response to #5-1 –** Grizzly bear management is a high priority in this area, along with multiple other objectives. Alternative 2a makes a number of adjustments to ensure grizzly bear habitat needs are met, including increasing core area (See FEIS Chapter 5, Page 1 and FEIS Appendix 4).
Noxious Weeds Noxious weeds are reaching at an epidemic level in many areas of the Yaak Valley and are getting worse every year. Hawkweed in particular is invading many forested areas in old regeneration units. Because of this I feel that the project should avoid logging and any soil disturbing activities that would be adjacent to any existing hawkweed infestations. In the Garver project there were many extra mitigation measures included in the EIS and last I heard from Ranger Balboni Three River's was not getting this work accomplished because of financial and work constraints (not enough time and money to get the work done). If this is the case then in any project on Three River's I feel the priority should be on prevention of weed infestations until the district can get better control of the present infestations across the forest. The two primary actions that cause weed infestations are road building and regeneration logging so I feel these two activities should be avoided in the Grizzly Project.	←2	**Response to #5-2 –** The project has specific design criteria (FEIS Appendix 1) to minimize the potential for spread of noxious weeds, including herbicide treatment on haul roads and washing of off-road equipment. This project does not include the type of mitigations measures you refer to that were included in the Garver project. The No Action Alternative does not propose road building or regeneration logging. There is no specified road construction proposed in any of the action alternatives.
I also have the following specific comments: Grizzly Bear Habitat Fragmentation: - I would like to see Unit 40 and Unit 60 dropped from the preferred alterative due to the fragmentation of habitat that these units create. o Unit 60 is the only unit along road 472 past the Grizzly Peak trail head and accessing this unit will create excess disturbance in an area that could serve as a corridor between Grizzly and Roderick while bears are displaced by other harvest activities. o Unit 40 is in a moist area along a bermed road, adjacent to the Grizzly IRA. This unit has been significantly reduced due to the presence of a rare plant species and this small unit does not warrant the disturbance that it would create to wildlife in the area. - I do not want to see summer helicopter logging adjacent to the Roderick IRA in and adjacent to grizzly bear core habitat. Please consider dropping units 57 & 57a from the preferred alternative.	←3	**Response to #5-3 –** These actions were analyzed in Alternative 3 (DEIS, pgs. 121-125). Grizzly bear habitat needs are met for Alternative 2a (see FEIS Appendix 4) The treatments in Units 40 and 60 were determined to be appropriate since movement corridors are maintained and the impacts from harvest short term (FEIS Ch. 5, pgs. 15 and 16). Forest Plan standards for movement corridors are met (Appendix 4-6). (Units 57 and 57a are dropped in Alternative 2a.
Enhance the wild qualities of Roderick IRA through the removal of Road 6100:		**Response to #5-4 -** Travel analysis identified this road for future

- Much of this road system is slated for decommissioning due to sedimentation found in the streams and I want to see the Forest Service commit to removing the entire road system to ensure that timber harvesting will not occur there at a later date. The removal of this road that is currently bermed and will be gated in the project, will expand the Roderick roadless area and allow for a more natural wilderness boundary to run along Burnt Creek drainage. Please consider removing this road.	←4	management needs based upon existing management direction (see transportation section of the project file). Public and U. S. Fish and Wildlife agency comments following the DEIS expressed concern that decommissioning and intermittent stored service work could adversely affect the grizzly bear due to the amount of disturbance involved, so this work is dropped from Alternative 2a (see FEIS Ch. 5, pg. 1).
Large Clearcuts - Units 49 and 50 will create a 126 acre opening on a hillside that has been extensively logged already. Creating large openings on the hillside will impact the viewshed from Roderick IRA as well as send the wrong message to the public that the Forest Service has not moved away from an era of large clear cuts.	←5	**Response to #5-5 –**. These units are redesigned with Alternative 2a to provide for wildlife movement corridors and leave islands where feasible (See FEIS Ch. 5, pg. 2). The vegetation is dominated by lodgepole pine experiencing increasing mortality and blowdown, so openings are likely to occur regardless of treatment. The harvest will provide increased forage on white-tailed deer habitat.
Alternative Fuels Treatments - Due to concerns about soils compaction and the spread of noxious weeds, I would like to see the project utilize alternative fuels treatment where ever appropriate throughout the project. Please emphasize the use of underburning throughout the project to reduce disturbance and the spread of weeds.	←6	**Response to #5-6 –** Alternative 2a considers this concern and includes less than half the machine piling that was included in Alternative 2 (308 acres vs. 712 acres (FEIS Table 3), and much of this is expected to be spot piling rather than full piling, depending on market conditions.
I would like to see Frozen ground logging occur wherever possible throughout the project to minimize soil disturbance and to minimize activities during the bear season.	←7	**Response to #5-7 –** Alternative 2a is 45% required winter harvest as compared to 12% originally proposed in Alternative 2 (FEIS Table 1).
I support the roads decommissioning that will occur in the project to reduce sedimentation in streams and all prescribed burning and underburning throughout the project. I also support the requirement made to yard tops on all harvest activities to reduce the need for mechanical post harvest fuels treatments. Thank you for taking the time consider my comments regarding the Grizzly Project. Randy Beacham		

Email comment. docket 2007-0222 erp d afs j 65484-mt this plan to log, burn and build more roads is the quickest way to destroy this land for the American people and their children. we need to preserve and protect not rape the land, which is what this kind of plan is. the sin city washington dc corrupt administration presently in office is filled with fat cat lobbyists with fat wallets which are destroying all of the land that the american people have worked long and hard for eons to protect. it is a destructive process - the same one that ruined rome many eons ago we need to clean up what is going on with this destruction of america. even other govt agencies say that the water and soil is being negatively impacted by this plan. this plan is nothing but destruction. we need to preserve and protected. b. sachau	←**1**	**Responses to #6-1 –** Your comments are noted. The project includes specific design criteria (FEIS Appendix 1) to minimize the impacts to soil and water, and include actions to improve and enhance soil and water quality.

Email comment. July 23, 2007 Dear Mike Herrin, Please accept the following comments from Jimmy and I for the Grizzly EIS. As members of the Yaak Valley Forest Council, many of our issues and concerns have been addressed by the comment letter submitted by Sarah Canepa - Forest Watch Coordinator for the YVFC. We add our name to these comments and would like to briefly discuss other issues that concern us.		
We thank the District for the continued willingness to work with local citizens on projects such as Grizzly and appreciate the time and effort put forth by local and non-local team members. We were surprised by the preferred alternative chosen by the non-Kootenai team members. While we respect the knowledge and expertise of these folks, we wonder if outsourcing these projects is in the best interest of special areas such as Grizzly.	←1	**Response to #7-1 –** The preferred alternative was identified by the Forest Supervisor based upon recommendations from the District.
Protecting and enhancing the wild qualities of this area is of upmost importance to us and we don't see this focus reflected in the preferred alternative. As you know, the YVFC along with a local collaborative group is seeking Wilderness designation for the Roderick IRA. The YVFC also supports Recommended Wilderness for the same IRA in the upcoming forest plan and to that end, we ask again that the focus and primary goal for this project be protecting and enhancing the wild qualities of this area as outlined in Sarah's comment letter. We would like to reiterate the concern expressed in the comment letter from YVFC concerning the level of disturbance that may occur through road decommissioning activities on the Roderick side of the drainage. As active members of the Headwaters Restoration Project, we recognize the need for watershed rehabilitation yet are very concerned about how these proposed activities will effect grizzly bears. We ask that the District consider watershed restoration alternatives that address the sediment issues with minimal amount of disturbance.	←2	**Response to #7-2 –** Alternative 2a drops the decommissioning and intermittent stored service work in the Vivian Creek portion of the Roderick Mtn. area in consideration of concerns for grizzly bear disturbance. Units 57 and 57a which were near the IRA are dropped (FEIS Ch. 5, pg. 2).
We do support sustainable, selective timber harvest on public lands focusing first on areas surrounding communities then moving out to include certain, site specific overstocked stands. We encourage the District to look for opportunities to reduce fuels in areas that threaten communities. Thank you for the opportunity to comment on this very special and unique project area. Best regards, Robyn King Jimmy Martin		

July 23, 2007 Mike Herrin, District Ranger Three Rivers District–Kootenai National Forest 1437 N. Highway 2 Troy, MT 59935 Dear Mike, I'm writing to submit some comments on the Grizzly EIS. It's been an interesting process, participating in this EIS–the first, to my knowledge, to be outsourced on the Kootenai–and while I respect the expertise as well as commitment of the non-Kootenai team members–they appeared to be concerned, capable, professional listeners on the field trips–I must say that I am surprised by the preferred alternative that is the current yield of all the various input as well as the needs attendant to this special area of the Yaak. As you probably know, I've been supporting much of this area for recommended (and designated) wilderness for a long time, and this area has been discussed for wilderness in various recent collaborative discussions–not to mention similar discussions at regional and national levels.	←1	**Response to #8-1 –** The preferred alternative was identified by the Forest Supervisor based upon recommendations from the District.
Protecting the wild qualities and characteristics of this region, then, seems to me to be the primary goal for any management, and it is my understanding that numerous comment letters and discussions with the Forest Service in the pre-scoping and scoping periods took pains to stress this point. From the first day, I, and others, requested that this EIS be managed to enhance wildness. In the way that certain EIS's are slanted toward timber, or restoration, or access and recreation, it is my belief that according to multiple use principles, the Grizzly region, more than any other in the Yaak other than perhaps the Northwest Peaks, is far and away the most capable and appropriate for such management direction that enhances and celebrates wildness and wilderness in a portion of the Kootenai National Forest where such formal management has been so lacking in the past.	←2	**Response to #8-2 –** Potential harvest treatments considered in the IRAs to restore important aspen clones were dropped prior to scoping due to considerations such as you describe. Alternative 2 was developed to meet the purpose and need. Effects to potential wilderness designation was analyzed as a key issue (DEIS, pg. 12), with Alternative 3 developed specifically to address and compare the difference in effects to the proposed action regarding the concerns expressed (DEIS, pg.23). Units 57 and 57a which were near the IRA are dropped under Alternative 2a.
Not incidental to this wildness, of course, would be management for grizzly bears–the ultimate wilderness species--which utilize this area and the rest of the associated Roderick complex with great frequency. Again, I can't help but think that it might be unfortunate in some regards for our first outsourced EIS to be relegated to such a critical area–the heart of the wild Yaak. I want to believe that had more local specialists been in charge of crafting alternatives, those individuals would have brought to this process a more developed and mature awareness of how vital this region is,	←3	**Response to #8-3 –** The purpose and need, as well as the proposed action was developed by the Three Rivers Ranger District specialists. The Interdisciplinary Team specialists from the TEAMS Enterprise completed much of the analysis with input and review by the district specialists.

both to grizzlies (particularly, traditionally, young grizzlies leaving the maternal direction of their mothers), as well as to wilderness characteristics and qualities so important to humans. Qualities that are not enhanced by clearcuts or regeneration harvests. No area of the Yaak is quite like any other area, and comments from day one sought with diligence and forthrightness to express and explain to the Forest Service that we did not consider the Grizzly area in quite the same manner that we might other area. We expect, and demand, prudent sustainable management for all projects, but when so much wild intact country lies in the heart of a project, a large-scale project such as this proposal becomes extra important. I feel strongly that in such areas it is important, and incumbent upon the agency–particularly in a place like the Yaak, where wilderness values have not been adequately managed in the past–to first do no harm.		**Response to #8-4 –** The Forest Supervisor identified the preferred alternative, and is the responsible official for making the final decision for this project. Considerations in making the decision will incorporate all of the comments received, the analysis of effects, and the degree to which the project meets the purpose and need.
The value of having such a wild area–particularly in a forest as heavily managed as parts of the Yaak have been–is great to me. As such, I would like to see units 40 and 60 dropped from the preferred alternative, not only for reasons of grizzly security, but viewshed. The entire Burnt Dutch corridor is a lovely viewshed, really incomparable in the Yaak, given its winding nature. With regard to that corridor, I would like to see the Burnt Dutch Road retired and made into a hiking/horseback trail between Sheepherder trailhead and the lower Clark Mountain road. I think an incidental benefit of such a closure, coupled with dropping those two units, would be to protect this core against an overly aggressive expansion of weeds as well. It seems it would certainly slow it. During one of the field trips, during a discussion of how closing the middle section of this road (which is redundant with east-west open road systems already in place along the main Yaak River, and the Long Meadow routing, as well as the Seventeen Mile corridor, it was mentioned that a decision as to whether to open or close any or all of the Burnt Dutch Road was something that should be addressed in travel planning, not an EIS; and yet simultaneously and paradoxically it seems to me, a decision to open a closed road in the Northeast Yaak EIS (upper Vinal) was made without deferring or waiting fro Travel Management. So I'm confused y what I see as an inconsistency in decision-making or reasoning on these two projects. Both roads, I should mention, bisect critical grizzly habitat and are already redundant in triplicate.	←4 ←5	**Response to #8-5 –** Units 40 and 60 meet Forest Plan VQOs and include a design feature to leave trees along the 472 Rd. (DEIS, pgs. 201-203). Closing the 472 Rd. was considered but eliminated from detailed analysis (DEIS, pg. 14 and FEIS Ch. 5, pg. 8). The Burnt Dutch Road #472 is a 16-mile road traversing the pass between Roderick and Grizzly peaks. It connects the Yaak Highway 508 with the South Fork Yaak/Pipe Creek Road NFSR 68. The first and last 5.5 mile stretches climbing either side of the pass are aggregate surfaces maintained for travel in a standard passenger car (maintenance level 3). The middle 5 mile section cresting the pass is a native rocky surface, maintained for high clearance vehicles (maintenance level 2). In an average year, this middle section of the road is closed to wheeled traffic due to snow from early December to mid June. The trailheads for Grizzly Mountain Trail #182, Roderick Mountain Trail #189, and Pleasant View/Sheepherder Trail #19 are all accessed via this route. The Burnt Dutch Road is particularly appealing as a high elevation scenic loop route through forested terrain as an alternative to the main paved roads passing through the valley bottoms of the Yaak area. Grizzly bear analysis found that habitat standards are met with this road open (see FEIS Appendix 4). BMP work includes culvert replacement and drainage work to reduce sediment delivery, not surface improvements, so motorized travel isn't expected to increase due to this project. Although traffic is not heavy, it is a popular recreation route providing access for scenic viewing, huckleberry picking, hunting, gathering firewood, and hiking. The analysis in this project indicates that both alternatives meet habitat requirements for grizzly bear, and do not adversely impact the visual quality of the area.
With regard to the proposed or suggested decommissioning of the 6100 road series (and again, I don't understand the logic–to be told that the decision to close a section of road such as the Sheepherder-to-Grizzly trailhead, or Sheepherder to Clark Mountain road, must come in Travel Management, not EIS–even as such a major decision as major decommissioning high up in the reaches of prime and core grizzly habitat, and worse yet at		**Response to #8-6 –** Based on concerns expressed by the public and the USFWS with grizzly bear disturbance, this watershed rehabilitation work

a time of year when bears are likely to be most active in this area, as they have been for generations)–I would like to register my strong opposition to this proposed activity. With nearly ten thousand miles of road on the Kootenai, I believe that some roads are appropriate for decommissioning, others for maintaining in open BMP access, others for conversion to hiking and horseback trails, and others–due not only to watershed values but other values as well–appropriate for supporting abandonment by a more gradual senescence means of senescence. Some of the early and rocky stretches of 6100, for example, are alder-shrouded and yet in rocky spring-fed north-slope terrain, where the most aggressive earth-moving equipment might find challenging. As a result I think it best to address the excessive sediment yields here–legacy of past management decisions–in a secondary manner that will be less intrusive to other resource values–such as grizzlies and wildness–that have unfortunately also been placed at or below threshold levels due to those same management decisions of the past. I do not feel qualified to suggest what secondary methods, either creative or standard, your specialists might come up with to address sediment yields in the watershed–netting, water bars, plantings, etc.–but will point out that this is not a first order drainage, and yet is probably the most important first-order core of grizzly habitat in the Yaak, and the Kootenai, and this portion of what is a transboundary population. I would imagine that the .argument for, as opposed to against, decommissioning road 6100 could be that it would result in a net increase in long-term protection against human and active management incursions into the area, but I would argue that there are other ways to achieve these goals, and that the diminished (and diminishing) population of Yaak grizzlies–which has suffered additional human-caused mortality,loss, and displacement in and from this vicinity even in the brief time since the EIS was initiated–is no longer plastic enough, and no longer possesses enough "bounce," for the perceived long-term benefits of decommissioning 6100 (a security that again can be accomplished by other means and commitments) to be appropriate. The population has unfortunately gotten so low that short-term "emergency" measures should be the order of the day–or at the very least, do-no-harm-first. In a more robust population, one less beyond-threshold–as we may some day experience in the Yaak–we might indeed have the luxury of entering core habitat with major decommissioning activities.	←**6**	was dropped in Alternative 2a (FEIS Ch. 5, pg. 1. Mortality information is updated in FEIS Ch. 5, pg. 14.
With regard to this project, I oppose helicopter logging in and adjacent to core grizz habitat. There are already too many stresses upon a hugely-stressed (and declining) population. I don't think this decision is prudent. If the agency does not support unregulated overflights in wilderness airspace then it seems illogical and inconsistent to me for a	←**7**	**Response to #8-7 –** Alternative 2a does not include helicopter harvest since Units 57 and 57a were dropped, and it wasn't considered feasible or necessary in the remaining units (FEIS Ch.5, pg. 2).

decision to support overflights of an area that the agency intends to manage for wilderness in the future, and which contain, again, the wilderness qualities and characteristics that the agency has been charged to protect, and for which the Kootenai has not yet received high marks in the past, and most notably in the Yaak.		
I also oppose strongly the 126 acres of clearcuts proposed in units 49 and 50. This general region of the valley has had plenty of regeneration created from the fires of 1988, 1994, and 2000, as well as the numerous clearcuts during that interim–the Clay-Beaver and Beaver-Browning timber sales, particularly. As we prepare to enroll acreages from the Roderick complex in the National Wilderness Preservation System, creating new clearcuts in this viewshed brings a negative to the Kootenai National Forest that is not "balanced" by the short-term value of wood gotten from those units; is in fact amplified further in the wrong direction by bringing in weeds, diminished viewshed, etc. In any event, even if creation of early succession forest types was what this area needed most–even if it was a first order need–there are other ways to accomplish this than by clearcuts, which of course neither mimic nor imitate any natural process of which I am aware in these valley, or this forest. In the Yaak, even the most extreme of stand-replacing wildfires–particularly on north-facing aspects in lush vegetative types--leave behind an incredibly impressive array of snags and survivors. As they will in this area, across time, with or without the proposed alternative's wilderness-marring 126-acre clearcut. As I mentioned on the field trip, the single best thing the agency could do for grizzlies here would be to close the Burnt Dutch Road. If the agency decides not to do that, then it should at least consider a first-do-no-harm approach.	←**8**	**Response to #8-8 –** These units are redesigned with smaller openings under Alternative 2a to provide for wildlife movement corridors and leave islands where feasible. The vegetation is dominated by lodgepole pine is experiencing increasing mortality and blowdown, so openings are likely to occur regardless of treatment. The harvest will provide increased forage on white-tailed deer habitat.
In short, then, while I appreciate the work done on this project to date, in the scoping process, I feel that the project still has far to go, and does not yet recognize the special nature of this area, tucked into the heart of the largest still-intact and wildest region of the Yaak. Early on there had been a request that this project's highest purpose and need be identified by needs for wilderness and wildness, and I don't yet see that reflected in the proposed alternative. Though I know your resources are taxed thin, I believe a re-examination of this project can address these concerns in such a way as to still meet the other various needs and goals mentioned in the document. Again, in no way do I see where the needs and goals of wildness and wilderness have been addressed yet.	←**9**	**Response to #8-9–** See response to 8-2.
As you know, I enthusiastically support selective timber harvesting on public lands in the frontcountry–overstocked wood taken from existing open roads in a manner that does not damage soil structure and processes (it is with increasing dismay each year that I view the expansion of noxious weeds		

into areas of soil disturbance). I'm looking forward to delineating, with the district's leadership and recommendations and prioritizations, a large-scale area of highest-need fuels reduction in areas closest to concentrated human habituation. I know also that this kind of work will not necessarily preclude or replace similar large-scale projects elsewhere on the forest, such as the Grizzly EIS, but again would like to request that the planning team look at this EIS with a keener eye toward protecting and enhancing the wild qualities of the Grizzly area, and the many benefits provided by that wildness to plant, animal, and human communities. I know that you have come in midstream on this project, and have a number of other issues to balance elsewhere on the forest at this time, but would like to take this opportunity once again to reiterate how critical I find this area to be to notions of wildness and wilderness–and grizzlies–in the Yaak. Thank you for your reconsideration of this project. Sincerely, Rick Bass	←**10**	**Response to 8-10** – This project minimizes soil disturbance through winter harvest and unit design to avoid steep slopes and wet areas. Noxious weeds will be treated along roadsides several times and off road equipment will be washed to reduce the risk of weed spread (see FEIS Appendix 1, Design Features). Grapple piling is reduced by almost 400 acres as compared to Alternative 2. Grizzly bear disturbance and effects of potential wilderness consideration were identified as issues for alternative development (DEIS, pgs. 11-12). Alternative 2a drops nearly 400 acres of harvest and 10 miles of decommissioning and storage work, includes timing restrictions, and adds 2700 acres of grizzly bear core area, all of which addresses these issues.

October 2, 2007 Dear Mr. Herrin, Please accept this letter as an addendum to comments previously submitted by the Yaak Valley Forest Council in regards to the Grizzly Vegetation and Transportation Management Project Draft Environmental Impact Statement released June 8, 2007. These comments are written in response to conversations held August 29, 2007, during a field trip to discuss disturbance to grizzly bears in the Roderick/Grizzly Peaks area and the proposed road decommissioning activities in the Burnt Creek drainage. The YVFC greatly appreciates the opportunity to participate in this field trip during which we were able to share thoughts with the Three Rivers Staff, the US Fish and Wildlife Service representatives and other interested parties. These discussions helped us to better understand how alternatives are developed, activities are prioritized and resource needs are weighed in the interdisciplinary process. Based upon this information we are writing this letter to clarify our position the proposed activities in the Burnt Creek drainage. In light of the information shared with us on that field trip, we do not support the proposed decommissioning activities on road 6100. It was clearly illustrated to us that there could be negative impacts to grizzly bears in the area if the vegetation was cleared from the road to do the proposed decommissioning and improvement activities. The removal of the vegetation could allow for increased human traffic in an area that currently receives little human use but serves as a secure area for wildlife. It was also made apparent that the Vivian Creek drainage is not at high risk and is not expected to be at high risk if the decommissioning activities do not occur. We share the same concerns expressed by Wayne Kasworm, US Fish and Wildlife Service biologist, that removing the established vegetation on road 6100 could inadvertently increase human activity in the area and this would pose greater risk to grizzly bears. We encourage the decision makers to remove these proposed activities from the final decision. During the field trip we gained a better understanding of the need for decommissioning in the upper Burnt Creek drainage along road 6132. However, we remain concerned about the level of disturbance currently proposed in the Burnt Creek drainage between Grizzly Peak IRA and Roderick IRA. We feel that the cumulative disturbance created by harvesting activities, road improvement activities and road decommissioning activities is an unacceptable level of disturbance to occur between these two areas of valuable grizzly habitat. Specifically we are concerned about activities being proposed during the bear season	←1 ←2	**Response to #9-1 –** Based on these discussions and the district's grizzly bear analysis, this work is dropped in Alternative 2a (FEIS Chapter 5, page 2). **Response to #9-2 –** The work on the 6100 road system is dropped with Alternative 2a. Also, a timing restriction is included in Alternative 2a so that these decommissioning activities on the 6132 road system would not occur at the same time as any of the other proposed activities (FEIS Appendix 1, Design Features, and FEIS Appendix 4, Grizzly Bear analysis). Additional core is created in the BMU to provide additional displacement area. The timing of activities to avoid displacement effects from decommissioning is included in the analysis of habitat conditions for the grizzly bear. Approximately 400 acres of harvest is dropped in Alternative 2a, much of it in this vicinity. The BMP work for road 472 is limited to replacement of 3 culverts, ditch relief, and road surface drainage structures. The analysis does not show adverse affects from the proposed actions (see FEIS Appendix 4).

along road 472 between roads 902 and 472P. These activities include: - Summer harvest units 55 C-G, units 57 & 57a and unit 60 - Associated BMP work on road 472 - Temporary road construction into unit 60 - Road Decommissioning activities on road 6132 In the timeline found on pg. 7 in the DEIS, road improvements and harvesting activities will occur in this area over a 3 year period, followed by 2-3 years of fuels treatments and another year or two will be required for road decommissioning. If funding is obtained for all of these activities then there will be a minimum of six years of disturbance occurring in this drainage during the summer months. We do not want to see any more than a single bear season (summer) of disturbance occur in this area that we have described above. We are aware of one female with cubs in the area and there may be other bears currently using this area as their home range, not to mention the potential for future generations to become established in this area. During our discussions, the biologist suggested that the bears would only temporarily be displaced during one season of decommissioning activities and that there was adequate habitat else where to accommodate them. Yet there are six years of proposed activities in the DEIS and we do not agree that the bears in the Yaak have adequate habitat in this area to be displaced for this period of time without coming into conflict with humans. Therefore it is of the utmost importance to us that activities are restricted to a single year of motorized/mechanized disturbance in this area. As we have stated in our previous letters, this project is located in some of the most spectacular wild and diverse country in the Yaak, an area that we would like to see protected through wilderness designation. Activities that occur in this area should improve the wild qualities and maintain wildlife security throughout the life of the project for the grizzly bears and other wildlife that depend upon these roadless areas. Preserving or enhancing these wild qualities is our primary goal in this area. Sincerely, Sarah Canepa Forest Watch Coordinator	←3	` **Response to #9-3 –**Timing all activities to occur within one year in the entire drainage would not be feasible, or desired. A timing restriction is included in Alternative 2a so that these decommissioning activities on the 6132 road system will not occur at the same time as any of the other proposed activities. Also, additional core is created in the BMU to provide additional displacement area, and almost half of the harvest will occur during the denning season.

(Handwritten letter, retyped verbatim) July 23, 2007 Mike Herrin, District Ranger Three Rivers Ranger District 1437 N. Hwy 2 Troy, MT 59935 RE: 1950/Grizzly Project Dear Mike: I want more pre-commercial thinning in managed stands. The young stands above the magic number for elevation for lynx habitat were created by harvesting and need active management. Larry Coryell	←1	**Response to #10-1 –** Thank you for your comment. Identification of thinning opportunities was based upon lynx habitat direction at the time of the proposed action.

(faxed letter retyped verbatim) Mike Herrin, District Ranger Three Rivers Ranger District 1437 N. Hwy 2 Troy, MT 59935 July 22, 2007 Dear Mr. Herrin, With regard to the Grizzly Vegetation and Transportation Management Project – I was disappointed to learn the comments submitted by the Yaak Valley Forest Council were not included in the preferred alternative for this project. I agree with and support the Forest Council's premise that their comments and suggestions would help reduce impact to soils, wildlife, rare and sensitive plant species, and other important resources in this project area – including the "wild" qualities this area is known for.	←1	**Response to #11-1 –** The preferred alternative was identified by the Forest Supervisor based upon recommendations from the District. In making the final decision, all comments received on the Draft EIS will be considered.
I would like to submit these comments (based on YVFC's comments) to be considered: - To avoid grizzly bear habitat fragmentation, units 40 and 60 should be dropped from the preferred alternative. Unit 40, a moist area already reduced to protect a rare plant species, is small and not worth the disturbance to wildlife in the area. Unit 60 is an area that would be better left alone to serve as a wildlife corridor for bears and other animals seeking refuge from project activities. - To avoid disturbing grizzlies in core habitat with helicopter activity, units 57 and 57a should be withdrawn. - Large clearcuts should be a thing of the past. Units 49 and 50, occurring in an area already heavily logged, should contain large leave islands for wildlife cover and to help promote natural seeding and a more ascetic view shed.	←2	**Response to #11-2 –** The treatments in Units 40 and 60 were determined to be appropriate since movement corridors are maintained and the impacts from harvest short term (FEIS Ch. 5, pgs. 15 and 16). Forest Plan standards for movement corridors are met (Appendix 4-6). Units 57 and 57a are dropped in Alternative 2a. Units 49 and 50 are redesigned with Alternative 2a to provide for wildlife movement corridors and leave islands where feasible. The vegetation is dominated by lodgepole pine experiencing increasing mortality and blowdown, so openings are likely to occur regardless of treatment. The harvest will provide increased forage on white-tailed deer habitat.
Along with these comments, I also agree with the Forest council in supporting road decommissioning where it's needed to reduce sedimentation. Logging on frozen ground, underburning and yarding tops wherever possible would cut down on the amount of mechanical fuels treatment needed which causes soil compaction and the spread of noxious weeds. Winter logging would also have less impact on grizzlies. It is encouraging for me to see the Forest Service moving toward more ecologically sound forest management practices, as have occurred in recent years. I sincerely hope these submitted comments will be evident in the Record of Decision. Thank you and best regards, Sue Janssen	←3	**Response to #11-3 –** Alternative 2a includes 15.4 miles of decommissioning and 9.7 miles of active intermittent stored service work. Approximately 45% of the harvest will be required to occur with frozen ground conditions to protect soils. Grapple piling is greatly reduced with Alternative 2a, from 712 acres originally proposed to 308 acres, with much of that expected to be spot piling, depending on market conditions.

(faxed letter retyped verbatim) July 23, 2006 Mike Herrin, District Ranger Three Rivers Ranger District Kootenai National Forest Troy, MT 59935 <u>Subject: Comments regarding the Draft Environmental Impact Statement (DEIS) for the Grizzly Vegetation and Transportation Management Project</u> Dear Mr. Herrin: By way of introduction, American Wildlands (AWL) is a non-profit conservation organization that for nearly 30 years has used science, advocacy, collaboration, and community engagement to promote a vision of interconnected landscapes that support healthy populations of bear, wolf, elk, trout, and other magnificent Rocky Mountain wildlife (please see brochure and newsletter, being forwarded to you by mail along with a copy of this letter). As part of our connectivity conservation work, we developed GIS maps of major wild land core areas and intervening landscapes for the Northern Rockies. You may find our most recent report of interest (also being sent to you by mail). While focusing on the Northern Continental Divide (Crown of the Continent) Ecosystem, the report includes maps showing earlier work inclusive of the Cabinet-Purcell mountains and the DEIS area. Currently, we are conducting "priority linkage assessments" (PLA) for each of the identified regional corridors to provide finer-grained analysis of landscape linkages (habitat areas of special significance for both wildlife movement and residency). We will be happy to provide you with results. Our plans are to work collaboratively with federal and state agencies, other private conservation organizations, county officials, private citizens, landowners, and others in evaluating, protecting, and restoring priority conservation linkages. Please consider the following thought on the DEIS for the Grizzly Vegetation and Transportation Management Project: *1. General comments*—We found that overall the DEIS did a thorough job in discussing the pros and cons of the proposed project and in disclosing important information on the project's likely effects on wide-ranging mammals. The tradeoff between improved habitat conditions expected to result from the project and the increased disturbance and risk to these species appears to be at best neutral (no net benefit). For example, open road densities would increase during project activities and after project completion drop back to where they are currently. The DEIS discusses the importance of movement corridors for grizzly bear and, with revision, could serve to better safeguard and improve these areas in the Final Environmental Impact Statement (FEIS). *2. Regional significance of the project area to conservation* – The Grizzly Vegetation	←1	**Response to #12-1 –** The proposed action, and alternatives were designed to meet grizzly bear habitat requirements utilizing the best available science (see FEIS Ch. 5, pg. 14, for the latest information on grizzly bear habitat analysis). For Alternative 2a the post-project, BMU 11 Core would increase to 56%, which is above the standard for this BMU (FEIS, Appendix 4, Table 1). An additional 2,700 acres is added to core with this project, linking two islands of Core into one block of over 10,200 acres in a key approach zone between BMUs. (See FEIS Appendix 4, Grizzly Bear Core map)

and Transportation Management Project, covering nearly 70 square miles, is located within a larger area of major significance for connectivity conservation in the Northern Rockies, particularly for large carnivores including grizzly bear, Canada lynx, wolverine, and gray wolf. Of particular concern is the area's endangered grizzly bear population, estimated at 30-40 bears with a very high probability of a declining population trend. The Cabinet-Yaak grizzly bear population is situated between the imperiled grizzly bear population in the Selkirk Ecosystem to the west and the Crown of the Continent grizzly bear population to the east, which has made some significant progress toward recovery. Grizzly bear conservation across the region entails securing and interconnecting these subpopulations. To provide further context for the reader in the Final Environmental Impact Statement (FEIS), we encourage adding a description of the "big picture" importance of the project area in terms of regional conservation of grizzly bear and other large carnivores.	←2	**Response to #12-2 –** The analysis of the specific project is related to the direct, indirect and cumulative effects that the site-specific project may incur. The "big picture" aspect is outside the cumulative effects boundary, primarily due to the lack of measurable effects at that large of a scale. The boundary for the cumulative effects analysis is the BMUs where project activities occur (BMUs 11 and 14) as described on DEIS pg. 118. The importance of the Cabinet-Yaak ecosystem within the larger context is captured within the requirements of the recovery plan for that specific ecosystem.
3. *Transportation management for grizzly bear conservation* – Standards for motorized access and core areas for grizzly bear management units of the project area and surrounding lands are far lower than standards in the Northern Continental Divide and Greater Yellowstone Ecosystems (please see the appendix below). At the same time, grizzly bear populations are doing far better in the Greater Yellowstone and Northern Continental Divide Ecosystems than in the Selkirk/Cabinet-Yaak Ecosystem. Including this type of information in the FEIS would help planners and other readers of the document better gauge the merits and hazards of the proposed actions as they related to grizzly bear conservation. Likewise, to provide a more balanced understanding of an important issue, the FEIS should disclose both sides of the technical debate about Forest Service/US Fish and Wildlife Service habitat standards. The DEIS limits its analysis to a single reference in support of validity of the standards.	←3	**Response to #12-3 –** The standards for access and core habitat have been developed by the USFWS through consultations with the Interagency Grizzly Bear Committee. The standards for the Cabinet-Yaak (CYE) were based primarily on specific research conducted in this ecosystem. The Cabinet-Yaak ecosystem differs in many regards to the Greater Yellowstone and Northern Continental Divide ecosystems. The standards are based upon the site specific characteristics of this ecosystem. In AWR vs. USFWS, CV 07-150-M-DWS, U.S. District Court Judge Molloy determined that Wakkinen and Kasworm (1997) represents the Best Available Science regarding the effects of motorized access on grizzly bears in the Selkirk and Cabinet-Yaak Ecosystems.
4. *Apparent incongruity between project goals and grizzly bear recovery requirements*—The information in Chapter 3 of the DEIS indicates the grave status of grizzly bear in Cabinet-Yaak Ecosystem (CYE). For example, the rate of human caused mortality of bears jumped from 0.71mortalities per year from 1983-1998 to 2.14 mortalities per year from 1999-2005, and the CYE does not meet recovery goals. The difficulty with motorized access is clear from the statement that 10 of 13 known-location human-caused mortality of bears (1993-2002) occurred less than 500 meters of a road open to public travel. While the need to reduce motorized road densities (DEIS p. 3) is fully recognized, the project does not provide alternatives that would significantly address this important conservation need. One wonders, for example, why extensive roads in the northern portion of Bear Management Unit 11 (between Shine Creek and Pheasant Creek) would not be eliminated in order to consolidate the existing, fragmented core habitat.	←4	**Response to #12-4 –** Mortality information is updated in FEIS Ch. 5, pg. 14. The district interdisciplinary team conducted a full risk/value analysis of all roads within the project area, identifying opportunities to meet multiple management objectives, including the need to meet access management requirements to meet Grizzly Bear standards, watershed issues, and future management access (see Travel Analysis in project file). The road systems mentioned have been identified as necessary to meet future management access needs. Sections of roads would be put into storage or decommissioned in Alt. 2A that would connect 2 blocks of Core into one block of over 10,000 acres. See Appendix 4, Grizzly Bear Core map. The contiguous block includes a portion of the movement corridor between Shine and Spread Creeks. Sufficient core habitat has been identified to meet standards.
5. *Recommendations from conservationists in the area* – We found many of the comments by the Yaak Valley Forest Council and other local conservationists to be useful in identifying modifications to improve the project and reduce risk to sensitive wildlife. The need to reconsider activity (proposed under Alternative 2) in units 40, 57,	←5	**Response to #12-5 –** These specific recommendations were considered in detail and are included in Alternative 3. In Alternative 2a, Units 57 and 57a are dropped. The findings for Sensitive Species (found on pages 137-157 of the DEIS) indicate that for both alternatives, individual animals may be affected, however overall the population would not be adversely affected. Individual animals would have sufficient displacement areas to move to during project activities. See FEIS Ch. 5, pg. 16 regarding Units 40 and 60,

57a, and 60 appears especially warranted. The DEIS in may instances confirms these concerns: e.g. it explains (p. 124) how harvest in unit 60 could disrupt movements of grizzly bear in a local movement corridor. For a range of reasons, Alternative 3 takes a more conservative approach in attempting to reduce adverse affects to wildlife. 6. *Protection of movement corridors* – Preliminary results from our PLA and information provided in the DEIS both indicate that the project area is an important nexus or hub for wildlife movement. The DEIS explains that "[w]ithin the project area, a movement corridor has been identified that lies along Spread Creek from the north, crosses the highway and Yaak River and passes into Shine (Pheasant) Creek to the south (based on movements of radio-collared bears as shown in Kasworm et al. 2004, Kasworm et al. 2005, and Kasworm pers. comm.). Features contributing to fragmentation in this corridor include traffic on Highway 508, recreational developments (Whitetail Campground) and development on private land. Another local movement corridor lies between the Grizzly Peak IRA and Sheepherder Mountain and Roderick IRA to the east and southeast. Forest road 472 bisects this corridor" (DEIS, p121). For the latter area, we share the concern stated in the DEIS about the adverse impacts that the project may have on wildlife movement. Wildlife movement would "potentially be impacted by harvest in unit 60 and construction of temporary road to access the unit, as well as improvement of road 472 for hauling in Alternative 2. Harvest in unit 60 would result in disturbance in this corridor and could disrupt movements of bears between the Grizzly Peak and Sheepherder/Roderick core areas during road work, harvest, and site-prep activities. Longer-term effects would be felt as a result of improving the road to access unit 60; an improved road could result in more public use in the future. Alternative 3 does not include unit 60 and road improvements to that unit" (DEIS p. 124-125). The movement corridors between the Grizzly Peak and Sheepherder/Roderick core areas, among the most important areas for connectivity in the ecosystem, would experience disturbance from the work proposed for units 57, 57a, 55c through 55g, and 60 (along with the temporary road construction and work on road 472 associated with unit 60). To protect bear movement in this key corridor, we suggest removing these units from the preferred alternative in the Record of Decision. We suggest removal of these units from this project to avoid cumulative impacts to this corridor from the work occurring to the immediate west in units 42-55b and 100-102. Planning to address the overall impact of road 472 on habitat security for grizzly bear should be undertaken. In the case of the Spread Creek/Shine (Pheasant) Creek movement corridor, the DEIS anticipates only minimal impact by actions under either alternative (DEIS p. 124), specifically mentioning precommercial thinning. We are concerned that this activity proposed for units 105, 106, 108, 109 and 111 through 116 would exceed the minimum impact expectation. 7. *Core area management* – There are opportunities to consolidate and expand core habitat in Bear Management Units that are not addressed by the DEIS. For example, the	←6	and Appendix 4 Grizzly Bear analysis. See also next response. **Response to #12-6 –** The project design features include specific timing requirements to minimize impacts by providing displacement areas during project activities, and restricting activities to provide sufficient movement and displacement areas for wildlife. Units 55c-55k are roadside salvage units along road 472, and would have minimal impacts beyond the existing effects of the road 472. Habitat security analysis recognizes the impacts of open roads and discounts the habitat suitability within these corridors (see FEIS Appendix 4). The most important corridors in the ecosystem are linkage zones: areas that allow genetic flow or natural dispersal of grizzly bears and other species between mountain ranges or adjacent ecosystem recovery areas. Movement corridors may accommodate gene flow, but they are usually associated with seasonal movements (access to forage or pairing for reproduction) of a species within an ecosystem recovery area. The corridor mentioned by the respondent would continue to function in its present manner. Alternative 2a reduces the amount of harvest in the roadside salvage units by over 100 acres as well as 8 miles of storage and decommissioning work in this corridor. The effects of project activities have been addressed, and they are temporary. The unit treatments would stimulate forage and browse for the bear in an area where it is declining (FEIS Appendix 4, pg.4-7). Precommercial thinning for all proposed units was included and incorporated into the analysis. The timing, duration and extent of the precommercial thinning were specifically addressed (DEIS pg. 124 and FEIS Appendix 4, pg. 4-2). Design features to reduce impacts to the grizzly bear were included in the project design to support the findings disclosed in FEIS Appendices 1 and 4.

road complex between Shine and Pheasant Creeks and roads in the broader Lucky Point and Clark Mountain area that could be eliminated. The proposed project activity in these areas, notwithstanding the decommissioning of some roads, seems counterproductive to the goal of increasing habitat security for grizzly bear.	←7	**Response to #12-7 –** Alternative 2a expands core in this area. Refer to response to #12-4.
8. *Glossary of terms* – We appreciated the care taken in the DEIS to define terms that may not be clear to the reader. It would be helpful in the FEIS to expand somewhat the list of definitions (for terms such as habitat effectiveness, linear open road density, moving window techniques, etc.) and include all definitions in a "one-stop" glossary at the end of the document (they are currently located in different chapters of the document).	←8	**Response to #12-8 –** The DEIS includes definitions of the more technical terms used in the body of the document for the reader's benefit, allowing an understanding of the term without having to go to the glossary as often.
We hope that these comments will be useful to you in your work and in preparing the FEIS. Sincerely, Tony Pouilitis, Ph.D. Conservation Director Appendix. A comparison of conservation standards between grizzly bear ecosystems in the Northern Rockies (AWL June, 2007) Standards for Open Road Density are as follows: ▪ In the Northern Continental Divide Ecosystem no more than 19% of each BMU can contain open road densities of greater than 1 mile/mile^2 ▪ The Greater Yellowstone Ecosystem averages 11% of each BMU containing open road densities greater than 1 mile/mile^2 and the standards state there will be no net increase in this density. ▪ However, the Selkirk/Cabinet-Yaak Ecosystems set the standards at <33% of each BMU containing open road densities greater than 1 mile/mile^2. Standards for Total Road Density are as follows: ▪ In the Northern Continental Divide Ecosystem no more than 19% of each BMU can contain total road densities of greater than 2 miles/mile^2 ▪ The Greater Yellowstone Ecosystem averages 5% of each BMU containing total road densities greater than 2 miles/mile^2 and the standards state there will be no net increase in this density. ▪ In contrast, the Selkirk/Cabinet-Yaak Ecosystems set the standards at <26% of each BMU containing total road densities greater than 2 miles/mile^2. Standards for Secure or Core Habitat are as follows: ▪ In the Northern Continental Divide Ecosystem states that secure habitat must be >68% of each BMU. ▪ Secure habitats averages 86% per BMU in Greater Yellowstone and the standards state there will be no net decrease in this area. Standards for core area are >55% per BMU in the Selkirk/Cabinet-Yaak Ecosystems.		

List of Recipients

The following is a list of recipients to whom this Final EIS or notice of availability has been sent. Additional copies of this Final EIS are available upon request from the Three Rivers Ranger District in Troy, Montana.

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Montana Wilderness Association
Wild West Institute
The Lands Council
The Wilderness Society
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