

APPENDIX I

RESPONSE TO COMMENTS

January 2004 EA

INTRODUCTION

This appendix to the Darroch-Eagle Decision Notice and FONSI contains the agency's responses to questions and comments received during the 30-day public review and comment period for the January 2004 Darroch-Eagle Creek Timber Sale EA. Public comments were due on February 24, 2004.

A total of 62 letters were received, containing 238 total comments. Table A-1 below lists the letter number and commenter. Comments are grouped by subject matter or resource. Each comment is identified by letter number first and then by individual comment letter after the hyphen (Example 1-a). The comments were transcribed as written in the comment letters with the agency response following the comment. Some comments are repetitive, so responses to these comments will refer to previous letters where that specific comment has already been addressed in this appendix. Identical comments have been grouped, showing the letter and comment numbers that apply.

Table A-1 Letters and Comments received in response to the January 2004 EA

| Letter Number | Commenter |
|---------------|--|
| 1 | Robert Lindstrom |
| 2 | Greg Gordon |
| 3 | Harvey Yanc |
| 4 | Beth Kaeding |
| 5 | Tammy & Greg Dalling |
| 6 | Wendy & Jerry Thomas |
| 7 | R Y Timber |
| 8 | Dan Chapman |
| 9 | Richard Parks (Park's Fly Shop) |
| 10 | Nancy Loren |
| 11 | Ralph Johnson (North Fork Outfitters) |
| 12 | Martha & Tom Adkins |
| 13 | Alliance for the Wild Rockies (Renee Van Camp) |
| 14 | Wendell Olson |
| 15 | Jim Sweaney |
| 16 | Greater Yellowstone Coalition (Tim Stevens) |
| 17 | Becky Johnson |
| 18 | Charles Szasz II |
| 19 | Bear Creek Council (Julia Page) |
| 20 | Alliance for the Wild Rockies & The Ecology Center (Michael Garrity & Jeff Juel) |
| 21 | Hank Rate |
| 22 | Native Ecosystems Council (Sara Jane Johnson) |
| 23 | Alexa Calio |
| 24 | Beth Curry |
| 25 | Beth Davidow |

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| Letter Number | Commenter |
|----------------------|----------------------------|
| 26 | Beverly Dawson |
| 27 | Bonnie Schwartz |
| 28 | Paul and Rose Norman |
| 29 | Carolyn Duckworth |
| 30 | Carrie Holder |
| 31 | Chandra Bryda |
| 32 | Chester and Monica Schmitt |
| 33 | Christina Cipriano |
| 34 | Christine Schildbach |
| 35 | Daniel Wright |
| 36 | Dan Martin |
| 37 | Debra Telsing |
| 38 | Diane Hilborn |
| 39 | Dixie Patrick |
| 40 | Doug Hilborn |
| 41 | Frank Markley |
| 42 | George Nell |
| 43 | Gordon J. Jones |
| 44 | Gorp Bungalunner |
| 45 | James Allen |
| 46 | James David Kirtley |
| 47 | Janice Wheeler |
| 48 | Jenny Golding |
| 49 | Jill Nadlonek |
| 50 | Jodi Clere |
| 51 | John W. Uhler |
| 52 | Judy Jones |
| 53 | Karen Low |
| 54 | Kathy Higgins |
| 55 | Kerry Black |
| 56 | Lori Rossmiller |
| 57 | Lori Todd |
| 58 | Renee Goubeaux |
| 59 | Seth Andrews |
| 60 | Summer Collier |
| 61 | Ted Meyer |
| 62 | Theresa Johnson |

RESPONSE TO COMMENTS

Alternatives

2-a. EA lacks a single alternative that complies with the current Forest Plan.

Response: As stated on pages 1-5 through 1-9 of the EA the proposed amendments to the Gallatin National Forest Land and Resource Management Plan (Forest Plan) are necessary because current conditions in the area do not meet certain standards. Proposed timber harvest actually does convert mature successional stages to a seedling condition, thus moving the area closer toward achieving the vegetative diversity standard (Forest-wide standard 6.c.2, FP, pp. II-19 and 20). However an amendment was needed because we acknowledge that treatments cannot fully achieve the targeted 10% in each of the five specified successional stages. Similarly, existing open road density does not result in an “elk effective cover” (or HEI) rating of 70% (FP, page II-18), therefore amendment was proposed. As stated on page 1-6, alternative road closure options are being considered that would close up to 3.0 miles of existing open road in the Upper Bear Creek habitat analysis unit (HAU) and 3.6 miles of road in the Palmer Mountain HAU. This would be sufficient to meet an HEI of 70% in the Upper Bear Creek and Eagle Creek HAUs, but HEI would remain below standard in the Palmer Mountain HAU due to the amount of existing open county and private road not within Forest Service jurisdiction to close.

4-b. None of the alternatives you present (except the no action) can be accomplished without site-specific amendments to the Forest Plan standards for vegetative diversity and elk effective cover.

Response: See response to Comment 2-a above.

9-a. The scope of the alternatives is defective. Nothing is offered between D(Modified), the selected alt, and A (no action)--a range of alternatives based on custom cut, small sales, post and pole, and firewood receipts should also be included.

Response: See the response to Comment 22 in Appendix F of the EA (F-28). In general, small timber sales are generally less efficient than single larger sales. Larger timber sales generate higher revenues for the government (higher stumpage rates) than small sales because of a larger sale's greater efficiency (Cassani 1999d). In other words, large timber sales better meet the purpose and need to generate revenue for reimbursement of the Land and Water Conservation Fund.

19-d. Why are there not alternatives that deal directly with the issue of over-roading in this part of the Gallatin Forest? Why, since roading is an issue, does the preferred alternative include cutting units that require entirely new roads to be built?

Response: The preferred alternative does not result in new permanent roads. To access stands to be harvested the preferred alternative includes 0.9 miles of temporary road which would be closed and put back as close as possible to pre-sale conditions including ripping and seeding (EA, page 2-24). The temporary roads are short in length (less than ¼ mile) and used where the topography and drainage requirements are minimal and the potential impacts are low risk. During the life of the sale these roads would be managed to preclude public use.

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21-k. I feel the alternatives offered are inadequate. There should be a "no action" alternative with closures of the roads designed to be extended into Crevice Creek, in light of subsequent wilderness classification of Crevice Creek.

Response: An alternative that only closes road without timber harvest would not meet the "purpose and need" to generate revenue for reimbursement of the Land and Water Conservation Fund or contribute toward providing a flow of wood products from National Forest lands identified as "suitable" for timber production (EA, page 1-4). Therefore, under NEPA, it is not a reasonable alternative to consider.

22-m. It seems that the lack of information on road impacts, firewood impacts, as well as having two separate project areas, on grizzly bears has prevented the agency from looking at a complete range of action alternatives.

Response: The range of alternatives were developed to: (a) fulfill the purpose and need described in Chapter 1; and (b) respond to the significant issues identified with the initial proposal (EA, page 2-1).

22-n. One alternative that was not considered, which seems obvious, is to close roads and reduce human impacts to improve grizzly bear habitat. Harvest activities could be more limited, such as to firewood, a use that seems more appropriate for this area.

Response: Refer to the response to Comment 21-k above. Limiting harvest activity to firewood gathering would not generate revenue for reimbursement of the Land and Water Conservation Fund.

Economics

4-c. The alternative considered but rejected concerning not harvesting old growth timber is also telling. There is no value to the sale without it.

Response: Chapter 2, page 36 discloses that an alternative which excludes old growth trees from harvest (Alternative F) would be expected to generate \$34,866 in timber receipts. These dollars would be available to pay back funds that were borrowed from the Land and Water Conservation Fund. For this reason, Alternative F could be implemented and meet the Purpose and Need. As stated on page 36, Alternative F was not analyzed in detail because the amount of timber receipts generated with Alternative F was less than with any other action alternative with no commensurate advantage of reduced environmental effect. Alternative F was not dismissed from detailed analysis because it had 'no value,' i.e. generated no timber receipts.

4-e. The costs of these projects, when appropriate, must also be fully built into the project. (Costs associated with planning, appeals, and litigation)

Response: The calculation of foreseeable costs includes both those factors that have an effect on the transaction to be made and allowances for the direct cost to the Forest Service to prepare and administer the timber sale and to continue to manage the land following harvest. Recognized costs include road construction, reconstruction and road obliteration, if called for as a mitigating measure and so dependent on the decision to be made. Slash disposal and tree regeneration are appreciated as costs, as is the possibility of treating noxious weeds following the sale. Where appropriate, the experienced, on-the-ground costs are inflated to allow for the contribution project implementation makes to administrative costs at the District, Forest, Region and Washington Office levels of the Forest Service (overhead). The costs of activities that

would be the responsibility of a purchaser under the terms of the timber sale contract are increased to allow for payments to Workman's Compensation and other payroll costs.

The costs for planning are not included in the analysis of Present Net Value. The National Environmental Policy Act (NEPA) is the legal setting for disclosing the purpose and need for action and the varying environmental effects of alternative means of satisfying the purpose and need. Since disclosure under NEPA is non-discretionary, the cost of complying with the law is properly treated as a cost of doing business. The magnitude of this cost does not vary by alternative. The purpose of the economic analysis is "... to disclose the *relative* efficiency of each action alternative" (Chapter 3, page 17, emphasis added) and subtracting *the same value* from each alternative would contribute nothing to a disclosure of the relative differences between them.

The costs for appeals and litigation are not included in the economic analysis because these costs cannot be quantified in a way that would bring out differences among the alternatives being considered. Also, administrative or judicial review is initiated at the request of a member of the public. The Forest Service has no decision to be made (Chapter 1, pages 9-10) regarding whether it will enter into administrative or judicial review.

6-a. The sale will result in a financial loss for the Forest Service. The timber is supposedly being sold to pay for the Gallatin II Land Exchange. A financial loss will not help this situation...the simple and logical answer is to transfer money from the Land and Water Conservation fund.

Response: As disclosed in Chapter 3, page 21, Table 38, Estimated Timber Receipts (Net Sale Value) by Alternative, all of the action alternatives are expected to generate receipts that would be available to pay back funds that were borrowed from the Land and Water Conservation Fund. For this reason, any action alternative could be implemented and meet the Purpose and Need.

As disclosed on page 1-1 of the EA, Section 333 of the Appropriations Act of 2004 (PL 101-108) allowed the Gallatin National Forest to borrow the remaining outstanding funds needed to complete the land acquisition authorized and directed by the Gallatin Land Consolidation Act of 1998. The moneys borrowed came from the Land and Water Conservation Fund (LWCF). The Appropriations Act of 2004 provided a five-year time frame for repayment of the borrowed funds using timber receipts from the Gallatin and other eastside Montana National Forests. Using the LWCF funding without repayment would not be consistent with this legislation.

11-b. I guide summer clients near the proposed cutting areas. I also guide elk and deer hunters in the area there is no question that the logging will have an adverse effect on the hunting, causing my clients not to rebook. This will seriously hurt my business, the noise logging makes and of course the ugly scar it leaves.

Response: Foreseeable environmental effects on elk and other ungulates are discussed in Chapter 3, pages 12-16. A review of this discussion does not support the conclusion that elk numbers will be reduced following implementation of any of the action alternatives. From Chapter 3, page 13, Affected Environment:

The proposed sale units are at a comparatively high elevation and experience harsh winter conditions. They are above the wintering limits for mule deer and are marginal for elk, except during early winter.

The reference to 'early winter' is the basis for a limitation on timber harvest activities that would apply to all of the action alternatives:

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From Chapter 2, page 26, Mitigation Measures, Recreation:

Hunting: To reduce or avoid possible conflicts between sale activities and the general big game hunt, timber sale contractual activities are precluded in the Eagle Creek area from October 16 to June 30.

This constraint on logging activities also mitigates the effect hearing logging activity in the distance might have on the quality of the hunt.

From Chapter 3, page 14, Direct and Indirect Effects, General:

The project site is summer range for elk, mule deer and moose. However, summer range is not a limiting factor for ungulate populations in the area. Some thermal and hiding cover would be lost to ungulates, but potential foraging habitat would slightly increase. The project site does not provide winter range for elk and mule deer.

From Chapter 3, page 15, Direct and Indirect Effects, Alternative D-modified (preferred):

With Alternative D-modified HEI (Habitat Effectiveness Index) would remain at 58% in the Eagle Creek area. In the upper Bear Creek area, it would drop 2% to 60% during sale activities until road closures have been completed. HEI would be unaffected in the Palmer Mountain area. This does not meet the 70% required in the Forest Plan. *Alternative D-modified would not appreciably alter long-term elk effective cover.* (emphasis added)

Foreseeable environmental effects on visual quality (“the ugly scar (logging) leaves”) are discussed in Appendix A, pages 21-22. A reading of this section of the EA does not support the conclusion that the visible effects of logging would lead to a decline in the future demand for guided hunts. From Appendix A, page 21:

... from these key viewpoints and corridors, the units proposed in the Darroch Creek area would not be easily discernable to the average viewer and would meet the Forest Plan visual quality, VQO of modification.

The discussion for the Eagle Creek portion of the project (Appendix A, page 22) begins by recognizing that “the proposed harvest units are not visible from any key viewpoints or corridors and, as such, (the units) will meet the Forest Plan Visual Quality Objective of Modification from all key viewing areas.”

12-a. We depend on tourists who want to see wilderness land - as do we.

Response: None of the action alternatives call for activities within the Absaroka Beartooth (AB) Wilderness area. All of the proposed harvest units are in areas where timber harvest occurred prior to designation of the AB in 1978 (Jardine Timber Sale in 1970, Darroch Creek Timber Sale in 1972, (Chapter 3, page 2)) and, while the harvest areas themselves were not included, evidence of past harvest clearly was not a deterrent to designating “...an area where the earth and its community of life are untrammled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation.” (Wilderness Act, 1964)

The potential impacts of harvest on visual quality are discussed in Appendix A, pages 21-22. A reading of this section of the EA does not suggest that the visible effects of logging would disappoint tourists who want to see 'wilderness land.' From Appendix A, page 21:

... from these key viewpoints and corridors, the units proposed in the Darroch Creek area would not be easily discernable to the average viewer and would meet the Forest Plan visual quality, VQO of modification.

The discussion for the Eagle Creek portion of the project (Appendix A, page 22) begins by recognizing that "the proposed harvest units are not visible from any key viewpoints or corridors and, as such, (the units) will meet the Forest Plan Visual Quality Objective of Modification from all key viewing areas.

17-b. I remain opposed to this timber sale because this sale would hurt the Gardiner area and community economically and aesthetically.

Response: See the responses to Comments 11b and 12a.

17-l. This document would be misleading to members of the general public unfamiliar with this issue regarding costs to date and the history of this sale. There is no discussion of costs of preparation and defense of this timber sale. There are statements, which would give the misleading impression that the timber is or would still be up for bid.

Response: The costs for appeals and litigation are not included in the economic analysis because these costs cannot be quantified in a way that would bring out differences among the alternatives being considered. Also, administrative or judicial review is initiated at the request of a member of the public. The Forest Service has no decision to be made (Chapter 1, pages 9-10) regarding whether it will enter into administrative or judicial review.

The discussion of "The need *to predict* the net dollars in hand from the sale of standing trees" and "... how much money a(n) (alternative) can be *expected* to contribute towards completing the land exchange." (EA, Chapter 3, page 20) (emphases added) gives the impression that the Forest Service is basing the decision to be made on estimates of the bid value of the timber when in fact the Darroch Eagle timber sale is under contract and the agency knows the amount bid for the timber. The confusion at issue here results from a juxtaposition of events – a decision is being re-examined in light of court direction imposed after the decision had been implemented. As required by law and to assure an opportunity for public participation, the re-examination is being carried out through the NEPA process.

NEPA requires consideration of alternative means for meeting the purpose and need (EA, Chapter 2, pages 5-19). For Alternatives B, C and D, timber value was estimated using the transaction evidence appraisal model current at the time of the original NEPA analysis. A decision was made to implement Alternative D and information gathered pursuant to the decision was considered in an appraisal of the value of the trees designated for harvest under the terms of a timber sale contract. The price subsequently bid for the timber reflects a consideration of information that could not be part of the NEPA process: contract constraints on operations and their implications for timely completion of the sale, market conditions for manufactured products *at the time of the bid* and those thought likely over a period of two to five years, the intensity of competition for timber in the Darroch-Eagle area, whether one processing facility (mill) may have an advantage by reason of its technology and how this advantage might find expression in a bid, future inventory needs specific to a processing facility and so on.

The price actually bid is not a mathematically driven estimate. It is instead a purchaser's best guess as to what he can afford to pay for the trees to be removed under the terms of a timber sale contract. Through the use of averages and correlation analysis, a mathematical model is made to estimate what standing trees are worth, using estimates of tree and sale attributes. These estimates differ from the information, based on intensive measurements a landowner relies on when putting his timber on the market. The relative uncertainty of the information available during NEPA is not a problem since it applies equally to all of the alternatives under consideration. Including a piece of information that is unique to an alternative and whose history is wholly unlike that of any other datum would not result in a more accurate analysis. It would instead vitiate the basis for a comparison among the alternatives.

19-b. Why is the roughly \$877,000 bid in the contract not discussed in the EA? The information is known and available to the FS and clearly is driving the conclusions of the EA...What is the meaning of the difference between the Forest's economic analysis of the value of the sale versus RY Timber's bid on the sale? Why isn't the cost of breaking the contract discussed?

Response: An economic analysis that is performed under the National Environmental Policy Act contributes to an understanding of the differences among the alternatives being considered. For this reason, any information should be equally comparable among the alternatives. The final bid price for the timber is applicable only to alternative D modified.

Areas were determined for the harvest units located on the ground pursuant to implementing the governing decision at the time. Values for area were disclosed in the updated environmental assessment (Alternative Dmodified) because the area treated frequently is a factor considered in assessments of environmental effect. The outcome in the NEPA document was a more accurate disclosure of the environmental effects than would have occurred had Alternative D been stated with no modification.

Additional measurements of timber volume were also made in the course of implementing Alternative D. Timber volume is not an indicator of environmental effect. Information on the volume to be removed is relevant to an economic analysis. However, incorporating these values into the economic analysis would have biased the comparison among alternatives since only those units identified in Alternative D and subsequently shown to be feasible on the ground were included in Alternative D-modified. None of the other alternatives benefited from comparably accurate information because Alternatives B and C called for harvest in areas that were not included in Alternative D. The option to gather equally accurate information for Alternatives B and C would have obliged the Forest Service to invest in preparing areas for harvest that had been excluded by the governing decision at the time.

For Alternatives B, C and D, timber value was estimated using the transaction evidence appraisal model current at the time of the original NEPA analysis. A decision was made to implement Alternative D and information gathered pursuant to the decision was considered in an appraisal of the value of the trees designated for harvest under the terms of a timber sale contract. The price subsequently bid for the timber reflects a consideration of information that could not be part of the NEPA process: contract constraints on operations and their implications for timely completion of the sale, market conditions for manufactured products *at the time of the bid* and those thought likely over a period of two to five years, the intensity of competition for timber in the Darroch-Eagle area, whether one processing facility (mill) may have an advantage by reason of its technology and how this advantage might find expression in a bid, future inventory needs specific to a processing facility and so on. The price actually bid is not a mathematically

driven estimate. It is instead a purchaser's best guess as to what he can afford to pay for the trees to be removed under the terms of a timber sale contract.

Taken as a single number the bid tells an economist nothing of the market value of timber. It is simply an item of information, a datum, that, when seen in the context of similar information spanning a number of transactions occurring over a period of time, contributes equally with all others to a view of 'the market.' Through the use of averages and correlation analysis, a mathematical model is made to estimate what standing trees are worth, using estimates of tree and sale attributes. These estimates differ from the information, based on intensive measurements a landowner relies on when putting his timber on the market. The relative uncertainty of the information available during NEPA is not a problem since it applies equally to all of the alternatives under consideration. Including a piece of information that is unique to an alternative and whose history is wholly unlike that of any other datum would not result in a more accurate analysis. It would instead vitiate the basis for a comparison among the alternatives.

The cost to the government to act unilaterally to terminate the contract in place was not considered in the analysis of Net Present Value. For one thing, payment would be ordered to remedy harm and the magnitude of a penalty, if any, would be determined through judicial review. For another, a decision to terminate the contract is outside the scope of the decision to be made, based on the information disclosed in the Environmental Assessment (Chapter 1, page 9). Finally, the updated EA is being written in part to address deficiencies identified during judicial review. The court's finding did not identify the contract in place at the time of the review to be a deficiency in the original analysis.

19-l. The EA discusses the economic feasibility of the sale but not the effects this sale may have on the economy of the Gardiner community.

Response: See the responses to Comments 11b and 12a.

20-e. The EA states that money will be made on this sale but the analysis does not include the cost of litigation from the earlier EA. The costs need to be included because the EA was done in error.

Response: The costs for appeals and litigation are not included in the economic analysis because these costs cannot be quantified in a way that would bring out differences among the alternatives being considered. Also, administrative or judicial review is initiated at the request of a member of the public. The Forest Service has no decision to be made (Chapter 1, pages 9-10) regarding whether it will enter into administrative or judicial review.

The experienced or 'sunk' costs entailed by past litigation are non-discretionary and would not differ by alternative. The purpose of the economic analysis is "... to disclose the *relative* efficiency of each action alternative" (Chapter 3, page 17, emphasis added) and subtracting *the same value* from each alternative would contribute nothing to a disclosure of the relative differences between them.

20-f. Since a contract has been signed to log this project area, the FS knows exactly how much the revenue will be. The EA shows estimated revenue. The revenue listed should reflect exactly what is in the contract.

Response: See the response to Comment 19-b.

20-g. The General Accounting Office recently reported the Forest Service's financial statements are unreliable...

Response: Data used in support to the analysis is identical to that used to perform a timber appraisal. An appraisal results in an estimate of the selling value of the timber. The estimated costs for road construction, slash disposal and tree regeneration cited in the economic analysis are the same values that would be applied to anticipate the costs to a prospective purchaser or the Forest Service to meet the requirements specified in the timber sale contract. The costs estimates are updated annually to reflect the effect of inflation, changes in operating costs for either the agency (overhead) or a purchaser (Workman's Compensation and other payroll costs). The cost estimated are empirical; they reflect the actual costs the agency and the wood products industry are experiencing, either through contract bids from previous years or through implied acceptance, ie, local purchasers continue to bid competitively on timber sale contracts where the advertised rate (the least value the Forest Service is willing to accept for the timber) is net of the costs as cited in a timber appraisal and an economic analysis.

On the benefit side of the economic analysis, the value of the standing trees to be felled and removed (stumpage) is estimated using sale-specific values for attributes that have been shown, through correlation analysis, to explain variations in purchaser bid behavior. Variances in the underlying data are taken into account statistically by reducing the strictly mathematical estimate of stumpage value by a factor that captures the aggregated variance and its associated uncertainty, thereby resulting in a stumpage estimate that is fair to the market at the time of the analysis.

20-h. The last TSPIRS report produced by the GNF was for FY 1997. Since the TSPIRS report can no longer be used to satisfy the economic monitoring requirements, there is no fiscal monitoring occurring.

Response: The TSPIRS system of annual reports attempted to disclose the cash flows (accruals and debits) resulting from accounting decisions made in the course of administration of the National Forest timber program. Indeed, one of the discoveries that led to the systems abandonment dealt with the seeming arbitrariness with which administrators reprogrammed dollars within sub-categories of the timber budget. Data on appropriations and expenditures were aggregated from the Forest to the Regional and National levels. No attempt was made to treat either the TSPIRS reports or the underlying data as insight into the profitability of individual projects.

20-i. There is no economic monitoring occurring and there is no reliable data to support the GNF's statements that logging benefits outweigh the costs.

Response: See the response to Comment 20-g.

20-j. The EA does not satisfy the economic requirements of the forest plans and federal financial reporting laws. There is an inaccurate and incomplete economic analysis in the FEIS.

Response: The Gallatin Forest Plan included a full economic analysis of the timber program on the Forest. Individual timber sales such as the Darroch-Eagle Timber Sale contribute towards the social and economic effects disclosed in the Forest Plan FEIS and ROD, but in and of themselves have insignificant effects. Individual projects must be included with many other projects over a larger area in order to predict noticeable changes and trends in employment and income. These concerns have been addressed at the Forest Plan scale, and will be readdressed during Forest Plan revision.

The Gallatin Forest Supervisor, who is the Responsible Official for this decision, reviewed applicable direction to determine the appropriate level of economic analysis for the Darroch-Eagle project. One consideration was the need to quantify costs and benefits. The Northern Region publication Economic Analysis for Forest Plan Implementation (USDA Forest Service, Northern Region, 1989) provides guidance for determining appropriate economic analysis for project-specific decisions. It states, "Throughout the Forest Plan Implementation Process, economic analysis should be done when it is useful in the Decision process. Efforts should be made to avoid doing more analysis than necessary or redoing analysis that was done in the Forest Plan and is still appropriate" (USDA Forest Service, Northern Region, 1989, p. 4).

Additional direction as to the method to be used to estimate the economic effects of an alternative is contained in the Forest Service Manual, 1970.3 – Policy:

6. Select cost effective methods of conducting economic and social impact analyses to ensure that *the degree of analysis is commensurate with the scope and complexity of the proposed action* (emphasis added).

The scope of the proposed action is described in Chapter 1, page 9-10 of the EA. This section of the document, along with the discussion in Chapter 1, page 3-5, Proposed Action/Purpose and Need, disclose the complexity of the actions awaiting decision. The Forest Service believes the analysis provided in the EA to be commensurate with the scope and complexity of the alternatives being considered and that the analysis provides the deciding officer and the public with a basis for a reasoned choice among the alternatives.

From Chapter 1, page 9 of the Environmental Assessment:

This EA documents analysis of site-specific, on the ground activities.... (The EA) does not reanalyze the management area allocations already specified in the Forest Plan *nor does it seek to reexamine Federal Regulations or Forest Service policy* regarding timber harvest on National Forest lands. (Emphasis added)

20-k. The Ea does not analyze economic consequences of the loss of plant and animal communities due to logging. Nor was the value of clean water in the project area analyzed or the economic impact of logging on clean water.

Response: Direction regarding the costs to be considered in a project-level economic analysis is provided in the Forest Service Manual, 1971.4, Analyzing Costs:

In analyzing proposed actions and alternatives, consider all economic costs. These include budget costs... Limit identification of economic costs only to those costs in the production process up to the point of evaluation or to those costs that influence the values of outputs.

The direction to include 'budget costs' is followed by adjusting agency and purchaser costs to include administrative costs (overhead). The costs recognized in the analysis are "those costs in the production process," namely timber sale preparation, timber sale administration, road construction, reconstruction, maintenance and decommissioning, slash disposal, including prescribed burning, tree regeneration and treatment of noxious weeds.

From Chapter 1, page 9 of the Environmental Assessment:

This EA documents analysis of site-specific, on the ground activities.... (The EA) does not reanalyze the management area allocations already specified in the

Forest Plan nor does it seek to reexamine Federal Regulations or Forest Service policy regarding timber harvest on National Forest lands. (Emphasis added)

20-I. NFMA and the Forest and Rangeland Renewable Resources Planning Act (RPA) require management of National Forest System Lands in a manner that "maximizes long-term net public benefits" [36CFR 219.1(a)]. The Forest Service's planning regulations have defined the term " net public benefits" as the overall value of positive effects (benefits) less all associated inputs and negative effects (costs)." NFMA requires a sophisticated consideration of benefits and costs, including use of both market and non-market methods of determining existing and future resource values, methods to determine opportunity costs, and use of best available quantitative and qualitative techniques [(36 CFR 219.12(e); 219.12(f)2; 219.1(b)12].

Response: See the response to Comment 20-j.

"Net public benefit" is used in the implementing regulations for NFMA. Specifically the regulations state that: "[Forest Plans] shall provide for multiple use and sustained yield of goods and services from the National Forest System in a way that maximizes long term net public benefits in an environmentally sound manner" [36 CFR 219.1(a)]. Forest Plans provide direction for all programs and activities on a Forest. The provision to maximize long-term net public benefits applies to the sum total of these programs and activities (i.e. the Forest Plan), not individual projects. In addition, unlike an analysis of economic feasibility that is applicable to a project (EA, Chapter 3, pages 17-20), a determination of net public benefits is not limited to monetary considerations.

20-m. To assess the adequacy of compliance with section 102(2)(B) of the Act the statement shall, when a cost-benefit analysis is prepared, discuss the relationship between that analysis and any analyses of unquantified environmental impacts, values, and amenities. This has not been done

Response: Section 102 (2) (B) of the National Environmental Policy Act reads:

(B) Identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by Title II of this Act, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in *decision-making* along with economic and technical considerations; (emphasis added)

The insistence that the relationship between subjects that are amenable to discussion using terms that imply quantity (economic and technical considerations) and subjects that cannot be discussed using these same terms (environmental amenities and values) is intended as direction to the person making the decision. Seen in this light, the following language in section 1502.23 of the Regulations For Implementing The Procedural Provisions Of The National Environmental Policy Act:

To assess the adequacy of compliance with section 102(2)(B) of the Act the statement shall, when a cost-benefit analysis is prepared, discuss the relationship between that analysis and any analyses of unquantified environmental impacts, values and amenities.

is properly understood as direction to a decision-maker. Specifically, 1502.23 directs the person making the decision to state how, in coming to a decision, he or she treated subjects that are discussed in terms of quantity and those that are not. The environmental assessment is not a decision document (Chapter 1, page 10) and it is no criticism of the adequacy of the EA that it does not include a discussion of the

relationship between a cost benefit analysis and any analyses of unquantified environmental impacts, values, and amenities.

20-n. To meet the letter and intent of NFMA, the FS must analyze the market and non-market benefits of unlogged forests in analysis areas.

Response: See the response to Comment 20-k.

20-o. The FS must make use of these methods and incorporate ecosystem service value as a standard component of the agency's environmental assessment process.

Response: See the response to Comment 20-k.

21-d. But all these costs relate to whether the sale is economically feasible or not.

Response: See the response to Comment 20-k.

21-e. The sale price should be discussed.

Response: See the response to Comment 19-b.

21-q. The varying estimates quantify relative differences among the alternatives and should not be taken as measures of the dollars in hand once the timber sale is offered in a competitive market. I don't understand this.

Response: The point being made is perhaps more clearly stated at the beginning of Chapter 3 of the EA. From Chapter 3, page 1:

Some of the effects discussed in this chapter are complex and not easily quantified. Thus it should be kept in mind that many of the values presented are modeled predictions of the effects and the actual effects may not occur exactly to the degree presented. More important than the exact effect is the comparison of change between alternatives and present condition as predicted by models and analytic projections.

22-b. It is not clear that you have included all the costs in assessing what revenue will be generated by this logging proposal. Why will this sale produce revenue when so many others will not?

Response: See the response to Comment 20-k.

A discussion of the receipts foreseen with each alternative can be found in Chapter 3, pages 20-21. A comparison of the factors contributing to the level of receipts anticipated for each action alternative with the alternatives considered *for other projects* would not aid the decision-maker in his choice of an alternative to be implemented as the Darroch-Eagle Timber Sale.

22-c. How do you address the costs of defending the previous Darroch Eagle timber sale against a legal challenge by 2 environmental groups?

Response: See the response to Comment 17-l.

23-f Why would RY Lumber bid \$877,000 on timber valued at \$177,000?

Response: See the response to Comment 18-b.

Appendix I

29-a Proposed originally to help buyout private landowners in Gallatin II this timber sale is no longer necessary for this purpose. Indeed it will likely LOSE money-- not produce it.

Response: See the response to Comment 6-a.

Hydrology

17-j. BMP's - This section appears to be boilerplate and does not give me any confidence that these measures would necessarily be sufficient for specific areas. Has there been any analysis as to how these measures would apply to this specific project?

Response: The Darroch Eagle BMP's (Appendix D) was developed from BMP's, which have been prepared for use on the Gallatin NF during the last 10-15 years. The BMP's are based on several BMP reviews for Gallatin NF timber sales since 1989 and have been generally adequate for soil and water quality protection with specific problem areas addressed in the timber sale administration process. Many of the BMP's are based on standard timber sale or road contract clauses, specifications, or provisions. Others are based on Montana SMZ law (1991) or rules (1993) or Montana Forestry BMP's which were updated in 2002.

19-j. Siltation and effects of the proposed sale on the water quality are only briefly discussed. It is inappropriate to cut near Darroch Creek before this preliminary base-line data is collected.

Response: The 1999 Darroch-Eagle EA did not address water quality as a significant impact due to the limited level of anticipated water quality impacts. The 1999 EA disclosed a summary of the water quality analysis on pages A-10 and A-11. In 2003 an updated analysis examined Alternative D-Modified. This includes a layout reduction from the Darroch-Eagle Creek Timber Sale Alternative D from 266 to 195 acres of harvest, temporary roads increased from 0.6 to 0.9 miles, and road reconstruction reduced from 4.4 miles to 3.6 miles.

Sediment effects per alternative were evaluated in Appendix A-14 and A-15. That analysis accounts for sediment effects from all the roads used in the timber sale harvest program. The sediment effects are due to an un-vegetated road surface and cut and fill slope erosion. Use of the road system for hauling trees harvested in the sale does not generate additional sediment. The new road construction and road reconstruction, as evaluated in the EA does generate some sediment, which is accounted for in the EA in Appendix A-14 and A-15 analysis.

NEPA

2-b. Since the current project area exceeds open road density, the EA should be delayed until the Gallatin NF Comprehensive Travel Management Plan is completed.

Response: The preferred alternative for the Darroch-Eagle Creek Timber Sale project would not result in any new permanent road development. Road closure options are considered to move toward meeting the current Forest Plan standard for timber sales to maintain elk effective cover ratings of at least 70% (EA, page 1-6). If the decision were to close these roads to public use, at least one of the alternatives considered in travel planning would reflect that decision. However, regardless of the decision made for this project, the option to retain these roads for public use remains available for consideration

in travel planning. There is no reason to delay the timber sale decision until the Gallatin National Forest Comprehensive Travel Management Plan is complete.

2-e. The outcome is predetermined in clear violation of NEPA as Alternative D-Modified is already under contract.

Response: The January 2004 Darroch-Eagle Creek EA is a second revision to the original EA that was prepared in March of 1999. A decision was made in May of 1999, based on the original EA, to proceed with an alternative very similar to the current preferred alternative. Subsequently this decision was appealed and litigated. In July of 2001 the United States District Court, Montana, found in favor of the Forest Service. On August 29, 2001 the timber sale was advertised and awarded. At about the same time, plaintiffs filed a notice of appeal to the 9th Circuit Court of Appeals continuing to challenge the timber sale decision. In September 16, 2002, the Court issued its opinion in favor of plaintiffs thus reversing the District Court's summary judgment in favor of the Forest Service. The Darroch-Eagle Creek Timber Sale was enjoined until the Forest Service remedied two deficiencies the court found in complying with NEPA and ESA. As discussed on page 1-2 of the EA, the deficiencies identified by the Court were procedural, not substantive violations of environmental law. These procedural deficiencies were corrected in the current EA and the results of that analysis have now been considered as required by NEPA. It should not be surprising, in absence of finding significant environmental effects based on the additional information, that the preferred alternative remains similar to the decision that was made in May of 1999.

2-l. The unique location of the project site (between the AB Wilderness and Yellowstone National Park) is not addressed in the EA.

Response: Unique characteristics of the geographic area were considered as disclosed on page 3-27 of the EA. The conclusion was that this project would result in no significant impacts to the Wilderness or Yellowstone National Park.

4-a. There are sufficient funds in the Land and Water Conservation Fund to pay for this land exchange. The amount of money that could be generated from this sale is not worth the cost to the land and the ecosystem.

Response: As disclosed on page 1-1 of the EA, Section 333 of the Appropriations Act of 2004 (PL 101-108) allowed the Gallatin National Forest to borrow the remaining outstanding funds needed to complete the land acquisition authorized and directed by the Gallatin Land Consolidation Act of 1998. The moneys borrowed came from the Land and Water Conservation Fund (LWCF). The Appropriations Act of 2004 provided a five-year time frame for repayment of the borrowed funds using timber receipts from the Gallatin and other eastside Montana National Forests. Using the LWCF funding without repayment would not be consistent with this legislation.

7-a. The new EA fulfills the court's requirement for further analysis of road densities and threats to grizzly bears.

Response: The revised January 2004 EA does include discussion of the potential cumulative effects of amendments to the Forest Plan standard for elk effective cover (road density) and the revised Biological Assessment contains detailed discussion of the potential effects to the threatened grizzly bear. The Forest Service believes this resolves the deficiencies in the original analysis found by the 9th Circuit Court of Appeals.

15-a. Because this sale is in a premier, scenic, wildlife, and recreation area, I think it deserves an EIS.

Response: NEPA requires federal agencies to prepare an Environmental Impact Statement on major Federal actions significantly affecting the quality of the human environment (Sec. 102c). To determine whether an activity has “significant” impacts, the CEQ Regulations For Implementing The Procedural Provisions of the National Environmental Policy Act requires consideration of 10 factors (40 CFR 1508.27). An environmental assessment is a NEPA document that serves to “briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact (40 CFR 1508.9). For this project, the Forest Supervisor has determined, based on this EA, that an Environmental Impact Statement is not warranted and therefore has prepared a Finding of No Significant Impact consistent with NEPA requirements (40 CFR 1501.4).

16-e. We would like a thorough explanation of the Forest's legal commitments to the private party who purchased the previous timber sale prior to the sale being overturned in court. Please describe the Forest's legal obligations, and options.

Response: To be clear, the 9th Circuit Court of Appeals did not “overturn” the Darroch-Eagle Creek Timber Sale. The court remanded the Decision Notice of the Environmental Assessment. The timber sale was legally advertised and sold upon a favorable decision in District Court. Unless the Forest Service determines the apparent high bidder does not meet one or more of several criteria demonstrating performance ability, under CFR 223.100, the sale of advertised timber shall be awarded to the apparent high bidder.

The Forest Service, under CFR 223.116 has the authority to unilaterally cancel timber sale contracts if serious or continued violations of its terms are committed, conviction of violation of criminal statutes occurs, or if the Chief of the Forest Service determines that operations would result in serious environmental degradation. We see no applicability of this CFR at this time. The timber sale contract contains a provision that addresses the potential need for compensation should a Settlement Action be warranted under CT9.53-Settlement for Administrative Appeal or Litigation (12/00).

17-n. Also this is not an appropriate venue for arguing the inapplicability or the "inappropriateness" of the HEI standard.

Response: The 9th Circuit Court’s opinion over the original Darroch-Eagle Creek EA concluded, in part, that the EA did not fully comply with NEPA because the Forest Service did not analyze what, if any, environmental impacts the road density amendment here might have in combination with contemplated road density amendments for other Gallatin Land Consolidation Act timber sales (Opinion at page 13951). In response the Forest Service believed it was necessary to thoroughly discuss the background of this standard to better support the “need” for amendment.

17-p. The overriding concern I have with this document and the procedure being followed is the fact that the timber is under contract. This precludes the possibility of a sincere and honest (let alone useful) analysis, which is mandated by NEPA. The outcome is predetermined.

Response: Refer to the response to Comment 2-e.

17-q. This document continues with the misconception that this is one timber sale, when it is, two separate sales to be conducted in two separate drainages. This would not be the Darroch-Eagle Creek Timber Sale as the title states.

Response: Both Darroch Creek and Eagle Creek are tributaries to Bear Creek. The proposed harvest activities are within the same geographic area and are part of the same proposal. NEPA allows federal agencies to establish the scope of actions to be considered in environmental analysis (40 CFR 1508.25).

17-r. The spatial separation and the many differing aspects between Creeks, the 9th Circuit court decision, and the public interest that this issue has generated, should warrant an EIS process.

Response: Refer to the response to Comment 15-a.

17-t. I urge you to request the simple release of money needed to replenish Forest Service funds used to complete Gallatin II from the Land and Water Conservation Fund.

Response: Refer to the response to Comment 4-a.

18-e. This timber sale is about paying off private parties involved in the Gallatin II land exchange. To my knowledge, money is available in the Land and Water Conservation Fund to finish the deal without timbering.

Response: Refer to the response to Comment 4-a.

19-a. We don't believe the Forest Service can prepare a valid NEPA document when the outcome is pre-determined by an existing contract.

Response: Refer to the response to Comment 2-e.

19-c. We object to the process used in developing this EA. The revised NEPA process should have begun with scoping.

Response: It was not our intention to start the environmental analysis process again beginning with "scoping." The comments and information we received during and after the comment period on the revised EA last December lead us to the conclusion that we should revise the EA again. Another opportunity for public comment was provided in January-February 2004. "Scoping" is "an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action" (40 CFR 1501.7). There have been no changes to the proposed action since last December that would warrant an additional scoping period.

19-o. If the FS insists on trying to go forward with this sale, we feel strongly that an EIS is needed to adequately explore all of the environmental, social, and economic consequences of this sale on the ecosystem and Gardiner community.

Response: Refer to the response to Comment 15-a.

20-d. Since the FS has already signed a contract to log this project area, a decision has been made prior to the EA and the DN. This violates NEPA.

Response: Refer to the response to Comment 2-e.

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21-a. The EA incorporates two separate entries, with many differing considerations: HAU's, timber compartments, management areas, elk habitat and migration, separate haul roads, interaction with sheep grazing, topography, different road requirements. For these reasons this should be an EIS. In addition, an EIS is warranted because of the 9th circuit decision and the Situation 1 grizzly habitat.

Response: Refer to the responses to Comments 15-a and 17-q.

21-b. Your attempt to separate the EA from the fact that the timber has already been sold (and the associated sale documents, cruise data, etc.) is bewildering.

Response: Refer to the response to Comment 2-e.

21-f. This sale was awarded while being litigated. In my understanding this does not comport with National and Regional Forest Service Policy.

Response: As stated on page 1-2 of the EA the timber sale was advertised and awarded after the District Court decision in favor of the Forest Service. There was also concern that litigation delay would reduce the amount of timber receipts that could be used for the land acquisition. At the time the timber sale was awarded, there was a deadline of December 31, 2003 in which only timber removed and paid for by that date could be used. Since a timber sale contract provides 3 years to complete all harvest and associated activities, further delay would have increased the likelihood that at least some of the timber would be removed and paid for after the 2003 deadline.

21-l. Actions that consistently violate the existing plan should at least be held in abeyance until the new plan is developed.

Response: Refer to the response to Comment 2-a.

21-n. I feel we were definitely misled regarding the process you are currently following.

Response: Refer to the response to Comment 19-c.

21-p. The statement in paragraph 3, page 1-3: "the Forest Service or the Purchaser has the ability to terminate the timber sale contract at any time." would imply that the FS is not bound by the contract. This ignores the large settlements that have been made over the past 2-3 years under similar conditions.

Response: Refer to the response to Comment 16-e.

22-a. Since the sale has already been sold, and you are proposing to select Alternative D modified, isn't your process simply a procedural effort to support a decision that has already been made?

Response: Refer to the response to Comment 2-e.

22-k. You did not address the cumulative impacts of having two separate sale areas over 3 miles apart, both, which will apparently be active at the same time.

Response: Refer to the response to Comment 17-q.

23-e. The two areas should be analyzed separately.

Response: Refer to the response to Comment 17q

25-a, 27-a, 35-a, 43-a, 45-a, 46-a, 49-a, 50-a, 52-a, 55-a, 56-a, 58-a, 59-a, 60-a, 61-a.
Monies to pay off the private parties involved in the Gallatin II land exchange should be coming from the Land and Water Conservation Fund, or some other source.

Response: Refer to the response to Comment 4-a

26-b. Alternate sources of funding need to be provided to accommodate contractual agreements regarding the Gallatin II Land Exchange.

Response: Refer to the response to Comment 4-a

32-a. There must be other ways in obtaining money to pay off borrowed funds and contribute toward providing a supply of wood products from the National Forest.

Response: Refer to the response to Comment 4-a

40-b. Try as hard as you can to get money from the LCWF.

Response: Refer to the response to Comment 4-a

42-a. Alternative D-Modified this timber has already been sold at a very inflated price to RY Lumber Co. This defeats the purpose of the Environmental Policy Act under which this Environmental Assessment is being done. This area is already in violation of the cover standards.

Response: Refer to the response to Comment 2-e.

42-d. The money that is needed can be obtained from the Land and Water Conservation Fund.

Response: Refer to the response to Comment 4-a

51-c. You are trying to justify a logging contract that has already been lent. You have not completed a fair unbiased study of the area.

Response: Refer to the response to Comment 2-e

51-d. Studies that have a predetermined outcome before they even begin are biased to say the least and should be illegal.

Response: Refer to the response to Comment 2-e.

Public Safety

5-d. Perhaps our biggest concern is the impact of the logging trucks traveling the Jardine Road. (Safety and Noise)

Response: There are approximately 500 log truckloads that would use the Jardine Road as a haul route during the life of the sale. Since the life of the timber sale contract would be at least 3 years and since hauling would occur only over about a 100 day season (mid

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July through October, the number of daily log trucks would normally be few. Noise from log trucks would temporarily affect residents adjacent to the Jardine Road.

11-c. Logging trucks on the Jardine Road is an imminent danger. Not to mention travel on the Bear Creek and Eagle Creek roads will be dangerous due to the narrow roads and sharp bends.

Response: There are approximately 500 log truckloads that would use the Jardine Road as a haul route during the life of the sale. Since the life of the timber sale contract would be at least 3 years and since hauling would occur only over about a 100 day season (mid July through October, the number of daily log trucks would normally be few. . Noise from log trucks would temporarily affect residents adjacent to the Jardine Road. Increased traffic would likely increase dust on the Jardine, Eagle Creek, and Bear Creek roads. Encounters between recreationists and log trucks traveling the Bear Creek and Eagle Creek roads would likely occur and occasionally result in the use of existing turnouts to facilitate vehicle passage. Occasionally one of the vehicles may have to back up to reach a turnout. The Jardine Road is a two-lane road, which will easily pass two vehicles.

17-f. There is no discussion regarding impacts and traffic safety on the Eagle Creek, Bear Creek, and Jardine Road from Gardiner to Jardine.

Response: See the response to Comment 11-c above.

19-n. What will be the extent and the effects of increased traffic from the sale on the Jardine road and Highway 89?

Response: There are approximately 500 log truckloads that would use the Jardine Road and Highway 89 as a haul route during the life of the sale. Since the life of the timber sale contract would be at least 3 years and since hauling would occur only over about a 100 day season (mid July through October, the number of daily log trucks would normally be few. Noise from log trucks would temporarily affect residents adjacent to the Jardine Road and Highway 89. Increased traffic would increase dust on the Jardine, Eagle Creek and Bear Creek roads. Encounters between recreationists and log trucks traveling the Bear Creek, Darroch, Ash Mountain and Eagle Creek roads would occur and occasionally result in the use of existing turnouts to facilitate vehicle passage. Occasionally one of the vehicles may have to back up to reach a turnout. The Jardine Road is a two-lane road, which will easily pass two vehicles.

21-m. Another Road consideration: The Jardine Mine has not been using dust suppressant for some time and cannot be expected to this during the proposed logging. This will seriously impact Jardine residents and recreationists.

Response: The decision to be made (Chapter 1, pages 9-10) applies to resources on public land. Park County holds the easements on the Jardine Road and for this reason a decision to implement an action alternative will have no effect on administration of the road. The procedures mandated by the National Environmental Policy Act are not the only means, and may not be the most effective means, for making concerns known to the appropriate, local administrative agency. Residents of Jardine could approach the Park County commissioners directly and ask that the county assume the cost of dust abatement during timber haul.

23-a. Logging trucks pose a major hazard to residents of Jardine and Gardiner

Response: See the responses to Comments 5-d, 11-c, and 19-n

28-e. We are concerned about the impact of the logging trucks traveling the Jardine Road.

Response: See the response to Comment 11-c

54-b. Logging truck traffic will make activities on and along the Jardine Road unsafe.

Response: See the response to Comment 11-c

Recreation

2-j. Because of park overcrowding and restrictions, the project site is heavily used by area residents for non-motorized rec. opportunities. The impacts on those activities are inadequately addressed.

Response: The Bear Creek drainage is used by recreationists primarily for driving for pleasure, access to Bear Creek and Palmer Trailheads, hiking, horseback riding, mountain biking, firewood cutting, hunting, camping, Christmas tree cutting, cross country skiing and snowmobiling. There will be short-term effects to summer recreation from log trucks hauling on Bear Creek road and during temporary closures of Ash Mountain and Darroch Creek roads. Other than temporary restrictions to traffic, there will be no direct affect to recreationists. Because logging would be limited to summer and fall months, there will be no direct effects to winter recreation activities. Tree removal would likely benefit cross country skiing and snowmobiling in harvest units until regeneration makes overland travel more difficult.

While there is a concentration of mostly local traffic in the Bear Creek drainage, describing the use as “heavy” is relative.

10-b. When motorized recreationists lose these types of opportunities, it often results in further losses of rec opportunities for many types of users in the long run. By logging this area you are putting unnecessary pressure on wilderness and lands less accessible than the proposed area. This is time to consider these types of cumulative effects on recreation users.

Response: A seasonal road closure would not result in a loss of a recreation opportunity, but rather a modification. A permanent road closure would result in a loss of a motorized recreation opportunity along the Bear Fork and Eagle Creek roads. Wilderness is not currently accessible to motorized recreationists. Effects of logging are temporary and are not expected to cumulatively affect wilderness or less accessible lands.

19-m. The project areas, both Eagle and Darroch Creeks, are used by many local residents as well as tourists for hunting, hiking, skiing, biking, leisure driving and wildlife viewing. The cutting of the majority of the last old growth in the area would degrade the recreation values of those activities.

Response: There are about 20,255 acres of old growth in the analysis area (compartments 305 and 306). Alternative D modified would remove most of the old growth from about 175 acres, or 0.8% of the area within compartments 305 and 306. This area would be converted to open timber stands until tree regeneration occurs. About 20 acres would be converted from old growth to mature forest. This represents a small fraction of the old growth in the analysis area.

Roads

2-c. Effectiveness of road closures is not addressed. The EA assumes that gated closure is effective, when numerous studies have demonstrated that gates are routinely left unlocked, driven around, or are used by agency personnel. The EA should include an alternative that reduces road density through road rehabilitation.

Response: The most effective method of closing a road is unquestionably a full re-contour but for a seasonal closure, gates have proven effective on the Gardiner Ranger District at all locations. We have not experienced gate vandalism, lock tampering or driving around gates to a great degree. Option 2 of the Alternative Road Closure Mitigation section of the EA (Chapter 2-19) would permanently close 6.9 miles of road in the Eagle Creek area, 3.0 miles of road in the Bear Creek area, and 3.6 miles of road in the Palmer Mountain area thus reducing road density in these three areas.

2-g. Again road densities should include all roads because:

- 1. Road closures are ineffective.**
- 2. Even seasonal or occasional road use displaces Grizzlies for up to 3 years.**
- 3. "Closed" roads are used illegally by ATVs.**

Response:

1. Permanent road closures that re-contour a road are very effective. Closures that re-contour the entrances to roads are generally effective. Gated closures are usually effective but not as effective as full or partial re-contours.
2. Closing new temporary roads refers to obliterating the roads and leaving them impassable to ATVs. Please refer to responses in the Wildlife Section- 1a, 2f, and 22e.
3. Closed roads are not regularly used by ATV's or motorcycles within the Gardiner District.

3-a. Proposed permanent road closures on established roads would in effect limit wood gathering for about 60% of the people in Gardiner, Jardine, and the surrounding area who heat their homes with wood. Force seniors (on fixed incomes) to install alternate heating systems with the rising energy costs would be a drain on their incomes. Wood gathering in these areas has been a plus cleaning up dead fuel. Loss of revenue (wood permits) for the FS. Lock out seniors & handicapped from usage of these roads. Restrict hunting and fishing activities for older sportsmen and congest these activities to a much smaller area. Make it more difficult for game retrieval.

Response: Under Option 2 of the Alternative Road Closure Mitigation section of the EA (permanent road closure), 6.9 miles of road in the Eagle Creek area and 3.0 miles of road in the Bear Creek area would be permanently closed to motorized travel. Access to firewood cutting areas would be reduced by three miles in the Upper Bear Creek area (from 12 miles to 9 miles); by 6.9 miles in the Eagle Creek area (from 16.2 miles to 9.3 miles) and by 3.6 miles in the Crevice Mountain area (from 21.6 miles to 18 miles). Motorized vehicle access for game retrieval would be similarly reduced, however 5.5 miles of the Eagle Creek Road are already closed seasonally during hunting season so that would reduce seasonal additional closures to a total of 8 miles.. Fishing would not be affected by proposed permanent road closures since the roads proposed for seasonal or permanent closure do not provide access to any lakes or fish-bearing streams.

5-c. Seasonal and additional road closures would have a negative impact on some, if not all of these activities: snowmobiling, hunting, fishing, hiking, wood gathering, camping, and biking.

Response: Seasonal road closures would not affect snowmobiling as the closures would be in effect from October 15th to June 30. If permanent closures were chosen, the Eagle Creek and Bear Fork Roads would be closed to motorized wheeled traffic but not snowmobilers. Seasonal or permanent road closures would affect some of the listed recreation activities, as described in Chapter 2-21 through 2-23. Very little camping occurs adjacent to roads proposed for either seasonal or permanent closures. The roads proposed for seasonal or permanent closure do not provide access to any lakes or fish-bearing streams; thus there would be no affect to fishing.

9-c. The analysis gives very short shrift to recreational and local subsistence (such as firewood harvesting) impacts from the proposed action. (ties to road closure options). In fact, in an effort to avoid some of the impacts to wildlife resulting from the proposed action, the impacts to local use will dramatically increase, particularly if the Eagle Creek road is closed at Casey Lake.

Response: The proposed action would provide an increase in the supply of firewood to the local community for a short (three year) period following the timber sale. After that firewood supplies would be random and primarily dictated by insect and disease mortality adjacent to open travel routes.

Chapter 2-21 through 2-23, the Alternative Road Closure Mitigation section, describes anticipated effects to recreationists (including firewood harvesters). Anticipated effects (of a road closure) would not be directly related to the proposed action (timber sale), but from implementation of the Forest Plan standard for H.E.I. (habitat effectiveness index). A permanent or seasonal closure of the Eagle Creek road would close 6.9 miles of road, all but 1.4 miles on timbered north and east exposures. Most of the closed area would provide good hiding security for ungulates. A permanent or seasonal closure of the Bear Fork road would close 3.0 miles of road within a mostly forested canopy, which would provide good hiding cover for ungulates. A permanent or seasonal closure would close 3.6 miles of the Bald Mountain Road at the east end of Crevice Mountain Road beyond private land. Seasonal closures would be from October 15 to June 30.

14-a. To close roads on a permanent base would be wrong closing off the use of all wheeled traffic as well as wood gathering for the local people. As well as closing the recreation, hunting, fishing, camping for all people.

Response: Opinion so noted. Proposed permanent road closures would affect human use of the upper Eagle Creek and Bear Fork areas as described in Chapter 2-21 and 2-21, "Projected Consequences of Road Closure Mitigation to Public/Administrative Access and Recreation Opportunity".

16-a. We strongly support the Gallatin's effort to meet Habitat Effectiveness goals. We therefore request that the Forest adopt and commit to implementing Option 2, permanent (and effective) closure of identified routes in order to raise HEI to 70% for the area.

Response: Opinion so noted.

16-c. We would like assurances in the final EA that the Forest is committing to a monitoring and enforcement plan for this area to assure closure effectiveness is maintained over time. (road closures)

Response: If Option 1 (seasonal road closures) is selected, initial monitoring of gates would occur on a sporadic basis or as needed. If compliance with the closure is not occurring the District would increase patrols in an effort to gain compliance. The Gardiner District's attention to monitoring and enforcement of road and area closures is well documented in the Cooke City area both with ATV's and snowmobiles.

22-d. The EA is somewhat misleading regarding proposed road closures because in some areas you are claiming seasonal road closures that are already in place.

Response: The HEI calculation in the EA does not consider road closures that are already in place in Eagle Creek. HEI was originally designed to provide elk security during the general big game hunting season. The Forest has never claimed credit for the Eagle Creek road seasonal closure toward attaining 70% HEI. By claiming credit for 5.5 miles of seasonal closure on Eagle Creek road, the Forest is actually much closer to meeting HEI in Eagle Creek than previously disclosed. There are an additional 8 miles of road to be closed with seasonal Road Option 1 and a total of 13.5 miles of additional permanent closure if Road Option 2 were to be chosen.

22-l. It is not even clear in the EA as to how this firewood harvest will be managed. It is not clear how the firewood harvest decisions were made in this project.

Response: Firewood harvest would be allowed under the terms of a formal, commercial contract or a number of permits issued to individuals for personal use. In either case, the Forest Service has the authority to designate the harvest areas and enforce road closures or harvest-scheduling restrictions as needed to assure operations are consistent with the direction provided in the decision document.

22-u. If you close roads that are not being used much, and replace them with roads that will receive heavy and relatively long-term use through logging and firewood harvest, how does this constitute mitigation for new road construction? Even though you are maintaining the existing open road density, you are increasing motorized levels of use.

Response: Road closures are proposed to mitigate foreseeable effects on elk security during the hunting season. The Habitat Effectiveness Index is an indicator of the effect increased miles of open road can have on animal vulnerability. The index uses data on road length as a function of area to yield an expression of road density per square mile. This mathematical determination is made independently of a consideration of the numbers of vehicles that might actually use an open road or be denied use of a closed road. Commenter's point regarding an increase in motorized use over a span of time brings out what may be a weakness in the modeled approach. However, incorporating numbers of vehicles per unit of time into the model would likely lead not to a more accurate assessment of environmental effect but to no result at all. The decision maker would be asked not only to specify which roads are to be closed and which will be open but also to assess, mathematically, whether closure of a relatively short road receiving moderate use for one year is adequate to mitigate the effect of opening a lengthy network of roads, all of which would be used infrequently for a period of several years.

The adequacy of the mitigation being proposed is fully tested by considering the lengths of road involved in closures and open road status and how closure periods are coordinated with periods when new roads are open. Approximately 0.9 miles of new road are proposed for construction in segments ranging from 0.1 to 0.3 mile. The length of road proposed for closure to mitigate the modeled effect on animal security of an

additional 0.9 total miles of temporary road is 8.0 miles, or a ratio of 8:1. This reduces road density. Temporary roads will be obliterated following timber harvest and a period of time to allow for gathering firewood. Although permanent closures associated with Road Closure Option 2 would entail an additional 5.5 miles of permanent closure on the Eagle Creek Road, these miles are currently closed seasonally during hunting season so they would not affect animal security differently. The roads proposed for closure will remain closed, seasonally or permanently.

28-d. Seasonal and additional road closures would have a negative impact on some, if not all these activities: bicycling, skiing, snowmobiling, hunting, fishing, hiking, camping, wood gathering.

Response: Refer to the response to Comment 5-c

48-a. Every alternative to the plan increases road density.

Response: Approximately 0.9 miles of new road are proposed for construction in segments ranging from 0.1 to 0.3 mile. The length of road proposed for closure in Road Closure Option #1 to mitigate the modeled effect on animal security of an additional 0.9 total miles of temporary road is 8.0 miles, or a ratio of 8:1. This reduces road density.

Silviculture

2-h. No alternative addresses the long-term cumulative effects of logging in the project area. The effects of each succession of logging operations needs to be addressed. What is the ecological status of the past cutting activity? Veg. Diversity has suffered from past activity and needs to be addressed before offering more cutting units.

Response: All alternatives address the cumulative effects from past logging activities. Each significant issue addresses direct/indirect and cumulative effects by alternative and incorporates all known past activities (such as logging). The present forested structural stage condition includes past harvest units and is identified on Map E-7 of Appendix E. Vegetative diversity has increased because of past activities. Without these past harvests, virtually all the forested lands within the analysis area would be mature and old growth forest. Currently, the only areas where younger aged forests exist occur where logging has been conducted.

4-d. To go in now and remove the last of the old growth timber is unconscionable and will have long-term negative effects on the health of the land and its indigenous inhabitants.

Response: Based on the analysis for vegetative diversity (see Chapter 3 pages 21 and 22), the percent of old growth in Compartments 305 and 306 after the preferred alternative is implemented will be approximately 38% or 20,080 acres (from a total of 52,610 acres).

4-f. The Forest Service has not rehabilitated the land devastated by past timber cutting in the area.

Response: All the past harvest units have regenerated successfully. Presently, most of these stands are well stocked and are in need of precommercial thinning (to reduce the stocking of these dense stands).

16-d. We are concerned that 173 of 195 acres to be harvested under this alternative are considered old growth. While admittedly, this reduction may not have a large impact on the overall old growth component in the analysis area, we are concerned about the particular location of these stands.

Response: The analysis for the significant issues took into account location of these stands. From these analyses, little concern was generated (see chapter 3 and appendices A, B, C, G and H for further information related to this concern).

17-c. The Forest Plan sets standards for old growth (30% of forested acres). To conclude that the standard is met when more than half of the area considered is in unharvestable, wilderness is not consistent with the intent of the Forest Plan standard.

Response: The Forest Plan is very clear that vegetative diversity will be analyzed by Compartment (page II-20 of Gallatin National Forest Plan). No direction is given to analyze vegetative diversity based on wilderness and non-wilderness boundaries.

17-g. The EA briefly discusses the need for artificial regeneration activities. Specifically which areas would receive this treatment?

Response: See page 2-18 table 2-6. Artificial regeneration is planned in units 1C and part of 13 for Alternative D modified.

17-h. This document is still lacking in displays, which clearly delineate the past harvest areas from open areas (meadows, cliffs, etc) and which clearly show units to be cut in conjunction with past harvest.

Response: Maps E-6 and E-7 of the EA address this concern. If you would like an enlarged color map showing these areas more clearly, please call.

18a. First and foremost the area in question has already been timbered extensively from the 1950s - 1980s. I cannot understand how the Forest Service can allow the area to have even more roads than it has now, while seeking to rehabilitate this heavily logged area.

Response: Based on a review of the areas outside the wilderness boundaries in Compartments 305 and 306 approximately 85% of the forested lands found here are mature and old growth forest with about 15% of the remainder in younger age classes (seedling, sapling and pole). These younger aged forests were created from logging that occurred 20 to 50 years ago. When all lands (meaning wilderness lands) in both Compartments are included in determining present forest stand types, about 94% of the forested lands are classified as either mature or old growth forest and the remainder (6%) are in younger age classes that were generated from previous logging operations. Because of these figures, I do not agree that the area has been extensively harvested.

Secondly, there will be no new permanent roads added to the present road system for this area as result of this project. About 0.9 miles of temporary road will be constructed with 3.6 miles of reconstruction occurring to existing system roads. And during the time of harvest, to maintain the current level of open road density for the Darroch-Eagle area, some roads will be temporarily closed.

19-k. What is the true acreage of timber available to harvest? The maps in Appendix E do not make this clear. The maps fail to show the fact that the proposal essentially takes all the remaining old growth that is not inside the wilderness area or in a riparian zone.

Response: To better address the question of old growth outside wilderness remaining after action is completed an analysis was conducted on lands below 7,500 feet. That

analysis showed 1,549 acres would remain (see page F-19 of the EA for further details of this analysis) after alternative D is accomplished.

20-b. The available information is not adequate to determine if sufficient, well-distributed old growth habitat exists on the GNF. The Forest lacks sufficient information on the forest wide old-growth situation to justify logging old growth.

Response: Based on a myriad of previous analyses conducted throughout the Gallatin National Forest, in virtually all cases old growth is at or above 10% of a Compartment's forested lands. Where old growth is below 10%, extensive harvesting has occurred on both private and public lands. This amount of harvesting is rare on the Gallatin. A large portion of the Gallatin NF is dominated by wilderness, roadless and specially designated areas in which no harvest has or will occur. In these areas, old growth averages 30% to 60% of a Compartment's forested lands with the remaining lands dominated by mature forest.

21-g. Old Growth: The fact is that, considering prior cutting, you plan to leave practically no old growth on these two mountainsides.

Response: See response to Comment 4-d. The areas will have a considerable amount of old growth before and after action is implemented.

21-o. I have noted the problems that have historically been encountered in establishing a new stand in these areas. I have asked you to research the records and account for this, but nothing other than general assurances that reproduction will occur has ensured.

Response: The records have not been reviewed because we currently have adequately stocked stands within the area that are doing well, and based on more recent reforestation activities (within the last 10-15 years) regeneration success for this area is practically guaranteed.

22-bb. It would help the public understand the cumulative impact of logging within the project sites if both the past and planned harvest units were provided on the same large-scaled maps. The way the information is currently provided in the EA it is almost impossible to determine the relationship between past and planned harvest units. Also we would like to see the acres of each before and after logging for MA 13 areas quantified in the EA.

Response: Please see maps E-5, E-6, and F-6. The acres before and after logging for MA 13 are included in all tables comparing alternatives with harvest totals calculated because all the proposed units are located in MA 13. See Chapter 2 for a majority of tables showing harvest acres before and after action.

23-d. According to the Forest Service's own standards this area is already over-cut and over-roaded.

Response: Refer to the response to Comment 18-a

24-a. These areas are already overcut and over-roaded

Response: Refer to the response to Comment 18-a

25-b, 27-b, 35-b, 43-b, 45-b, 46-b, 49-b, 50-b, 52-b, 55-b, 56-b. 58-b, 59-b, 60-b, 61-b. This is an already over-logged and over-roaded area

Response: Refer to the response to Comment 18-a

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28-a. The area is overcut and over-loaded. More harvesting would simply create more scars and more roads

Response: Refer to the response to Comment 18-a.

30-a. It is hard for me to believe that clear-cutting a forest is still even an option for Forest Service Land

Response: Where we are clear-cutting, anywhere from 20% to 30% of the stand will remain in clumps and individuals. Clear-cutting is still used where conditions warrant (for example; in stands of mature and older diseased lodgepole pine, stands of mature and older subalpine fir, and Engelmann spruce that are diseased and would require an open situation for regeneration of shade intolerant species to thrive). Partial harvest, where much of a stand remains, can be a way to perpetuate disease and other unwanted conditions in forests that exhibit such traits.

33-a. The Forest Service is again proposing to clear cut 195 acres of Situation 1 Grizzly Habitat on two areas above Bear Creek

Response: See response to Comment 1-a, 8-a, 17-a, 18-d.

33-b. This area, logged in the 1950s, 1960s, 1970s, and 1980s is already overcut and over-loaded

Response: Refer to the response to Comment 18-a.

33-c. This is the last old growth on these slopes. The Forest Service's proposal is to take literally the last uncut sections from the immediate area.

Response: Refer to the response to Comment 4-d.

34-a. I am dismayed to learn that once again the Forest Service is proposing to log the last remaining old growth forests in the areas above Bear Creek.

Response: Refer to the response to Comment 4-d.

39-a. I heard that the last 195-acre of virgin timber above Gardiner, MT are in danger of being clearcut.

Response: Refer to the response to Comment 4-d.

40-a. Do not cut the last 195 acres of virgin timber above the Gardiner, MT area referred to as the Darroch-Eagle.

Response: Refer to the response to Comment 4-d.

54-a. This area is the last old-growth in an already over-cut area.

Response: Refer to the response to Comment 4-d.

57-a. This area is already over-logged

Response: Refer to the response to Comment 18-a.

57-b. We should not be so hasty in removing one of the last old-growth forests.

Response: Refer to the response to Comment 4-d.

Soils

20-c. The EA does not demonstrate consistency with the Region One Soil Quality Standards found in the FS Manual.

Response: Soil quality standards and the Gallatin approach to maintaining soil productivity is discussed on pages A-18 and A-19 in the EA. Please see these pages for a discussion of consistency with the Regional Soil Quality Standards.

Timber Volume

17-k. Volumes - There is not sufficient discussion as to how volumes are derived and how and/or why they may or may not differ from volumes indicated in the Timber sale report and/or bid package (exam vs. cruise data)

Response: Estimates of timber volumes are provided, by cutting unit, for each action alternative. Table 2-3, Chapter 2, page 8 presents the estimated volumes, along with information on unit size, treatment method, logging system, acres thought to be subject to reforestation following harvest, the foreseeable actions to be taken to treat fuels created by harvest and the methods thought to be needed to provide a suitable site for reforestation, for Alternative B. Similar tables are provided in Chapter 2, pages 14 (Alternative C), 16 (Alternative D) and 18 (Alternative D-Modified). The information in the tables contributes to an analytic basis for the decision to be made. From Chapter 1, page 10:

The Forest Supervisor will make the following decisions:

- 1) Whether or not to harvest and regenerate timber stands, conduct road construction, and other support activities to meet the stated project purpose,
- 2) Under what conditions and by which methods timber harvest and associated activities would be conducted, and
- 3) Whether or not to implement project-specific Forest Plan amendments to exempt the project from Forest Plan standards.

The estimates of timber volume provided in Chapter 2 are considered in the economic analysis. The reasons for not including data based on field measurements that were taken pursuant to implementing a decision are provided in the response to Issue 19-b.

19-e. The EA is confusing and contradictory concerning the volume of timber in the preferred alternative.

Response: Table 2-7, Chapter 2, page 31 misstates the Gross Volume, in millions of board feet (MMBF) for Alternative D-Modified. The estimates of economic efficiency and anticipated timber receipts used the correct volume which is the sum of the unit volumes shown in Table 2-6, Chapter 2, page 18. Since the volume of timber thought likely to be available for harvest is not an indicator of environmental effect, no other analyses were affected by the discrepancy.

21-c. The volumes per acre in the cruise appear to be over twice the average for this area, when gross volumes are calculated by adjusting net (sold) volumes by the cull factor and partial cutting guidelines.

Response: The unit volumes displayed in Chapter 2 for each action alternative contribute to an analytic basis for the decision to be made. The reasons for not including data based on field measurements that were taken pursuant to implementing a decision are provided in the response to Comment 19-b.

Visuals

2-k. The EA fails to mention the aesthetic and landscape values that would be irretrievably lost due to increased logging.

Response: Appendix A of the EA, issue 26 addresses the scenery resource and describes the effect of the proposed actions, in terms of the Forest Plan standards for visual quality. Also, in Chapter II, there is a list of mitigations that would be applied to the actions for this project to meet the Forest Plan standards for visual quality. The effects and relationship to the Forest Plan standards are described, as viewers would see the landscape 1 year after completion of the project activities. After about 10 years, most likely those effects would slowly be softened as new trees fill in. Over many years, the harvested areas would progressively become less discernible. There would be no irretrievably lost aesthetic or landscape values.

10-a. A recreation resource that is scenic and of older growth timber with large trees gives a chance to experience that type of forest without having to enter the wilderness by foot or stock animal. This opportunity will be destroyed for a long period of time, if not forever, should the cutting occur.

Response: While this project is proposing to harvest some of the older, mature stands that are outside of the Absaroka Beartooth Wilderness, it would leave large blocks of mature stands within the overall project area (the Eagle and Darroch areas and the terrain in between), some of which would be accessible for immediate foreground viewing to recreationists who desire to tour by automobile, as opposed to foot or horseback. For those recreationists viewing the forest only from their vehicles, older mature stands would be visible in the immediate foreground along Forest Road #493 between Pine Creek and the Bear Creek Trailhead, and along a few miles of the Forest Road #3243 above Casey Lake, as well as for short distances along other portions of area spur roads. For recreationists who travel on foot or horseback, even outside of the Wilderness, larger blocks of mature trees would be visible and accessible to immediate foreground viewing.

23-b. Logging of the Darroch-Eagle areas will reduce the aesthetic value of this area for residents of Jardine and Gardiner, as well as visitors.

Response: Refer to the responses to Comments 2-k and 10-a.

Wilderness

21-h. Does the fact that the wilderness signs on these roads have been moved or moved farther up country have anything to do these measurements?

Response: No. The wilderness boundary in Section 11, T.9S., R.9E. (North of Palmer Mountain) was surveyed and posted by Forest Service survey crews in 1984. While working in the area on August 27, 2001, survey crews found the 1984 wilderness boundary posts next to Pine Creek Trail. These posts were 1600 feet northwesterly of the large wooden 'Absaroka-Beartooth Wilderness' sign that was located in the saddle NE of Palmer Mountain. It was the assumption that the wooden sign had been in place for many years and the district failed to move it when the wilderness boundary was officially surveyed in 1984. The survey crew told the district about their findings. Dan Tyers contacted them in May, 2001, indicating that he had plans to move the wooden sign to the proper location.

28-b. The proximity to the Absaroka Wilderness and to Yellowstone National Park would exposes those precious and unique resources to adverse effects.

Response: Refer to response to Comment 2-I in the NEPA section.

Wildlife

1-a. It seems that further habitat reduction in a known Situation-1 Grizzly Bear Habitat is regrettable, especially since this seems like a below cost sale.

Response: Please refer to Appendix C, Biological Assessment. An increase in motorized access is commonly recognized as the primary source of grizzly bear habitat reduction or degradation. Consequently, Gallatin Forest Plan Amendment 19 disallows an increase in open motorized road density on the Forest. As described in Appendix C, the proposed project meets Amendment 19 constraints. That is, no new permanent roads would be added to the system with this project, and, to mitigate temporary road construction effects during timber harvesting, the necessary amount of open system roads was previously closed.

Also, timber harvesting would not reduce available grizzly bear habitat in terms of foraging opportunities. Locally significant grizzly bear food sources do not exist at the project site. About 173 acres of old growth would be converted to grass-forb/seedlings through timber harvesting. This would alter but not necessary reduce foraging opportunities and food abundance. Vegetative food items used by grizzly bears are currently found at the project site and would be present after timber harvesting, although changes in species composition would undoubtedly occur.

Project implementation (at least one alternative) would also not compromise other Forest Plan standards designed to protect grizzly bear habitat, such as size and shape of harvest units and hiding and thermal cover constraints. Please refer to pages C10-C35 for more details.

2-d. None of the alternatives presented address how to best manage for biodiversity. There should be a conservation biology alternative that addresses past and current land use and how to restore ecosystem health.

Response: Biodiversity is addressed through analyzing the effects of the proposed project on species of special concern, including Threatened and Endangered Species, Forest Service Sensitive Species, Management Indicator Species, and several local indigenous species. Biodiversity is maintained if viability of these populations is maintained.

Some of these species were pre-selected to receive specific attention in analyses because they represent distinct environments. Specifically, this is the concept behind MIS species. The species involved reflect the range of habitats present on the Gallatin Forest. The continued existence of these species is an indication of the continued biological integrity of the environments they inhabit.

Analysis results in the Biological Assessment, Biological Evaluation, and the Environmental Assessment indicate that the proposed project (at least one alternative) would not compromise any of these species of special concern. Therefore, it is reasonable to conclude that the biological diversity of the area would be maintained.

Please refer to Appendix A-11, #21. In addition, species-specific effects analyses are discussed in the Biological Evaluation (Appendix B), the Biological Assessment (Appendix C), and Appendix A (Issues Disposition Summary).

2-f. The project is within Grizzly Bear Situation 1 habitat and will displace Grizzly Bears leading to increased mortality. This alone should disqualify any alternative that reduces Grizzly habitat in Situation 1, since every alternative increases open motorized access density.

Response: Please refer to Appendix C, Biological Assessment. The Bear Creek Drainage does not have a high density of grizzly bears comparatively because seasonally available foods are about average in abundance and variety relative to the surrounding landscape. Therefore, there is no reason to expect that unique concentrations of bears would be affected by implementing this proposal. In addition, the project would be temporally limited; i.e. direct project effects would be restricted to summer months for about 3 years. Consequently, bears that use the drainage would be affected by logging operations for a short duration.

The amount of bear displacement that might occur during timber harvesting in terms of dispersal distance is unknown, but it is not reasonable to conclude that it would lead to the death of bears. In fact, based on various studies addressing the effects of resource extraction on bears, they may be displaced from the timber harvesting activities no further than the adjacent cover. With adequate security cover (which is ubiquitous in Bear Creek), bears may not leave the drainage during harvesting activities.

The long-term effects of the harvesting (created clear cut areas) would not necessarily result in the displacement of bears. The areas scheduled for timber harvesting would not have hiding cover for several decades, but they would provide foraging opportunities after the timber is removed and sufficient adjacent uncut forests would be retained to provide needed security cover.

Finally, Forest Plan Amendment 19 does not allow an increase in open motorized access (motorized access is often a factor in bear displacement). Therefore, the project alternatives are designed accordingly and will not result in a breach of this standard.

5-a. The timber sale will directly impact the conservation and recover of the grizzly.

Response: Please refer to Appendix C, Biological Assessment. As required under Section 7 of the Endangered Species Act, the Gallatin Forest consulted with the U.S. Fish and Wildlife Service regarding the effects of the proposed action on the recovery of the Yellowstone Ecosystem grizzly bear. The USFWS is mandated to consider the effects of federal activities collectively and individually at a landscape level on the grizzly bear. The USFWS agreed that the proposed timber sale is not likely to adversely affect the Yellowstone grizzly bear population. This determination was based, in large measure, on the fact that an increase in bear mortalities would not be associated with the project and habitat changes would not reduce critical foraging opportunities. In addition, applicable standards designed to protect grizzly bear habitat and promote population were met in the project design (at least one alternative).

5-b. There are areas proposed for cutting which include stands of White-Bark Pine, a crucial source of food for grizzly bears. This food source for grizzly bears is important to the biodiversity of the area and will take decades to come back.

Resource: Two units (#14 and #9) are adjacent to whitebark pine stands. Consequently, all timber harvest would be concluded prior to August 30th as a mitigation measure for grizzly bear foraging activities (page 2-17). Several of the higher elevation units proposed for harvesting contain scattered whitebark pine trees but none are pure stands. Most whitebark pine trees in these units are in the understory and would not reach sufficient stature to produce cones for bears to utilize. Leaving uncut the few mature whitebark found in the upper units is an additional mitigation measure that could be considered for the final decision.

6-a. The logging will displace wildlife causing an increase in grizzly mortality as they are forced to move into the neighboring sheep allotment.

Response: Please refer to Appendix C, Biological Assessment, especially pages C-20 to C-23. This subject is dealt with in great detail in the analysis documents. For a variety of reasons, this concern is unwarranted: it is unlikely that more than a few grizzlies regularly inhabit Bear Creek; it is not a given that bears would be displaced out of the drainage by the logging operation; if they were displaced out of the drainage, they would not inevitably move into the sheep allotment because there are many other remote areas nearby where they can avoid humans; the Forest Service has the administrative prerogative to ensure that the sheep are as far as possible within the allotment from the logging operation when it occurs; the allotment is huge (74,000 acres), characterized by rugged terrain, and the sheep could be as far as 15 air miles away from the logging operation within this rough landscape; if a grizzly is displaced into the allotment, there is a slim chance it would encounter the sheep band; if it did encounter the sheep band, it is not inevitable that the bear would be killed; the special use permit for the sheep allotment has many administrative caveats designed to prevent conflicts with bears, and, ultimately, deference is given to grizzly bear conservation in the administration of the sheep allotment permit.

6-b. It could also carry grave consequences for the endangered lynx in the area.

Response: Please refer to Appendix C, Biological Assessment, especially pages C-38 to C-40. Suitable foraging and denning habitat is found in the Bear Creek drainage, but lynx have not been sighted in the area in recent decades. In addition, quantitative analysis demonstrated that the project consequences (at least one alternative) are well within the standards prescribed in the Canada Lynx Conservation Assessment and

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Strategy, the document that contains the established management standards for Lynx Analysis Units.

Conservation measures direct that if more than 30% of suitable lynx habitat within a Lynx Analysis Unit is currently in unsuitable condition, no further reduction of suitable conditions can occur as a result of vegetation management by Federal agencies. A total of 5.59% of the Sheep Mountain LAU has been altered since 1990 and 5.38% in the Ash Mountain LAU. In addition, management actions cannot change more than 15% of lynx habitat within a LAU to an unsuitable condition within a 10-year period. Disturbances since 1990 plus the proposed action will alter a total of 5.8% of suitable habitat in the Sheep Mountain LAU and 6.25% in the Ash Mountain LAU. These project consequences are well within the prescribed standards.

Moreover, lynx benefit when a diversity of forest succession stages are present. This project would add to the diversity of available habitat by providing early successional stage coniferous forest. Although the proposed project area would not be suitable snowshoe hare or lynx foraging habitat immediately after harvesting, in several decades it would provide better quality habitat than it currently does as old growth forest. In this area, snowshoe hare densities are highest in forests 30-60 years post disturbance.

Periodic forest disturbances are necessary to sustain a snowshoe hare population. Most of the young forests in Bear Creek reflect 25-50 year-old clear-cuts. They are currently favorable snowshoe hare habitat, but in a few more decades they will not have an appropriate forest structure to sustain current hare densities. Creating disturbances now will ensure the availability of snowshoe hare habitat when the old clear cuts have matured past the point of providing the necessary habitat components. Therefore, the consequences of the timber sale would be favorable for lynx.

8-a. Importance of old growth to fur bearers, lynx, and migrating elk, deer, grizzly bears.

Response: To achieve size and age diversity of vegetation, the Forest Plan directs the following mix of successional stages in timber compartments containing suitable timber: 10% grass-forb, 10% seedling/sapling, 10% pole, 10% mature, and 10% old growth. Currently, 38.5% of the analysis area is old growth. The proposed project would decrease the amount of old growth from 0.33% to 0.67%, depending on the alternative selected, which means far more old growth remains than the Forest Plan standard directs. The preferred alternative would convert about 175 acres of old growth into grass-forb and 20 acres to mature forest (40-60% harvest). About 20,082 acres of old growth would remain (38.17%) after timber harvesting.

Please refer to Appendix A-3-5 and Appendix B for a discussion of project effects to fur bearers. Implementing any of the proposed alternatives would impact furbearer habitat. For example, D-modified would have the least impact but it still would result in a loss of 3.5% high quality denning habitat, 1.5% moderate quality denning habitat and 0.8% optimal foraging habitat for pine marten.

Recent surveys have shown that the pine marten population in the analysis area is robust. Moreover, the amount of habitat affected by the proposed timber harvesting would be comparatively small in the context of the analysis area and the impacts would not be enough to affect pine marten population viability. Consequently, the effects of implementing this proposal would be minimal.

In addition, while the logged areas will probably support lower densities of marten than they did before harvesting, in several decades these areas will provide good foraging opportunities as prey species numbers increase. In particular, snowshoe hare densities

are typically higher in young lodgepole pine forests than in recently disturbed areas or mature forests, which is beneficial to pine marten.

Implementing this project would not compromise lynx vegetation standards as outlined in the Canada lynx Conservation Assessment and Strategy (see 6b). Moreover, early successional stage forests are also important to lynx because they sustain snowshoe hare, their primary prey.

Please see Chapter 3 12-16, Appendix C, and Appendix F 10-12 for discussions of effects to ungulates. The timber/grassland edge on the north side of the Yellowstone River through the Gardiner Basin is an important migration corridor, especially for elk. Because of this, the proposed harvest units were intentionally selected away from this corridor. The forests proposed for harvesting are not critical for migrating elk or deer, nor are they important as winter range because they are generally above the snow tolerance limits of these species. Old growth forests can serve as summer range, but summer range is not a limiting factor and ungulates use a variety of habitats during this season.

For a discussion of the effects of the project on grizzly bear foraging habitat and hiding and security cover in the context of old growth forests, please see Appendix C 10-13.

8-b. Removing the old stands tends to severely dry the watersheds and reduce the already small moose habitat.

Response: Please refer to Chapter 3 12-16, and Appendix F-11. Summer range is not a limiting factor for moose in this area but late-winter habitat is. Late-winter habitat would decrease by about 1.8% in the Bear Creek drainage if this proposal is implemented. About 10,780 acres of late-winter habitat would remain. The impact this would have on the moose population size is unknown but it would not determine population viability in the Bear Creek drainage.

Montana Fish, Wildlife, and Parks administer the hunting seasons. Based on their assessment of population size and potential, they maintain an annual hunting quota of 2 moose in Bear Creek. Annually approving the season is an expression that they are not concerned about the viability of this moose population. Similarly, moose are hunted throughout southwest Montana. In addition, moose in the Greater Yellowstone area and across North America are not considered at risk of extirpation.

9-b. It is apparent from reading the BA and the alternatives analyses that all of the action alternatives, including the selected alternative, violate the existing forest plan standards for wildlife, particularly moose, elk and grizzly bears.

Response: Please refer to response to Comment 8b above, Chapter 3 12-16, and Appendix F-11 for a response to issues related to moose.

For issues related to Forest Plan standards and elk, please refer to the Appendix C, Biological Assessment, pages C 29-34, and Chapter 3 pages 12-16.

For issues related to Forest Plan standards and grizzly bears, please refer to the Biological Assessment, especially Table 5, C-14.

10-c. There are many other reasons not to proceed with this cutting. These include the forest's value as lynx and bear habitat.

Response: Please refer to Appendix C, Biological Assessment, as well as responses to Comments 1-a, 2-f, 5-a, 6-a, 6-b, and 8-a.

11-a. I think there is a great concern of destroying prime Grizzly Bear habitat as well as wolverine, lynx cat, moose, elk and other small mammals and birds.

Response: Please refer to Appendix A Issue Disposition Summary, Appendix C, Biological Assessment, as well as responses to Comments 1-a, 2-f, 5-a, 6-a, 6-b, 8-a, and 8-b.

13-a. Logging in this area will immediately displace ungulates by increased activity in the area, an additional 2.2 miles of new roads and reconditions up to 4.4 miles of existing roads, a loss of forage and cover, and an interruption in natural travel and migration routes for native ungulates. The displacement of native ungulates will directly impact wolves that use the area, as their natural prey will be less abundant and increasingly difficult to obtain due to lack of security caused by increased activity in the area.

Response: Elk, mule deer, moose and other ungulates on the Northern Yellowstone Winter Range use seasonal movements as a survival strategy. During favorable conditions (primarily summer and fall), they may occupy the analysis area and potentially, the project site. However, winter conditions generally preclude access in the upper reaches of Bear Creek, including the project site. In the fall, hunting activity displaces big game. The area is hunted intensely, in part, because of the network of access roads. In addition, the project site does not contain habitat features of inordinate value to attract ungulates. For these reasons, large concentrations of ungulates for wolves to pursue do not occur at the project site.

The availability of summer and fall range is not a limiting factor for ungulates in the GYA. When logging is scheduled to occur, ungulates have no environmental restrictions on their movements, and can travel readily across the landscape. In addition, ungulates do not necessarily disperse long distances from human activities when adjacent hiding cover is available, which is the case in Bear Creek. Therefore, effects to ungulates because of displacement resulting from the timber harvesting activities would be minimal, as would the subsequent potential for related effects to wolf movements and opportunities for pursuing large prey. In terms of population viability, project implementation would not have significant effects on principal prey species for the gray wolf (see Appendix c 29-34 and 35-37).

Because the gray wolf is regarded as a non-essential experimental population in this area under the Endangered Species Act, it does not have the status of an endangered species. Under the constraints this evokes, impacts to dens are the primary concern in assessing project effects. Direct and immediate threats to individual wolves are also a consideration. Population viability is assessed using prescribed population recovery standards. These standards are being met in the Yellowstone Ecosystem. Protocols for habitat maintenance, such as those used in analyzing effects to grizzly bears, are not applicable for wolf conservation.

No gray wolf dens have been reported in the analysis area. Wolves dispersing from YNP may use the analysis area. Wolves may avoid the project area during project implementation, but this would not result in an important habitat loss for the gray wolf, or in any adverse effects on wolves in YNP, or the overall viability of the tri-state wolf population.

13-b. With displaced prey, wolves will find it necessary to move out of the area in search of prey and acceptable habitat.

Response: Please refer to response to Comment 13-a.

16-b. We are concerned about the proximity of timber harvest relative to whitebark pine stands. We also request that harvest activity specifically exclude removal of whitebark pine, even as incidental removals.

Response: Please refer to response to Comment 5-b.

16-f. The EA admits that through the road upgrades, motorized access will be made easier, and it is likely that more motorized access will occur. This in turn could lead to more human caused bear deaths.

Response: Please refer to Appendix C, especially pp. 15-23.

17-a. I remain opposed to this timber sale because this sale is slated to occur in Situation 1 grizzly bear habitat, known suitable habitat for threatened lynx, and known occupied habitat of rare wolverine.

Response: For a discussion of effects to lynx, please refer to Appendix C pages 38-41 and responses 6b and 8a. For a discussion of effects to wolverine, please refer to Appendix B, especially pages 8, 9, 12, 14, 15, and 25-28.

17-d. The document admits there would be impacts to moose habitat. Considering that moose numbers are so low at present, moose and protection of moose habitat must be taken into more serious consideration.

Response: Please refer to response Appendix C 29-34 and response to Comment 8-b.

17-e. The impacts of haul roads are never discussed. Separate roads would be used for hauling from Darroch and Eagle and they truncate migratory routes - especially elk.

Response: For a discussion of road effects and ungulates, please refer to Appendix C, especially pages 14-15 and 29-34. Routes that would potentially be used for haul roads were included in the appropriate analyses. They are part of the motorized access database.

Time restrictions for hauling (and harvesting) are an important consideration in responding to this issue. They are described on page 2-23. Unless waived in writing by the Forest Service, operational restrictions will include the following: 1) July 1 to October 15 will be considered the normal operating season for contractual purposes, 2) no hauling of logs from the sale area will be allowed from Friday at 5PM until midnight Sunday or 5 PM preceding a state or federal holiday to midnight of that same day, 3) all timber sale contract activities that would use the Eagle Creek road system are precluded October 15 to June 30 and 4) all timber sale contract activities that would use the Bear Creek road system are precluded December 1 to May 1. In addition, all felling, skidding, and hauling activities are to be concluded in units #9 and #14 prior to August 30 of any given year to mitigate for possible grizzly bear foraging due to the proximity of the whitebark pine forests to these units.

An historically high percentage of the elk on the Northern Yellowstone Winter Range currently migrate out of Yellowstone Park and arrive at the Dome Mountain Game range, or areas in between. To do so, they cross the Yellowstone River at several predictable locations and move northward. The more heavily used routes involve crossing State Highway 89 and/or the County road from Gardiner to Jardine, road corridors that already experience comparatively high traffic levels. Most of this movement occurs during November, December, and January, depending on winter severity. During this time they may be intensely hunted.

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In this context, the addition of log hauling for this project would not be consequential, especially since it would not occur during the period of elk migration. Moreover, the migration routes would not be “truncated” in the sense of being physically blocked. For about 3 years, the haul trucks would travel roads during the summer and fall that elk cross during migrations in early to mid-winter.

17-l. Whitebark Pine- we can't afford to lose any more of these trees given the slow regeneration of the species and given the recent losses due to fire, blister rust, drought, etc.

Response: Please refer to response to Comment 5-b.

17-m. Appendix G - Populations of elk is not necessarily the issue. Habitat health is the issue.

Response: Please refer to Appendix C, especially pages 29-34. Effects to ungulate habitat as well as populations are discussed in this section. The section on ungulate population viability on pages 31-34 was included in response to previous comments. Population viability can be one measure of habitat suitability.

17-o. Appendix C Biological Assessment - Effects on grizzlies of the two activities in conjunction need to be examined. (grizzlies being chased into sheep allotments and whitebark pine)

Response: For a response to the issue of “grizzlies being chased into sheep allotments”, please refer to response to Comment 6-a.

17-s. Consultation with other agencies, organizations and individuals is in order in an analysis such as this. Specifically the Montana Fish and Wildlife Service.

Response: Please refer to Chapter 4, Consultation and Coordination. Comments and input from Montana Fish, Wildlife, and Parks were solicited. Area biologist Tom Lemke and Kurt Alt are listed as the State representatives involved. In addition, under Section 7 of the Endangered Species Act, concurrence with the U. S. Fish and Wildlife Service is required on the determination of effects to Federally listed species for projects of this type. Please refer to Appendix C page 3 and 42. In accordance with this mandate, the project was discussed verbally with USFWS representatives, Helena Office. In addition, they reviewed a copy of the Biological Assessment. A written response from the USFWS is required providing their review of the determination of effects to Threatened and Endangered Species presented in the Biological Assessment.

18-b. The old growth forest in question provides thermal and hiding cover for grizzly bear, elk, and important winter range for moose. How can we deny habitat for so many threatened and elusive species, when so many areas of habitat across the west are quickly shrinking away?

Response: Please refer to Appendix C, especially pages 12-15, for a discussion of effects to grizzly bear thermal and hiding cover. Refer to Appendix C Pages 29-34 for a discussion of effects to ungulates, including elk and moose, as well as responses Comments 8-a and 8-b.

18-c. This area contains stands of white bark pine, which are a critical food source for Grizzly Bears especially in the fall. Because of one quarter of the White Bark Pine trees in Yellowstone have been burned in the past few years, it seems even more critical that we protect areas with this much needed resource.

Response: Please refer to response Comment 5-b.

18-d. The sale should not go through because this is a Situation I Grizzly habitat area. If we allow this timber sale to proceed are we not seeking to alter or perhaps even destroy another refuge for the threatened grizzly bear?

Response: Please refer to Appendix C, Biological Assessment. There is no indication that this project will destroy grizzly bear habitat. About 195 acres of old growth forest will be converted to grass/forb (early successional stage lodgepole forest) or open mature forest. This represents a very small portion of bear habitat available in the Yellowstone Ecosystem. In addition, conversion of habitat from a late to early successional stage does not constitute habitat destruction. Coniferous forests and bears coevolved in the Yellowstone Ecosystem with disturbances, including fire, wind-throw, disease, and insect infestations. Recently disturbed areas are and have been abundant in the ecosystem. Post-disturbance environments are currently common given the present drought and associated fire cycles. Bears can and do utilize post-disturbance coniferous habitat types. A variety of cover types fosters biological diversity and, specific to the bear, offers a greater array of available vegetative food sources than a monoculture of either early or late successional stages.

The project site does not involve unusual, unique, or inordinately important habitat features or food sources that are necessary to ensure the viability of the Yellowstone grizzly or local populations. The 195 acres of forest involved does not represent a critical refuge for the Yellowstone grizzly, and conversion of these forests to young lodgepole pine forests will not deprive grizzlies of a landscape feature that plays a critical role in population continuance.

For a variety of reasons, the truly negative consequences of human activities such as timber harvesting involve increases in open motorized access. It is commonly recognized that habitat reduction or degradation (see response 1a) is caused by permanent additions to open motorized road density. This project does not have that component.

19-f. The EA trivializes the impacts of the sale on the endangered grizzly bear and by doing so misleads the reader. This sale will take grizzly habitat.

Response: Please refer to the Appendix C, Biological Assessment, and responses to Comments 1-a, 2-f, 5-a, 6-a, 6-b, 8-a, 18-d, and 18-b.

19-g. The Environmental Consequences section of the EA says that hiding cover would be reduced by 175 acres and that thermal cover would be reduced by 20 acres resulting in reductions that exceed the Forest Plan standards. The area already exceeds the road density standards for MS 1 grizzly habitat and the EA does nothing to address this.

Response: In terms of compliance with Forest Plan hiding and thermal cover standards, the converse of this concern is accurate. Forest Plan standards (p.H-8) require that sufficient cover be provided within grizzly bear habitat equivalent to 20 percent hiding cover, 10 percent thermal cover, and an additional 10 percent in either hiding or thermal cover for a total of 40 percent cover. The Forest Plan also requires that cover should be distributed throughout the analysis areas (Forest Plan p. H-8). Currently, 62.9 percent (21,796 acres) of the analysis area provides hiding cover and 19.7 percent (6,820 acres)

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provides thermal cover. If the project is implemented, hiding cover would be reduced by 175 acres and thermal cover by 20 acres. This would result in a ratio of 62.4 percent hiding cover and 19.7 percent thermal cover, which would exceed minimum Forest Plan standards.

Existing open road density within the three habitat units surrounding the proposed project area do not meet the Forest Plan standard for elk effective cover (i.e. habitat effectiveness index rating of 70%) (Forest Plan, page II-18). As an alternative to allowing this situation to continue after proposed timber sale firewood gathering under any alternative described previously, options have been forwarded to close additional existing roads. These options are explained in Chapter 2 pages 19-23. Refer also to the map in chapter 1-12 HAU's and Appendix E Maps E-1 through E-4 Possible Additional Closure for HEI.

19-h. For species after species, the EA trivializes the effect of this sale. The document addresses the affect on lynx habitat to some extent but concludes that the proposal is not consequential for the lynx. This is misleading.

Response: Please see responses to Comments 6-b, 8-a, 11-a, and 17-a.

19-i. The EA fails to adequately consider potential effects of this sale on the wolverine that has been observed on both the Eagle and main Bear Creeks and is only not listed as threatened because their numbers are difficult to quantify.

Response: Please refer to Appendix B, especially pages 8, 9, 12, and 14. The statement is correct that the wolverine has not been listed as a threatened species.

20-a. The GNF has failed to adhere to these Plan standards, and therefore viability is not assured.

Response: Project effects on the viability of Forest Service sensitive species is addressed in Appendix B pages B9-B13. Grizzly bear population viability is addressed on pages C23-C29. The viability of ungulate populations is addressed on pages C31-C34. Grey wolf, bald eagle, and lynx population viability is addressed on pages C40 C36, C37, and C40, respectively.

21-j. Address Grizzly conflicts with sheep allotment on Ash Mountain.

Response: Please refer to 6a above as well as Appendix C, Biological Assessment, especially pages C-20 to C-23. This subject is dealt with in great detail in the analysis documents.

21-l. Elk migration: both haul roads cut across the migration route.

Response: Please refer to response to Comment 17-e.

22-e. The EA does not clearly demonstrate that new temporary roads will be obliterated. It in fact appears that any new roads will be maintained as closed roads. If these roads are not obliterated and reforested, they need to be counted as an impact on grizzly bears.

Response: The roads would be obliterated. Please refer to Chapter 2 pages 13 and 23-24, and Appendix C pages 6 and 52-53.

22-f. You did not evaluate the impact of closed roads on grizzly bears in your analysis, or areas that are still going to provide access routes for ORVs or hunters/recreationists on foot.

Response: Roads that would be closed would be obliterated and therefore would not provide access for ORVs. Forest Plan Standards and the Grizzly Bear Conservation Strategy do not require an assessment of the effects to grizzly bears of foot traffic off designated routes. The project would involve the construction of 0.9 miles of temporary roads that would later be closed. In a closed condition, they would not provide any particular enticement to off route travel. Hunting in grizzly bear habitat involves inherent risks to bears and humans. Constructing and then obliterating 0.9 miles of road will not alter these risks. Please refer to Appendix C.

22-g. Overall, given the problem that access and roads create to grizzly bears, you need to be more specific in the impacts the various road management activities, from the construction of new "permanent" temporary roads, to the maintenance of other "temporary" roads, will have on grizzly bear mortality risk and displacement.

Response: Temporary roads would be obliterated after harvest activities are concluded. Consequently, they can not be considered permanent and would not be left as access, or need to be maintained. Please refer to Appendix C.

22-h. It seems that a reduction in forest cover adjacent to this heavily used big game winter range will affect grizzly bear use of carrion. This impact needs to be more carefully addressed in the EA.

Response: The Northern Yellowstone Winter Range is one of the primary winter areas for ungulates in the Yellowstone Ecosystem. Animals that die during the winter are an important source of carrion for grizzly bears in the spring. However, the project site is not a part of this important wintering area and does not provide a spring foraging opportunity for grizzlies seeking carrion.

The project site is not suitable winter range for pronghorn, bighorn sheep, or mule deer because snow depths and lack of suitable habitat preclude use. Similarly, it is marginal winter range for elk; elk would winter in the proposed sale units only under unusual circumstances. The proposed timber harvest units are potential moose habitat. Moose numbers are comparatively very low and, therefore, would only supply a limited and unreliable source of carrion for bears.

The area where timber may be removed through this project is separated from the NYWR by several miles. More importantly, the intervening area, as stated, is not good ungulate winter range. That is, the project site and the NYWR are not juxtaposed so the removal of timber on the former will not affect the later. Please refer to Appendix C, especially pages C-12 and C29-C34.

22-j. Isn't there some way you can quantitatively measure the change in access that will result from this project on grizzly bears, such as vehicles per day, or number of people in the woods?

Response: Please refer to responses 1a, 22o, and 22p. Quantifying human use associated with the proposed project in absolute terms is unlikely, although numbers could be approximated. However, for preserving grizzly bear habitat security, available open motorized access is the critical issue. Regardless of the number of people involved with project implementation, regulating (and hopefully reducing) motorized access appears to be the best mechanism for promoting grizzly bear conservation. This

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represents the best long-term strategy for grizzly bear population recovery. This is discussed in Appendix C.

22-l. You define 2 different road options, but the specific impacts of either option on grizzly bear is extremely vague. It is not clear what specific information will be used to make a decision on which option to select.

Response: Please refer to Chapter 2 pages 19-23. Existing open road density within the three analysis units surrounding the proposed project area do not meet the Forest Plan standard for elk effective cover (i.e. a habitat effectiveness index rating of 70%)(FP, page II-8). These options are offered as an alternative to allowing this situation to continue after proposed timber harvesting and firewood gathering under the described alternatives. Any additional road closure related to the project is not required because the appropriate standards for grizzly bear habitat conservation have been met through the proposed alternatives. However, any additional road closures would benefit the bear (refer to response 1a).

22-o. You are violating the Forest Plan by not managing MA 13 habitat for the grizzly bear. This includes hiding cover and old growth.

Response: MA 13 is designated in the Forest Plan as suitable for timber harvesting. Standards are delineated to protect grizzly bear habitat and promote population recovery. The project design (at least one alternative) meets those standards.

22-p. You are violating the ESA by failing to manage a threatened species with the most current best science.

Response: Standards are delineated in the Forest Plan and the Grizzly Bear Conservation Strategy to protect grizzly bear habitat and promote population recovery. The project design (at least one alternative) meets those standards. Determinations of project effects to federally listed species, including grizzly bears, are reviewed by the USFWS under Section 7 of the Endangered Species Act. The USFWS performs this review in the context of the current and projected status of the Yellowstone grizzly bear and the best scientific information available.

22-q. There is basically no analysis in the EA regarding the potential impacts on grizzly bear habituation to humans from all the increased activity.

Response: Please refer to Appendix C, Biological Assessment, especially pages 15-22 and 34.

The increase human activity associated with timber harvesting is temporally limited. Major activities will last for several years and then end, thus limiting the opportunity for habituation to occur. However, habituation is unrealistic regardless.

The contract for the sale will stipulate that attractants not be made available to bears to avoid habituation with humans. Moreover, a Special Order requiring attractant storage is already in place on the Gardiner District.

Rather than bears becoming habituated to humans because of the timber harvesting, it is more likely they would be displaced, although the number of bears that might be involved would likely be small and the displacement factor would be ameliorated by the existence of extensive cover in the drainage. Again, because of the nature of timber harvesting and the lack of available attractants it is unlikely that bears would become habituated to humans because of project activities.

22-r. It is not clear in the EA as to why until 9 and 14 have no valuable whitebark pine resources for the grizzly bear.

Response: Please refer to response to Comment 5-b.

22-s. Management of whitebark pine for grizzly bears clearly involves management of red squirrels. It does not appear this close association has been addressed in your analysis.

Response: Please refer to Appendix A, page 2, issue 15. The issue of effects to red squirrels is addressed there. Suitable squirrel habitat is abundant within the analysis area, the surrounding region, and the intermountain west. Consequently, this species is ubiquitous. Therefore, there is no concern over the viability of the pine squirrel population at any relevant spatial scale. About 65% of the analysis area is forested and would continue to support squirrel populations. Each action alternative would remove less than 1% of available pine squirrel habitat. This effect would be short term; squirrels would utilize the area again as soon as lodgepole pine regeneration is of sufficient height to produce cones (about 10 to 15 years). The impact to grizzlies reflected by a loss of squirrel habitat in less than 1% of the analysis area for 10 to 15 years would not appear to be significant.

A series of standards have been provided in the Forest Plan and the Grizzly Bear Conservation Strategy to ensure that management activities do not degrade grizzly bear habitat quality or present mortality risks so that potential population recovery is compromised. Those standards have been met for this project. They are discussed in the context of this project in Appendix C.

22-t. There have been almost no goshawk surveys on this landscape. Given this, how do you know you will not be logging goshawk nesting or post fledgling areas? We could not understand how the information on goshawk habitat in Table 3 of appendix B matches goshawk information provided in the text.

Response: About 7 miles of surveys have been conducted in the area using vocalization recordings. These did not generate a response. However, goshawks have been seen incidental to other tasks in Pine Creek and on the Ash Mountain road, locations within the project analysis area. Goshawk surveys will be conducted (or repeated) prior to timber harvesting. If active nests are located, proposed harvest locations will be adjusted to protect these locations.

Two different predictive goshawk habitat models are described in the project analysis documents on pages B 10-11. They reflect different spatial scales: the Gallatin National Forest and the project level. At both scales, analysis indicates that goshawk habitat potential would be maintained in spite of project implementation.

The GNF model indicates that the Absaroka-Beartooth Range (which includes Bear Creek) could contain 32-63 nesting territories and the rest of the GNF could contain 36-68 territories. These numbers show wide variation in the predictive model outputs. Regardless, they reflect significant reproductive potential in the A-B and Forest-wide. In addition, the GNF model identified the possibility for 1 or 2 goshawk breeding territories in the Bear Creek drainage. The best nest site potential, according to this model, is within the North Fork of Bear Creek, an area not considered for timber harvesting in this proposal.

Table 3 reports the results of the second modeling exercise, the project-specific effort. It indicates that 52 acres of optimum nesting habitat and 2,743 acres of foraging habitat are found in the project area. According to the model, from 15 to 37 acres of foraging habitat

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would be lost, depending on the alternative, if the project is implemented, with alternative D-modified having the least impact. It did not indicate a loss of nesting habitat.

22-u. We could not understand how the information on goshawk habitat in Table 3 of Appendix B matches goshawk information provided in the text

Response: Please refer to the response given for Comment 22-t.

22-v. You have not identified a landscape plan for grizzly bear conservation in this proposal.

Response: We did address the viability of the Yellowstone grizzly bear population, which indicates a landscape level of analysis, in the context of the proposed project. This can be found in Appendix C, pages 23-28.

One of the purposes of conducting Section 7 consultation with the FWS is to ensure that project effects are assessed at a landscape scale. That is, the FWS considers the effects of a proposal in the context of what else is occurring at a much broader spatial scale. Project effects are also assessed in light of the Grizzly bear conservation strategy, an analysis that includes a comprehensive management approach to ensuring species recovery.

22-w. It is not clear why you picked August 30 as the date to be done logging units 9 and 14. Are you inferring that grizzly bears will not be affected by logging of these units prior to August 30?

Response: Grizzly bears forage on whitebark pine cones and squirrel caches of cones in the late summer and fall. This corresponds to the timeframe when the cones are ripe and provide a suitable food source. There is considerable annual and regional variation as to the quantity of available cones and ripening dates. August 30 is a reasonable date selection to account for this range of variation. In general, whitebark pine cones are ripe enough to serve as a food source for grizzly bears after that time.

22-x. It does not appear that you can meet the requirements for management of MS1 habitat by minimizing bear-human conflict potential, since you will be greatly increasing human use in this landscape.

Response: Human use associated with this project would be spatially and temporally limited. Harvesting activities would be restricted to several years and about 195 acres. The actual number of people involved in timber removal would be very small.

More importantly, a series of standards have been provided in the Forest Plan and the Grizzly Bear Conservation Strategy to ensure that management activities do not degrade grizzly bear habitat quality or present mortality risks so that potential population recovery is compromised. Those standards have been met for this project. They include the restriction that open motorized access cannot be increased. Motorized access is a known catalyst for increasing human use. Again, the project configuration meets that standard.

22-y. What specific amount of displacement, and for how long, constitutes a "nonsignificant" impact on grizzly bears?

Response: The response of bears to human activities is highly variable and depends upon many factors including, in part: the annual, seasonal, and diurnal timing of the project; the duration, spatial scope, and intensity of the activity; the density of the bear

population; the population cohort involved; the history of the individual bears; the behavior of the people involved; and the amount and type of cover available. Definitively determining the respective influence of these factors or the synergism among them is not realistic.

In this circumstance, displacement would be expected to be comparatively minimal given that this project is limited to summers for several years (temporally limited), involves 195 acres (spatially limited) would not be conducted in an area with high bear densities, and would occur in an area with abundant cover.

Because of the vagaries with these types of qualitative assessments, standardized prescriptions for assessing habitat impacts are used. These are provided in the Forest Plan and the Grizzly Bear Conservation Strategy. This project meets the required standards. Please see Appendix C for a description of the standards and associated project analysis.

22-z. The EA notes that 2.7 grizzly bears will be displaced from this landscape during the project. This seems to be a conflict with management direction for situation 1 habitat, as well as MA 13 habitat.

Response: The numeric of 2.7 is a rough estimate of the number of grizzlies that might inhabit the Bear Creek drainage. It was offered to provide a perspective on the number bears that might be affected by the project. Mostly, it was used to demonstrate that a relatively small number are potentially involved. There was no inference intended that this or any other number of animals would be inevitably displaced from the immediate area, drainage, or landscape.

22-aa. There was no analysis in your EA regarding the cumulative displacement impacts of grizzly bears from other ongoing and planned activities, such as timber sales.

Response: The cumulative effects of human activities on grizzly bears are discussed on pages 3-11 and C34-C35. The section on grizzly bear population viability (C23-C28) is also useful in understanding the relationship between the Yellowstone grizzly and its environment because it describes the current and projected grizzly bear population status. Population status and trend are indicators of habitat quality. The Yellowstone grizzly bear exists in an environment that is the cumulative expression of various influences, including human activities. All indicators suggest that the Yellowstone grizzly is expanding in numbers and distribution.

In addition, in responding to the findings in the Biological Assessment, the USFWS considers the affects of past, present, and reasonably foreseeable future state and private federal activities and past and ongoing federal activities on grizzly bears at a landscape level. That is, they respond to the analysis and discussion in the Biological Assessment for federally listed species in light of the cumulative effects of human activities on the recovery potential of the Yellowstone grizzly bear. This provides a comprehensive context for the project effects.

22-cc. Although the EA provided a display of the impacts of roads and motorized routes on grizzly bears in Appendix C, the actual impact of these levels were never addressed.

Response: Densities of motorized access are used to assess grizzly bear habitat quality. To hold the line on habitat condition, applicable standards disallow an increase in motorized access. This standard is apropos in an environment where grizzly numbers and distribution are increasing. Therefore, a quantification of road densities is the appropriate and required analytical tool. As mentioned, this was reported in Appendix C.

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22-dd. Please discuss the open motorized route densities displayed in Appendix C as to what they are in MA 13 lands, and how this affects management of grizzly bears on these acres.

Response: Please refer to responses to Comments 1-a and 22-cc

23-c. Cutting the last of the remaining old growth between wilderness boundary and Yellowstone Park will remove critical wildlife corridors.

Response: Please refer to responses to Comments 4-d and 17-e

24-b. This would also affect wildlife in the area: Grizzly bears, lynx, cougar and moose.

Response: Please refer to responses to Comments 2-f, 5-a, 8-a, 8-b

25-c, 27-c, 35-c, 43-c, 45-c, 46-c, 49-c, 50-c, 52-c, 55-c, 56-c. 58-c, 59-c, 60-c, 61-c. Most of the whitebark pine (grizzly bear food) in the Yellowstone ecosystem is rapidly disappearing. We don't need to hasten its demise through the Darroch-Eagle Creek Timber Sale

Response: Please refer to response to Comment 5-b

26-a. The proposed sale will encroach on the habitat of grizzly bear, wolves, elk and moose.

Response: Please refer to responses to Comments 2-f, 8-b, 18-b, and 13-a

28-c. There are areas proposed for cutting which include stands of White-Bark Pine, a crucial source of food for grizzly bears. This food source for grizzly bears is important to the biodiversity of the area and will take decades to come back.

Response: Please refer to response to Comment 5-b

33-d. There are cutting units at high elevations which include stands of White Bark Pine- a crucial food source for grizzly bears.

Response: Please refer to response to Comment 5-b

41-a. I am very disturbed to here of the renewed proposal to cut 195 acres of Situation 1 Grizzly habitat on two areas above Bear Creek.

Response: Please refer to responses to Comments 1-a, 2-f, and 18-d

42-b. The cutting of the last of the old growth trees in this area could displace these threatened animals and send them into the nearby sheep grazing allotments where they could be killed for praying on these sheep.

Response: Please refer to response to Comment 6-a

42-c. The moose, whose numbers are in decline in the area, would also be displaced by this timber cut not to mention the elk, deer, and black bear that are also found in the proposed cut area.

Response: Please refer to responses to Comments 8-a and 8-b

51-a. The whitebark pines are a vital food source. We do not need to take this food source from the bears.

Response: Please refer to response to Comment 5-b

51-b. The forest cover and food source make this a prime area for Lynx habitat. A completed thorough study of this situation has not been made.

Response: Please refer to response to Comment 6-b