United States Department of Agriculture **Forest Service** **Region One** **200 East Broadway P.O. Box 7669 Missoula, MT 59807**

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Subject: 215 - ARO Letter - Main Boulder Fuels Reduction Project ROD - Gallatin NF - Appeal #05-01-00-0052 - Alliance for the Wild Rockies, et al.

To: Appeal Deciding Officer

This is my recommendation on disposition of the appeal filed by Michael Garrity, on behalf of Alliance for the Wild Rockies and The Ecology Center, Inc., protesting the Main Boulder Fuels Reduction Project Record of Decision (ROD) on the Gallatin National Forest.

The Forest Supervisor's decision authorizes the following activities in the Main Boulder Fuels Reduction project area:

- Proposed fuel reduction treatments would occur on approximately 2,500 acres in 51 separate units. Stand density reduction, utilizing ground-based harvest equipment, would occur on approximately 1,060 acres on slopes up to 35 percent. Approximately 1,040 acres on slopes greater than 35 percent and/or areas not operable by conventional ground-based equipment would be treated with other methods.
- A minimum of 15 to 20 percent of the planned acreage for each unit will be left untreated to provide diversity across the landscape and maintain undisturbed habitat.
- Conifers would be slashed and prescribed burning activities would occur on approximately 400 acres of meadow type habitats.
- In addition to reducing surface fuel loading by commercial thinning and salvaging large diameter trees, small-diameter fuel reduction will occur in each unit. Understory burning and/or pile burning would occur in conjunction with the thinning activities.
- Aspen clones would have conifers removed within a radius of 100 feet in order to encourage aspen regeneration.
- A maximum of 7.4 miles of temporary road may be constructed to access the areas proposed for mechanical fuels treatment using conventional ground-based logging systems. No new permanent road construction will occur.
- Implement all of the design criteria common to all action alternatives and project-specific mitigation actions detailed in the Final Environmental Impact Statement (FEIS) in Chapter 2-31 through Chapter 2-41. Implement Appendix C- Best Management Practices from the FEIS:
- Harvests, skidding, log hauling, and mechanical slash piling will generally occur from November 1 to April 30.
- Harvest and skidding activities must be completed on a given unit within one year, unless extreme weather conditions prohibit completion.

My review was conducted pursuant to, and in accordance with, 36 CFR 215.19 to ensure the analysis and decision is in compliance with applicable laws, regulations, policy, and orders. The appeal record, including the appellants' objections and recommended changes, has been

thoroughly reviewed. Although I may not have listed each specific issue, I have considered all the issues raised in the appeal and believe they are adequately addressed below.

The appellants allege violations of the National Environmental Policy Act (NEPA), the National Forest Management Act (NFMA), the Endangered Species Act (ESA), the Administrative Procedures Act (APA), the Clean Water Act (CWA), the Range and Resource Planning Act (RPA), the Multiple-Use Sustained Yield Act (MUSYA), the Wilderness Act (WA), the Wild and Scenic Rivers Act (W&SRA), the Data Quality Act (DQA), the Trout Unlimited Settlement Agreement, the Montana water quality regulations, and the Gallatin Forest Plan. The appellants request a reversal of the ROD. An informal meeting was held but no resolution of the issues was reached.

ISSUE REVIEW

Issue 1. The FEIS failed to consider the alternative that most obviously would achieve the purpose; creating low-fuel perimeters around buildings.

Response: The purpose and need for the Main Boulder Fuels Reduction Project (MBFRP) clearly states the objectives of the project, which are not defined by limiting treatments that create low-fuel perimeters around buildings (revised ROD, p. 3, III. Purpose and Need). Alternative H was developed to respond to this issue but was dropped from detailed analysis because it does not meet the purpose and need for the project (revised ROD, p. 36).

Issue 2. Alternative H would have been limited to protecting public structures; therefore, we believe the Main Boulder Project was trying to mislead the public into believing that Alternative B was better in violation of NEPA, NFMA and the APA.

Response: See Response to Issue 1.

Issue 3. The FEIS and ROD do not anywhere evaluate the variety of weed management tools available (the most effective being preventing the introduction or germination of weed seeds); or mention 'integrated weed management,' an effective strategy to control weeds.

Response: The FEIS describes in detail the potential effects of the proposed action on noxious weed spread (FEIS, pp. 3-32 through 3-44), and a variety of design and mitigation measures that would reduce or minimize the introduction and spread of noxious weeds are also described (FEIS, pp. 2-34 and 2-35). The Gallatin National Forest's monitoring reports from 1992 and 1997 have indicated that mitigation measures have proven effect on the Forest and throughout the Region as a precautionary measure to reduce or minimize the spread of noxious weed species (FEIS, p. 2-35). Integrated weed management is described in the Gallatin National Forest Noxious Weeds Final EIS, Chapter 1, pages 6-12 (PF, Vol. 3, Doc. 289b).

Issue 4. A single decision would minimize the threat of weeds; minimizing the areas you work in by choosing an Alternative such as H (fire-safe perimeters around buildings). This impact was not analyzed in violation of NEPA, NFMA, and the APA.

Response: As discussed in the Response to Issue 1, Alternative H does not meet the purpose and need for the project. See also Response to Issue 3.

Issue 5. The Main Boulder Project allows logging up to 15 feet of the river (FEIS, p. 2-32). This violates the Trout Unlimited Settlement Agreement.

Response: The Trout Unlimited Settlement Agreement does not specifically prohibit vegetation manipulation within riparian areas. The project is not scheduled harvest to meet timber objectives; it is a thinning prescription to meet fuels reduction objectives. The Agreement (ROD, p. 21; PF, Vol. 3, Doc. 360) states, "The Gallatin National Forest agrees that vegetation manipulation within riparian areas will occur only for the purpose of meeting riparian-dependent resource objectives such as watershed, wildlife, or fisheries." Timber harvest activities designed to meet timber management objectives will not be scheduled in riparian areas." The Agreement goes on to define riparian areas as "…the land and vegetation for approximately 100 feet from the edges of perennial streams, and intermittent streams of sufficient size, to include a distinct riparian vegetation community and rock substrate stream channel."

Issue 6. Logging for fuel management violates the Forest Plan and the agreement with Trout Unlimited.

Response: Harvest of trees is one tool used to treat fuels, and the proposed project is consistent with all provisions of the Gallatin National Forest Plan (ROD, pp. 25-30 and 36-41; FEIS, pp. 3-5 thru 3-23). Also see Response to Issue 5.

Issue 7. Despite this identified possible permanent degradation of a wilderness river, loss of river quality was not shown in the FEIS to be recoverable.

Response: The Main Boulder River does not pass through designated wilderness in the vicinity of proposed treatments, nor is designated wilderness located further downstream (revised ROD, pp. 7-14, Maps 2-1 thru 2-8; FEIS, Chapter 2, pp. 23-30, Maps 2-1 thru 2-8).

Issue 8. Back on land, ongoing loss of native forbs due to the perpetual use of forb-killing herbicides seems an obvious permanent impact, which could spread into wilderness if that's where weeds spread. See Responses to Issues 10, 12, and 48.

Response: The use of herbicides is only one tool for the control of the spread of noxious weeds (PF, Vol. 3, Doc. 289b, pp. 7-12). The risk of spread of identified noxious weeds with the MFBPA was evaluated and discussed in the FEIS (pp. 3-32 thru 3-37). Design criteria and mitigation measures to eliminate or reduce the spread of noxious weeds were identified (FEIS, pp. 2-34 thru 2-35) as well as site-specific unit specific mitigation measures (FEIS, pp. B-3 and B-4).

Issue 9. Second, because of random mutations causing adaptation, you are acknowledging that eventually all weeds would become resistant to currently used eradication tools. At a minimum, over time this will cause weed impacts and their management impacts to become an ever-increasing problem.

Response: This issue of random mutation of noxious weeds and their resistance to control methods is subject to speculation regarding how and under what time frame this may occur. As such, this issue is outside the scope of this analysis. Also see Response to Issue 8.

Issue 10. Therefore, the ROD and FEIS violates the Gallatin Forest Plan Amendment 12, which states the Main Boulder River will be managed to protect its outstanding remarkable values for future consideration and potential classification for inclusion into the Wild and Scenic River System (FEIS, p. E-43).

Response: Design criteria and mitigations specific to the proposed action with regard to Scenery and Wild and Scenic River System eligibility of the Boulder River were addressed in the FEIS (pp. 2-37 thru 2-39). The ROD also states that following this, design criteria and mitigation measures will ensure that Wild and Scenic values will be protected as per Forest Plan Amendment No. 12, with the implementation of the selected alternative (ROD, p. 41).

Issue 11. If weeds are indeed a perpetual problem, so will be the problems that they and their management cause. This violates the Wilderness Act (maintaining perpetual wilderness character), the Clean Water Act, and Montana water quality regulations; yet has proposed to do nothing to remove the cause of weeds. The FEIS failed to evaluate the legality and the consequences of these two postulated permanent losses of natural resources (native plants and river quality) in violation of NFMA, NEPA, the RPA, MUSY, and the APA.

Response: See Response to Issues 3 and 8. The MBFRP is also consistent with all applicable laws, regulations, the Gallatin National Forest Plan, and Forest Service policy and direction (ROD, pp. 25-30 and 36-41; FEIS, pp. 3-5 thru 3-23).

Issue 12. The Main Boulder Project is violating the Gallatin Forest Plan Amendment 12 in that it allows visual evidence of logging within a quarter mile of the Boulder River, which is prohibited in areas classified as a scenic river.

Response: See Response to Issue 10.

Issue 13. The Wild and Scenic River Act does not give an exemption to allow evidence of logging to be seen during the project.

Response: See Response to Issue 10.

Issue 14. Contrary to the Forest Service assertion that there are no grizzly bear cubs using the project area, information provided by the Yellowstone Interagency Grizzly Bear Study Team to Native Ecosystem Council shows two different female/cub groups are using the area.

Response: It was acknowledged in the FEIS (p. 3-66) that grizzlies are well established and known to inhabit the wilderness portion of the planning area and that grizzly bears are also rarely to occasionally known to occur in the non-wilderness portion of the area surrounding the Main Boulder River, but are not known to be consistently present in this narrow canyon bottom.

Effects to grizzly bear hiding cover, foraging habitat, and motorized route densities were fully analyzed (FEIS, pp. 3-66 thru 3-70). Specific mitigation regarding grizzly bears is described in the FEIS (p. 2-35 thru 2-36; Appendix B-2 thru B-4). The conclusion in the Biological Assessment (BA) was that the proposed action is not likely to adversely affect the grizzly bear (ROD, p. 37; PF, Vol. 3, Doc. 293B, pp. 7-14). The U. S. Fish and Wildlife Service concurred with the findings in the BA (ROD, p. 37; PF, Vol. 3, Doc. 292).

Issue 15. The Boulder River project EIS makes several fundamental errors in its assumption the project will have no significant affect on grizzly bears. The analysis is sparse or nonexistent and is based upon a 14-year-old internal Forest Service memo.

Response: See Response to Issue 14.

Issue 16. On page E-65 of the FEIS in Response to Comments 10-71, the FEIS states, "There are no known or expected resident grizzly bears." This error violates NEPA.

Response: See Response to Issue 14.

Issue 17. The Main Boulder project will have 7.4 miles of new, "temporary" roads built in grizzly bear habitat. The scientific data from the Yellowstone Ecosystem (Mattson, et al., 1987) shows that most grizzly bears avoid roads up to 0.32 miles (500 m) during spring and summer, and up to 1.9 miles (3 km) during fall. Other studies have shown grizzly bear avoidance of roads up to 0.6 miles (914 m) (Kasworm and Manley).

Response: The effects of roads to grizzly bears and grizzly bear habitat were fully analyzed in the BA (PF, Vol. 3, Doc. 293B, pp. 11-13) and discussed in the FEIS (pp. 3-69 and 3-70). The U. S. Fish and Wildlife Service concurred with the not likely to adversely affect determination reached in the BA (PF, Vol. 3, Doc. 292).

Issue 18. The impacts of roads within the project area are seriously underestimated in the DEIS.

Response: See Response to Issue 17.

Issue 19. Thus, noise from logging operations will travel far up and down the drainage, displacing grizzly bears from a large area of habitat. Even if grizzly bears displace from one area to another, the next year that area will have new activity and they'll be displaced again and again.

Response: See Response to Issue 14.

Issue 20. Moreover, the EIS shows the logging units are within the Recovery Zone boundary and directly adjacent to the Absaroka-Beartooth Wilderness Area and North Absaroka Roadless Area, and over 90 percent of the project area is within these protected areas. Thus, the impact of roads and reduction in cover will extend into the Wilderness and Recovery Zone, reducing habitat effectiveness and grizzly bear use.

Response: Effects to grizzly bear hiding cover, foraging habitat and motorized route densities were fully analyzed (FEIS, pp. 3-66 thru 3-70). Specific mitigation regarding grizzly bears is described in the FEIS (pp. 2-35 thru 2-36; Appendix B-2 thru B-4). The conclusion in the BA was that the proposed action is not likely to adversely affect the grizzly bear (ROD, p. 37; PF, Vol. 3, Doc. 293B, pp. 7-14). The U. S. Fish and Wildlife Service concurred with the findings in the BA (ROD, p. 37; PF, Vol. 3, Doc. 292).

Issue 21. Due to their large home ranges, grizzly bears within the Recovery Zone will most certainly be negatively impacted by the proposed action, in violation of the Endangered Species Act, the APA and NFMA.

Response: Effects to grizzly bear hiding cover, foraging habitat and motorized route densities were fully analyzed (FEIS, pp. 3-66 thru 3-70). Specific mitigation regarding grizzly bears is described in the FEIS (p. 2-35 thru 2-36; Appendix B-2 thru B-4). The conclusion in the BA was that the proposed action is not likely to adversely affect the grizzly bear (ROD, p. 37; PF, Vol. 3, Doc. 293B, pp. 7-14). The U. S. Fish and Wildlife Service concurred with the findings in the BA (ROD, p. 37; PF, Vol. 3, Doc. 292).

Issue 22. The Main Boulder project relies on a 14-year-old internal memo for direction on cover standards, concluding 30-50 percent reductions in cover won't have any impacts. Both NEPA and the ESA require use of the "best available scientific information."

Response: Effects to grizzly bear hiding cover was fully analyzed (FEIS, pp. 3-66 thru 3-70). Specific mitigation regarding grizzly bears is described in the FEIS (pp. 2-35 thru 2-36; Appendix B-2 thru B-4). The conclusion in the BA was that the proposed action is not likely to adversely affect the grizzly bear (ROD, p. 37; PF, Vol. 3, Doc. 293B, pp. 7-14). The U. S. Fish and Wildlife Service concurred with the findings in the BA (ROD, p. 37; PF, Vol. 3, Doc. 292).

Issue 23. The EIS admits the primary purpose of the project is to provide timber products, not to recover the grizzly bear. The project would allow violation of distance to cover Forest Plan standards, which would persist for many years due to poor regeneration at these sub-alpine and alpine habitats. This violates the Forest Plan.

Response: The purpose and need for the proposed action clearly states the objectives of the project, and does not include a goal or objective to provide timber products (ROD, p. 3; FEIS, p. 1-13). Proposed treatment units have been designed to retain between 30-50 percent cover affecting less than 5 percent of available hiding cover in the analysis area (PF, Vol. 3, Doc. 293B, pp. 8-9). After review of the FEIS, the Forest Supervisor determined that the proposed alternative is consistent with the goals, objectives, and standards of the Gallatin National Forest Plan (ROD, p. 25).

Issue 24. The cumulative effects of the impacts to grizzly bears and their habitat as shown above, covering several thousands of acres, indicates that the effects of the project on grizzly bears would certainly be much higher than what the Forest Service concludes in the DEIS.

Response: Effects to grizzly bear hiding cover was fully analyzed (FEIS, pp. 3-66 thru 3-70). Specific mitigation regarding grizzly bears is described in the FEIS (pp. 2-35 thru 2-36; Appendix B-2 thru B-4). The conclusion in the BA was that the proposed action is not likely to adversely affect the grizzly bear (ROD, p. 37; PF, Vol. 3, Doc. 293B, pp. 7-14). The U. S. Fish and Wildlife Service concurred with the findings in the BA (ROD, p. 37; PF, Vol. 3, Doc. 292).

Issue 25. Moreover, the project area has already suffered significant impacts to grizzly bear habitat and has a history of grizzly bear mortalities. This project will add to this degradation and reduce the quality of the area for grizzly bears. Therefore, formal consultation with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act must be initiated by the Forest Service.

Response: The conclusion in the BA for the proposed action was "not likely to adversely affect" which does not require formal consultation with the U.S. Fish and Wildlife Service. The U. S. Fish and Wildlife Service concurred with the findings in the BA (ROD, p. 37; PF, Vol. 3, Doc. 292).

Issue 26. FEIS, p. 2-35 states that big game hiding cover standards will be met by leaving clumps of trees 30-50 feet in diameter. The standard is 600 feet to be effective. The entire project will have no effective elk cover if the logging is allowed to go forward.

Response: It was concluded in the FEIS (p. 3-92) that fuel reduction treatments would not affect elk security cover and that mitigations for retention of patches would provide ample security cover for elk (FEIS, p. 3-92). See big game cover definitions (Amendment 14). Mitigation is identified in the FEIS (p. 2-35) to provide for big game cover as described in the Gallatin National Forest Plan per Amendment 14 (FEIS, p. 2-35).

Issue 27. The FEIS, FSEIS, and ROD failed to address the effects of logging and roading the uninventoried roadless areas on their characteristics vis-a-vis potential for future wilderness or inventories roadless area designation.

Response: A discussion of the unroaded and inventoried roadless areas characteristics in relation to future wilderness or inventoried road designation is provided in the ROD (p. 26) and FSEIS (Appendix B, pp. 5 and 6).

Issue 28. This misleading information that the Main Boulder Project will make money violates the National Environmental Protection Act, the NFMA, the RPA, and the APA.

Response: The analysis presented in the FEIS (Appendix A, pp. A-22 thru A-25) is an accepted method for displaying costs and benefits of the proposed action. NFMA doesn't state any specific method for economic analysis.

Issue 29. Based on these calculations, the Gallatin National Forest would have lost nearly $3,862,500 on the Main Boulder Timber Sale. We suggest the Forest Service should cut its losses and withdraw the project now. Losing money doesn't pay for anything.

Response: I do not concur with you opinion. The Forest Service is mandated by its role as a steward of public resources to consider opportunities for fuels reduction as a means of improving public safety (FEIS, Appendix E, Comment 10-12, p. E-7).

Issue 30. 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]. This was not done.

Response: The Deciding Official is responsible for determining the appropriate level of social and economic analysis for the Main Boulder Fuels Reduction EIS (FSM 1970). FSM 1904.1 states that Line Officers are responsible for managing and controlling any planning process which leads to decisions for which they are responsible (FEIS, Appendix E, Comment 10-77, pp. E-7 and E-8).

Issue 31. The Forest Service also failed to consider the cumulative effects of the ongoing timber sales in grizzly habitat over the last 30 plus years, and the potential for future timber extraction. The timber programs on the Gallatin have resulted in continual and ever-expanding habitat fragmentation and escalating road densities that have resulted in permanent loss of large areas of secure high value seasonal habitat for grizzly bears and other wildlife. The cumulative effects, do not include the positive economic impact on hunting and fishing which would result from fewer roads and less logging.

Response: Approximately 209 acres within the Main Boulder River Corridor have been harvested since 1982. Timber harvest activity since 1982 is displayed in Table 3-1 of the FEIS (p. 3-3). This information has contributed to the existing condition as portrayed in Alternative A (FEIS, p. 3-2). The BA analyzed past road and trail development, which is reflected in the current open motorized access route density figures. Forest Plan standards for grizzly bears regarding habitat effectiveness, core area, open route density and total route density are met in all timber compartments, except number 118 (PF, Vol. 3, Doc. 292). The BA (PF, Vol. 3, Doc. 293B, pp. 8-16) fully analyzed the effects of the proposed project to grizzly bears and concluded that the project may affect, but is not likely to adversely affect the grizzly bear or its habitat. The U. S. Fish and Wildlife Service concurred with this determination (PF, Vol. 3, Doc. 292).

Issue 32. The ROD and the FEIS do not satisfy the monitoring requirements of the Forest Plan or NFMA.

Response: The ROD (p. 18) incorporates monitoring activities identified for the proposed action in the FEIS (pp. 2-41 thru 2-43). The Gallatin National Forest monitoring requirements outline specific items to be monitored (PF, Vol. 5, Doc. 476A, pp. IV-3 thru IV-7).

Issue 33. The Main Boulder project is therefore in violation of 36 C.F.R. § 219.27(a)(7) which requires the Forest Service prior to project implementation to access for potential physical, biological, aesthetic, cultural, engineering, economic impacts, and for consistency with multiple uses planned for the general area, and 36 CFR 219.12(3) which requires documentation of costs

associated with carrying out the planned management prescriptions as compared with costs estimated in the Forest Plan.

Response: See Response to Issue 30.

Issue 34. The Gallatin Forest Plan Standard 6.c(2) requires the Forest Service to maintain at least 10 percent of each timber compartment containing suitable timber in old growth condition. Forest Plan Standard 6.a(13) states: "'Indicator species,' which have been identified as species groups whose habitat is most likely to be affected by Forest management activities, will be monitored to determine population change." The Forest Plan requires the Forest Service to monitor old growth indicator species (MIS) by determining population trends of old growth MIS and their relationships to habitat change, reporting every 5 years. The Forest Plan identifies old growth indicator species as: pine marten (moist spruce sites) and northern goshawk (dry Douglas-fir sites). On page E-62 of the FEIS in Response to Comment 10-42 states, "Based on the best available science, the Gallatin NF does not have any old-growth wildlife species."

The Main Boulder project clearly violates the Forest Plan and NFMA.

Response: The FEIS displays the amount of old growth by timber compartment, which shows that each compartment exceeds the Forest Plan standard. The pine marten and northern goshawk are identified as old growth MIS; however, the pine marten and goshawk do not exclusively use old growth, and this is acknowledged in the FEIS (pp. 3-88 and E-62, Comment 10-42) and FSEIS (Section III, p.1).

Issue 35. Forest Plan Standard 6.a(12) states: Habitat that is essential for species identified in the Sensitive Species list developed for the Northern Region will be managed to maintain these species. These Forest Plan Standards thus describe the Gallatin National Forest's way of maintaining viable populations of sensitive and old growth-dependent wildlife species, as NFMA requires. Unfortunately, the Gallatin National Forest has failed to adhere to these standards, and therefore viability is not assured.

Response: The analysis conducted for sensitive species concluded that the selected alternative will not lead to a downward trend toward listing for any of the species which may be potentially affected by this project (FEIS, pp. 3-77 thru 3-88). The *Viability Assessment for Species of Special Concern on the Gallatin National Forest* concluded that population viability does not appear to be a concern for any of theses species found on the Forest (FEIS, Appendix D-14). Furthermore, after a thorough review, the Forest Supervisor concluded that the proposed action is consistent with all of the pertinent goals, objectives, and standards of the Forest Plan (ROD, p. 25).

Issue 36. The Gallatin National Forest has indicated that there is no Forest-wide old growth inventory. This is because old growth allocations are only completed on a project-by-project basis, for example, when an area is being analyzed and prepared for a timber sale. Only 40 of a total of 139 compartments Forest-wide have had their structural stages analyzed. The available information is not adequate to determine if sufficient, well-distributed old growth habitat exists on the Gallatin National Forest. Although the Forest Service claims that there is more than

enough old growth to meet the 10 percent distribution standard, the Forest Service lacks sufficient information on the Forest-wide old growth situation to justify logging old growth.

Response: The Forest Plan standard of 10 percent old growth is determined by analysis of the size and age diversity of vegetation by timber compartment, not Forest-wide (FEIS, Appendix A, p. A-17). All timber compartments within the MBFRPA meet or exceed the Forest Plan standard of 10 percent with a range of from 13 to 50 percent within the 14 compartments (FEIS, Appendix A, p. A-18).

Issue 37. In response to our first appeal of the Main Boulder Project, more goshawk surveys were completed according to the FSEIS. But these were substandard surveys.

Response: The goshawk surveys conducted were not substandard surveys but were conducted according to currently accepted survey methodology for detection of goshawks (FSEIS, p. 7). Survey results for the MBFRP area are found in the Project File (Vol. 8, Doc. 520b).

Issue 38. Old growth MIS information in the reports is inadequate for determining baseline populations and population trends. Rather than performing adequate samples of old growth stands in the project area to allocate old growth to meet Forest Plan requirements and validate the EA's assumptions, the Gallatin National Forest apparently uses a database analysis to identify old growth in the project area.

Response: Percentages of old growth, as well as other vegetation structure and ages classes, was developed from compartment stand exam data. This information was ground-truthed in each proposed harvest unit. These surveys indicated that the estimates developed for the timber compartments coincided with the relative percentages of each structural and age class in proposed harvest units (FEIS, Appendix A, p. A-16).

Issue 39. The Forest Plan and Forest Plan EIS also fail to cite any scientific research that justifies the Plan's 10 percent standard. The Main Boulder Project FEIS suggests that typically, much more that 10 percent old growth has existed in this Forest. The standard itself appears to be arbitrary. Maintaining only 10 percent of the forested areas in old growth condition will likely result in significantly reduced populations of old growth wildlife species, and at those levels population viability is in doubt.

Response: The justification of the Forest Plan standard for retention of old growth (10 percent) is beyond the scope of analysis for this project. Regarding the effects on old growth species as related to the 10 percent old growth standard, see Responses to Issues 36 and 38.

Issue 40. The Forest Plan fails to provide any detailed guidance for maintaining viable populations of the listed Sensitive species. The combination of project impacts and inadequate FEIS analyses means that the Forest Service cannot assure that viable populations of Sensitive species are being maintained, as NFMA requires.

Response: See Response to Issue 35.

Issue 41. The EIS thus fails to come close to a genuine viability analysis for Sensitive and old growth indicator species, such as the pine martin, wolverine, grizzly bear, or northern goshawk. The significance of the cumulative effects of habitat fragmentation and reduction due to logging, road building, fire suppression, and other management activities in regards to their effects on population levels or viability was not disclosed.

Response: Approximately 209 acres within the Main Boulder River Corridor have been harvested since 1982. Timber harvest activity since 1982 is displayed in Table 3-1 of the FEIS (p. 3-3). This information has contributed to the existing condition as portrayed in Alternative A (FEIS, p. 3-2). The BA analyzed past road and trail development, which is reflected in the current open-motorized access route density figures. Forest Plan standards for grizzly bears regarding habitat effectiveness, core area, open route density and total route density are met in all timber compartments, except number 118 (PF, Vol. 3, Doc. 292). The analysis conducted for sensitive species concluded that the selected alternative will not lead to a downward trend toward listing for any of the species which may be potentially affected by this project (FEIS, pp. 3-77 thru 3-88). The *Viability Assessment for Species of Special Concern on the Gallatin National Forest* concluded that population viability does not appear to be a concern for any of theses species found on the Forest (FEIS, Appendix D-14). Furthermore, after a thorough review, the Forest Supervisor concluded that the proposed action is consistent with all of the pertinent goals, objectives and standards of the Forest Plan (ROD, p. 25).

Issue 42. The FEIS paints the no-action alternative as bad news for water quality in the long term because a wildfire would result in adverse effects. The FEIS fails to disclose how such effects would differ from the effects of fires in the previous thousands of years, the conditions under which the native fish and aquatic species evolved. And the ROD contradicts the FEIS in that the former admits that such a small area would be treated under the Selected Alternative that no such prophylactic effect from fuel reduction, as implied in the analysis of the no-action alternative, would occur.

Response: As discussed in the FEIS (pp. 3-24 thru 3-26) current fuel conditions in the Boulder River Corridor are different than historical conditions. Fuel loadings and arrangements are more conducive to extreme fire behavior and are likely to result in larger more intensive fires. An analysis of a hypothetical 38,400-acre wildfire in the Boulder River canyon (1/3 high intensity, 1/3 moderate intensity, 1/3 low intensity) resulted in a model estimate of 52.2 percent over natural first year sediment increases (FEIS, p. 3-45). The Purpose and Need (ROD, p. 3) for the project identified the need to reduce the intensity of a potential wildfire leaving the wilderness and entering the wildland/urban interface of the Main Boulder River Corridor. In response to environmental issues and public comments the Forest Supervisor concluded that the potential impact to public and firefighter safety in the event of a wildfire in the Main Boulder corridor was the driving issue for the implementation of the project (ROD, p. 19).

Issue 43. Forest Plan direction for protection of native fish species habitats is inadequate for insuring continued population viability in the bodies of water to be directly or indirectly affected by the proposed project. As with terrestrial wildlife, issues such as quality and quantity of habitat, specifications of viable populations, habitat connectivity, and baseline levels are not adequately considered.

Response: The analysis of Forest Plan direction for the protection of native fish species is beyond the scope of the decision for this project. Based upon the channel sensitivity analysis, the proposed action poses little threat to the physical integrity of riparian areas or streambank stability (ROD, p. 21). In addition, mitigation measures (FEIS, p. 2-32) are designed to reduce or eliminate potential adverse effects on riparian integrity or bank stability. The project is consistent with the Trout Unlimited Settlement Agreement (ROD, p. 21) that provides for maintaining the highest value streams from a fishery standpoint (Class A) at or above 90 percent of the streams potential. It is assumed that a high level of habitat protection will result in no, or negligible affect on viability (FEIS, p. 3-49.)

Issue 44. This lack of adequate Forest Plan direction leads to the situation where the FEIS's analysis of the potential cumulative impacts of sediment on fish and other aquatic features rests almost entirely on the accuracy of the R1/R4 model. Nowhere can we find in the FEIS where it discloses the amount of error in this modeling methodology. Disclosing the amount of error, or imprecision in models (which by their very nature only approximate or estimate the responses of natural systems) is standard scientific practice. The Forest Service's lack of commitment to such standard practice is one reason why the public should have little trust in the agency's professionalism.

Response: The FEIS discloses the appropriate uses of, and limitation of, the R1/R4 model (FEIS, bottom of p. 3-45 thru top of p. 3-46; FEIS, Appendix E, p. E-50).

Issue 45. Since the FEIS does not provide the public or decision maker with any kind of information on the accuracy of its percentage of the statistical analyses it uses for water quality, the sediment analysis is not scientifically valid nor reliable.

Response: The FEIS discloses the appropriate uses of, and limitation of, the R1/R4 model (FEIS, bottom of p. 3-45 thru top of p. 3-46; FEIS, Appendix E, p. E-50). The methodology for assessing potential sediment effects on spawning habitat quality and incubating fish eggs is described in the FEIS (pp. 3-53 thru 3-54, and 56).

Issue 46. Whereas the FEIS identifies habitat connectivity due to poorly designed culvert placements as fish barriers, the Forest Service has no real plan in place to remedy the situation in the project area.

Response: Barriers to fish movement (e.g., culverts) have been evaluated for the Boulder River and are being addressed via the Gallatin National Forest inventory. Opportunities to improve connectivity throughout the corridor are being addressed outside this project (FEIS, Appendix E, p. E-50).

Issue 47. The EIS shows no evidence that logging to reduce fire risk provides for improvement or a significant upward trend for fish, and thus the Main Boulder Project violates the settlement and the Gallatin Forest Plan.

Response: Fuel treatments are designed to maximize the amount of large woody debris available for recruitment to stream channels (FEIS, p. 3-55). Mitigation measures identified in the FEIS (p. 2-32) are designed to protect riparian vegetation and soil to maintain an effective sediment filter, to protect the integrity of the stream channel and its banks, and to provide recruitment of large woody debris for fish habitat, all of which are important to the long-term persistence of fish populations and their survival following catastrophic events (FEIS, pp. 2-32 and 3-56). The project is in full compliance with the Trout Unlimited Settlement Agreement (ROD, p. 21; PF, Vol. 3, Docs. 360 and 552).

Issue 48. Despite public comment during EIS preparation to do so (examples immediately below), no where is there evidence that analyzes the negative impacts of herbicide use. The FEIS failed to even state which herbicides will be used, in what amounts, or how far from the target weeds the formulation will be released--inches or hundreds of yards (not counting drift) in violation of NEPA.

Response: The Gallatin National Forest Invasive Weed Control EIS (PF, Vol. 3, Doc. 289b, pp. 4-61 thru 4-76) provides a detailed analysis of the direct, indirect and cumulative effects of the use of herbicides. This analysis also includes an extensive analysis of spray drift (PF, Vol. 3, Doc. 289b, pp. 4-72 thru 4-75). General guidelines for the use of pesticides and chemicals to treat noxious weeds are also found in the Weed Control EIS (PF, Vol. 3, Doc. 289b, pp. 3-18 thru 3-19).

Issue 49. In Response to Comments by Native Ecosystems Council and Alliance for the Wild Rockies, the long-term costs are interpreted to be only the direct costs of weed monitoring and treating. However, long-term costs include the impacts of ever-increasing human recreation on weed establishment, resistance to herbicides, and toxicity of herbicides to humans and ecosystems.

Response: Short term and long term costs associated with weed control are displayed in the FEIS (Appendix E, pp. E-6 thru E-7). Effects of the proposed action are thoroughly described in the FEIS (p. 3-36 thru 3-44). The effects of all human activities and costs associated with weed control beyond the reasonably foreseeable future are outside the scope of this analysis.

Issue 50. The FEIS and ROD are non-responsive to the EPA's request there be no herbicide use in or near aquatic areas; the response only implies that the Gallatin National Forest's Watershed Guidelines and the Forest-wide weed project (at the DEIS stage) take care of the EPA's expert opinion.

Response: The EPA reviewed the FEIS and ROD for the Main Boulder Fuel Reduction Project and stated, "We do not object to the proposed project" (PF, Vol. 2, Doc. 138).

Issue 51. As a response to allegation, the FEIS failed to analyze the impacts of weeds in Wilderness and in W&SR; the FEIS only evaluated the vulnerability, not the impacts! Page 3-32 states (Issue 2) that noxious weeds could enter wilderness.

Response: The FEIS evaluated the noxious weed risk of spread (pp. 3-36 thru 3-44). The risk

of spread to wilderness depends on the location of treatment units and the presence of noxious weeds in relation to the wilderness (FEIS, Appendix E, p. E-51).

Issue 52. In fact, (FEIS p. 3-14) stated that there can only be insignificant effects on public health from the project (including from herbicide application), despite that herbicides will be applied for the duration of the project and throughout the project's area, including on the border of many if not most of hundreds of human residences in this valley.

Response: Treatment of noxious weeds varies from between 55 and 440 acres per year (5-40 percent of the total area). See Response to Issue 48.

Issue 53. It is impossible to evaluate these impacts of this project without knowing anything about herbicide use other than that it will be extensive. For example, there is no evidence presented in the EIS of any of herbicide-impact mitigations that will work to the extent (e.g., to protect water quality).

Response: See Responses to Issues 50, 51 and 52. The FEIS discusses the effectiveness of mitigation measures (FEIS, p. 2-35).

Issue 54. In relying heavily on registration data to evaluate the safety of the use of herbicides, the FEIS relies on the most subjective and incomplete toxicology data possible; completely violating the DQA and some similar statutes.

Response: I do not agree with your assertion. Toxicology information is discussed in detail in the Gallatin National Forest Noxious Weeds EIS of 2005 (PF, Vol. III, Doc. 289b, Chapter 4, pp. 61-76).

Issue 55. The DEIS comments pointed out that the proposed fuel reduction would reduce the intensity of future fires, and by implication is good for water quality and fisheries. A recent position paper by the Western Montana Level I Bull Trout Team (appeal attachment) does not agree with this management prioritization…

Response: The Level 1 Bull Trout Team position paper was used to define the riparian/aquatic issue that was analyzed in the FEIS (PF, Vol.3, Docs. 349 and 350). This position paper is related to management prioritization, which is not directly related to the purpose and need for the project.

Issue 56. The FEIS mentions some fish population surveys, but gives vague numbers and makes no reference to NFMA-required minimum viable population numbers, and worse, leaves the impression that population distribution is inadequate. Hard population trend data is totally lacking.

Response: See Response to Issue 43 regarding viability. Based on the effects determinations there would be no effect to wild trout (MIS) and no impact to the sensitive Yellowstone cutthroat trout (SEIS, pp. 16 and 17).

Issue 57. Logging and roadbuilding will occur in Management System (MS) 1 grizzly bear habitat and Management Area 15 units in violation of the Gallatin Forest Plan and the Endangered Species Act.

Response: The project is not within MS 1 habitat. A portion of the proposed project area (approximately 1,000 acres) is within MS 2 grizzly bear habitat (FEIS, Appendix E, Comment 10-69, p. E-65). The BA (PF, Vol. 3, Doc. 293B, pp. 8-16) fully analyzed the effects of the proposed project to grizzly bears and concluded that the project may affect, but is not likely to adversely affect the grizzly bear or its habitat. The U. S. Fish and Wildlife Service concurred with this determination (PF, Vol. 3, Doc. 292). Management Area 15 management direction does not specifically preclude logging and road building (ROD, p. 29). After review of the FEIS, the Forest Supervisor determined that the proposed alternative is consistent with the goals, objectives and standards of the Gallatin National Forest Plan (ROD, p. 25).

RECOMMENDATION

I have reviewed the record for each of the contentions addressed above and have found that the analysis and decision adequately address the issues raised by the appellants. I recommend the Forest Supervisor's decision be affirmed and the appellants' requested relief be denied.

/s/ Thomas K. Reilly
THOMAS K. REILLY
Appeal Reviewing Officer