



United States  
Department of  
Agriculture

Forest  
Service

Region One

200 East Broadway  
P.O. Box 7669  
Missoula, MT 59807

---

**File Code:** 1570-1

**Date:** July 25, 2001

**Route To:** (1570 - 215)

**Subject:** ARO Letter, Knox-Brooks Timber Sale and Road Rehabilitation ROD, Appeal #01-01-00-0049, Lolo NF

**To:** Appeal Deciding Officer

This is my recommendation on disposition of the appeal filed by Jeff Juel on behalf of The Ecology Center, Inc.; Alliance for the Wild Rockies; and American Wildlands protesting the Superior Ranger District's Knox-Brooks Timber Sale and Road Rehabilitation Record of Decision (ROD) signed by the Lolo National Forest Supervisor.

The Forest Supervisor's decision adopts Alternative E, which includes timber harvest on up to 2,519 acres; reconstruction of 40.3 miles of road, primarily to reduce water quality impacts followed by stabilization and decommissioning of 1.7 of these miles; new closures to motorized vehicles on 15.4 miles of road, including stabilization and decommissioning 13.7 of these miles; stabilization and decommissioning of 37.4 miles of roads that are currently closed; construction of 2.1 miles of temporary and short-term roads followed by obliteration of these roads after use; and development of a rock source to provide gravel for the road surfacing to reduce water quality impacts.

My review was conducted pursuant to, and in accordance with, 36 CFR 215.19 to ensure the analysis and decision are 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 Clean Water Act (CWA), the Administrative Procedures Act (APA), the Multiple Use Sustained Yield Act (MUSYA), the Rangeland Renewable Resources Planning Act (RPA), the Global Climate Change Prevention Act, the Forest Service Economic and Social Analysis Handbook, the Forest Service Timber Sale Preparation Handbook, the Forest Service Manual, and the Lolo National Forest Plan. The appellants request the ROD be withdrawn or remanded. If the Lolo National Forest wishes to further carry out logging, road construction and reconstruction, and prescribed burning activities in the Knox-Brooks project area the appellants request the Forest to remedy all the alleged violations of the laws, policies, and regulations identified in their appeal. An informal meeting was held but no resolution of the issues was reached.

## ISSUE REVIEW

### **Issue 1: The project file does not contain enough hard data on the present day conditions**



**of the stands to be logged in the Knox-Brooks project area to make a reasoned conclusion that these forests are representative of a landscape that is out of any well defined “desired condition”. The Project File also contains insufficient historical data to adequately define the historical range of conditions in the project area.**

**Response:** The project file contains sufficient data and other information (PF, Vol. 2, Docs. A-1, E-9, E-10 and Vol. 4, Doc. B-4) to compare the existing condition to the desired future condition, which is based on the Forest Plan and the Forest Service Natural Resource Agenda (EIS, pp I-1 to I-4, and III-7). The EIS summarizes the data and describes the historical, existing, reference, and desired condition in the effects section (pp. III-9 to 13 and 26 to 31).

**Issue 2: The EIS is in violation of the Clean Water Act.**

**Response:** In 1998, Twelvemile Creek was identified by the state of Montana as Water Quality Limited Segment (WQLS), assigned the level of ‘Threatened’. During project analysis in 1999, the Creek’s status was revised to reflect a lack of credible data (EIS, pp. I-3 and III-43). Regardless of its listing, the Forest Service is still concerned about the water quality of Twelvemile Creek, and has designed the project to reduce stream sediment and improve channel stability (ROD, p. 5). The proposed activities to improve the condition of the Creek are still part of the project (EIS, pp. II-6 and IV-6). The Forest Service is working cooperatively with Mineral County and other agencies in development of a Total Maximum Daily Load (TMDL) and a Water Quality Improvement Plan for Twelvemile Creek, as required by Montana Department of Environmental Quality and Environmental Protection Agency (EPA) (EIS, p. III-195). In the meantime, the Forest is following the process for working in a WQLS that does not have an established TMDL (PF, Vol. 1, Doc. A-10). The EPA supports the selected alternative and recognizes the project will increase sediment in the short term but will reduce sediment more than no action will in the long term (PF, Vol. 3, Doc. I-23). The EIS is in full compliance with the Clean Water Act.

**Issue 3: The WATSED model is not scientifically credible; it underestimates the amount of sediment produced.**

**Response:** Comparison of WATSED numbers and monitoring data (EIS, pp. III-45 to 48) indicates in the Twelvemile Creek area that WATSED actually over-estimates the sediment produced by road construction and timber harvest (EIS, p. III-47). As explained in the EIS (p. III-45, and Appendix F, pp. 9 through 11), WATSED is only used by the Forest to compare alternatives. The WATSED model greatly simplifies very complex physical systems using a limited database. The results should be treated as a broad estimate of how a real system may operate (EIS, Appendix F, p. 9). The Forest is using WATSED in an appropriate manner.

**Issue 4: The range of alternatives is too narrow to meet NEPA requirements; the EIS did not consider an alternative that would obliterate the main Twelvemile Road #352.**

**Response:** The Forest Supervisor pointed out in his letter of May 1, 1998, (PF, Post-ROD Vol., Doc. 6) Forest Plan Standard 52 states “Generally, arterial and major collector roads will be left open...” The Forest Supervisor understands it is valuable for ID Teams to consider all roads on

a landscape scale while discussing which to close and which to leave open. However, in light of the Forest Plan standard and the uncertainties of the national roads debate, in NEPA documents he wants teams to move forward with only viable alternatives and document those other alternatives considered by the team but not given detailed study. This is what the ID team has done (EIS, pp. II-6 to 15 and II-30 to 31; PF, Vol. 1, Doc. A-11). The five alternatives considered in detail and the four alternatives dropped from further analysis cover the range necessary to meet NEPA requirements.

**Issue 5: The analyses for Rock and Twin Creeks were omitted, in violation of NEPA.**

**Response:** Rock Creek is part of the Twelvemile Creek watershed, and was included in the analysis (ROD, p. 2). The watershed analysis map indicating the watershed analysis boundaries is displayed in the EIS (p. I-8).

Watershed and fisheries did analyze Twin Creek (PF, Vol. 2, Doc. F-2, page 1). The few harvest units in the watershed, combined with their location high on the slope added up to a sediment contribution of zero. With no effect to Twin Creek, the team focused on the watershed where impacts would be a concern, Twelvemile Creek. The old growth, openings, and soil productivity section also included Twin Creek in the analysis (EIS, pp. III-70 to 81). The analyses for Rock and Twin Creeks are in compliance with NEPA.

**Issue 6: The USDI Fish and Wildlife Service Biological Opinion is inadequate.**

**Response:** The USDI Fish and Wildlife Service Biological Opinions are not appealable under 36 CFR 215 and are beyond the scope of this appeal review.

**Issue 7: The EIS's analysis of the impacts of water yield increases is inadequate.**

**Response:** The watershed and fisheries report (PF, Vol. 2, Doc. F-2, p. 3) determined the past detrimental impacts to Twelvemile Creek were from sedimentation, and less a result of water yield increases. Montana's identification of Twelvemile Creek as water quality limited segment is based on siltation (ROD, p. 22; EIS, p. III-43). A water yield analysis done in 1977, after the last major timber harvests in the watershed, estimated water yields would increase 3 to 6 percent, depending on the location of the measurement. Measured water yields have been between one-half and two-thirds of that estimated increase (EIS, p. III-44). Since sediment is the major concern in this watershed, the ID team chose to focus their attention on it instead of the secondary factor of water yield.

**Issue 8: The EIS fails to disclose an accurate accounting of the cumulative effects of ongoing and foreseeable activities in the Twelvemile Creek area.**

**Response:** The ID team developed a set of possible future timber harvests, roading, burning, and thinning activities for the analysis area (EIS, p. III-14), including Montana's timber sale program and the Forest Service's Mullanium and Dromedary sales. Each of the members considered the listed activities as they determined the cumulative effects for their resource. For example, watershed analysis used WATSED to estimate the cumulative effects of past activities

(EIS, pp. III-49 to 50), then used WATSED to estimate the sediment effects of each of the action alternatives (EIS, pp. III-50 to 54) and then used WATSED to model the cumulative effects of the reasonable foreseeable activities. In a similar way each resource area considered the past, present, and foreseeable future activities to estimate the cumulative impacts on the Twelvemile Creek area.

**Issue 9: The EIS over-relies on Best Management Practices (BMPs) to mitigate watershed damage.**

**Response:** The ID team relies on BMPs to prevent erosion because the Forest finds that they work. Forest Plan monitoring for the last 6 years has shown no departures in soil productivity standards (Lolo National Forest Plan Monitoring Reports 1994 to 1999). In addition to Forest Plan monitoring, the Lolo National Forest also participates in the annual Forestry Best Management Practices Monitoring conducted by the Service Forestry Bureau, Forestry Division of the Montana Department of Natural Resources and Conservation (DNRC). The 1998 BMP audit included evaluation of both BMP and Streamside Management Zone (SMZ) application and effectiveness, and also evaluated previously audited sites to determine effectiveness over time. Findings concluded that BMPs were properly implemented 94 percent of the time and were effective in protecting soil and water resources at a 96-percent rate. Comparison of the 1998 audit with similar audits conducted previously shows an improving trend in BMP and SMZ application and effectiveness. The 1999 BMP audit results showed that across all ownerships, BMPs were effective in protecting soil and water resources 98 percent of the time.

The EIS discusses at great length BMP practices that will be applied in the project area, the objective for using each BMP, the effectiveness of each, and how the BMP will be implemented (Appendix F, pp. 1 to 43). BMPs were designed to mitigate watershed impacts. The project correctly relies on them to do just that.

**Issue 10: The EIS and Fisheries BA and BE do not comply with the Forest Plan as amended by INFISH, or the terms and conditions of the programmatic Biological Opinion.**

**Response:** The Decision incorporates the INFISH standards, and the ROD states that INFISH riparian habitat will be protected (ROD, pp. 12 and 16). INFISH buffers are part of the project's required mitigation (EIS, App. D). The Fisheries BA and BE define the Riparian Habitat Conservation Areas that will be followed during project implementation (PF, Vol. 4, Doc. E-1, pp. 12 and 13). The USDI Fish and Wildlife Service (USFWS) states in their Biological Opinion the project is in compliance with INFISH (PF, Vol. 4, Doc. E-8, p. 24). The project is in compliance with INFISH, and the terms and conditions required in the Biological Opinion are incorporated into the project implementation.

**Issue 11: There is not enough old growth and snag habitat to maintain the viability of management indicator species and the Forest has failed to monitor management indicator species in violation of the Forest Plan and NFMA.**

**Response:** Detailed information regarding old growth, snag habitat, and management indicator species was provided in the EIS (see old growth and wildlife sections of Chapter III) and project file (Vol. 2, Docs. E-1 to E-8). An old growth analysis was completed for the Twelvemile

Ecosystem Management Area (EMA) and the adjacent Twin Randolph EMA that meet the Lolo National Forest Plan old growth strategy (PF, Vol. 2, Docs. E-7 and E-3). Old growth was considered during planning, and the impact to old growth in the project area is displayed in the EIS (pp. III-70 to 81). Only 33 acres of old growth will be treated in the selected alternative (EIS, p. III-81). The treatment will retain the overstory trees, and only remove the younger lodgepole pine understory to reduce the risk of stand-replacing fire (EIS, p. IV-43).

Within the project area, the likely goshawk habitat was identified using the habitat model in Hayward, Holland, and Escano (1990); aerial photo interpretation; old growth information; and GIS mapping. The three areas with suitable habitat in the project area are in old growth areas where no activities are planned (EIS, p. III-144). These areas were surveyed in late May and early June 1999. No goshawks were found. The wildlife biologist determined the project would not impact goshawks (EIS, p. III-144).

Stand exams supply some information about snags and live cull trees that have potential as nesting habitat. The stand exams found about three snags per acre, which is below the desired eight snags per acre. The exam found around 23 cull trees per acre. This shows there are a good number of potential recruitment trees (EIS, p. III-149). The wildlife biologist concluded Alternative E would have no impact on pileated woodpeckers because the potential snag loss from even-aged harvesting of 376 acres will be offset by the potential gain of snags from burning 323 acres (EIS, p. III-64). Over all, the number of snags in the project acre will remain relatively constant.

The Forest-wide amount and status of old growth, and monitoring of old growth-dependent species at the Forest level is outside the scope of this project. However, habitat for pileated woodpeckers and goshawks are assessed at the project scale and were assessed for the Knox-Brooks project, as noted above. The Forest is in compliance with the Forest Plan and NFMA concerning old growth, snags, and management indicator species.

**Issue 12: The failure of the EIS to adequately analyze project impact on Canada lynx violates the Forest Plan, as amended by the Lynx Conservation Assessment and Strategy (LCAS), NFMA, NEPA, and Endangered Species Act (ESA).**

**Response:** The wildlife biologist analyzed the impacts to Canada lynx. This analysis can be found in the project file (Vol. 4, Doc. A-1) and the EIS (pp. III-140 to 142 and 168 to 169). The wildlife biologist determined Alternative E “may effect, not likely to adversely affect” lynx (PF, Vol. 4, Doc. A-1, p. 52). The USFWS concurred with this determination (PF, Vol. 4, Doc. A-2). The Lolo National Forest used the most recent and best available science, found in the LCAS, in their analysis of impacts to Canada lynx. The analysis is in compliance with the Lolo Forest Plan, the LCAS, NFMA, NEPA, and ESA.

**Issue 13: The analysis of project impacts on wildlife is inadequate to substantiate population viability of listed species, in violation of NFMA, NEPA, and the Forest Plan.**

**Response:** The wildlife biologist analyzed the impacts the Knox-Brooks project would have on threatened, endangered, sensitive, and management indicator species (PF, Vol. 4, Doc. A-1).

She followed the analysis process outlined in the Forest Service Manual at 2672.43. She determined there would be “No Impact” to any of the sensitive species. With no impact to a species the project would not change the viability of that species.

She determined the project would have “No Effect” on bald eagle, gray wolf, and grizzly bear. With no effect to those species the project would not change the viability of those species. The wildlife biologist also determined the project “may effect, not likely to adversely affect” Canada lynx. This determination was made because the project will impact about 1 percent of the lynx foraging habitat. The project will take poor quality foraging habitat and make it unsuitable habitat for about 10 years. After 10 years these areas will then become good quality lynx foraging habitat. Overall, this would provide some improvement in lynx habitat (EIS, pp. III-168 to 169; PF, Vol. 4, Doc. A-1, pp. 15 to 17, 40, 52, and 53). This improvement in lynx habitat will not change the viability of the species. The USFWS concurred, “the proposed project is not likely to adversely affect the threatened lynx” (PF, Vol. 4, Doc. A-2). The wildlife analysis is in compliance with NFMA, NEPA, and the Forest Plan.

**Issue 14: The EIS fails to adequately analyze the project impact on biological corridors, and analyze the issue of fragmentation, in violation of NEPA, NFMA, and ESA.**

**Response:** The EIS did adequately analyze the impact on corridors and fragmentation (EIS, pp. III-150 to 153, 173 to 174, and Figures III-6 to III-6f; PF, Vol. 4, Doc. A-1, pp. 26 to 28 and 50 to 51). After considering fragmentation, corridors, and travel ways the wildlife biologist determined the best way to analyze these was by using elk security as a surrogate model. This is a valid procedure based on good reasoning that is documented in the EIS and project file. The analysis is in compliance with NEPA, NFMA, and ESA.

**Issue 15: The EIS fails to meet NEPA, NFMA, and Regional soil quality standards and analysis requirements.**

**Response:** The EIS described the existing soils, the analysis methods used, and the effects the project will have on soil productivity (pp. III-70 to 81). The soil scientist conducted field surveys in those locations of the project area where past activities had occurred (PF, Vol. 4, Doc. F-5). After appropriate soil sampling he concluded, “I did not find detrimental soil conditions present on areas sufficient to be beyond the regional soil quality standards.” In one location where he found compaction he recommended measures to mitigate for the past damage to the soil. The soils scientist determined, “with the mitigation now required for protection of soil productivity, the proposed harvests in all the alternatives and foreseeable harvests on forest system and state lands will meet regional standards. Cumulatively, soil productivity will be protected within acceptable limits.” The EIS meets NEPA, NFMA, and Regional standards for soils.

**Issue 16: The economic analysis is inadequate, and in violation of Multiple Use Sustained Yield Act, Rangeland Renewable Resources Planning Act, NEPA, Global Climate Change Prevention Act, Administrative Procedures Act, the Forest Service Economic and Social Analysis Handbook, Forest Service Timber Sale Preparation Handbook, and the Forest Service Manual.**

**Response:** Project-level economic analysis does not require that non-commodity economic values be addressed. “Weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations” (40 CFR 1502.33). The NEPA process shall be used “...to emphasize real environmental issues and alternatives” [40 CFR 1500.2(b)].

The primary focus at the project level is to identify economic implications that are unique to the decisions made at this management level. The basic management direction for economic analysis of timber sales is contained in letter 2430, Financial and Economic Analysis of Timber Sales, from the Washington Office dated May 3, 1995, that identifies the Timber Sale Planning and Analysis System (TSPAS) model as a means “...to complete all the necessary calculations and provide the required efficiency information.” TSPAS information is displayed for each alternative (EIS, Table II-12, p. II-20, and Tables III-16 to 20, pp. III-59 to 63). The economic analysis complies with all laws and the Forest Service Manual and Handbook.

**Issue 17: The analysis of the impacts to the roadless area is inadequate, and the land adjacent to the roadless area should serve as a buffer.**

**Response:** The impacts to recreation including roadless areas are covered in the EIS (pp. III-174 to 178). No cutting units or road construction activities are planned within either roadless area in the project area (EIS, p. II-38, Fig. II-7, and p. III-177). The amount and quality of roadless areas in the project area will remain the same after the project is completed. There are no buffers between roadless areas and other management areas, just as there are no buffers between different management areas.

**Issue 18: The discussion regarding fire and insects lacks scientific integrity.**

**Response:** The fire and insect analyses are based on published literature (EIS, App. A, pp. 13 to 14; PF, Vol. 4, B-12 to B-18), various laws (EIS, pp. III-25 to 26 and 98), the existing condition (EIS, pp. III-26 to 31 and 98 to 100; PF, Vol. 4, Doc. B-2) and the known effects that fire and insects have on the ecosystem (EIS, pp. III-32 to 40 and 101 to 104; PF, Vol. 2, Doc. E-9). The discussions have sound scientific bases.

RECOMMENDATION

I recommend the Forest Supervisor's decision be affirmed and the appellants' requested relief be denied.

/s/ Paul E. Nesselroad  
PAUL E. NESSELROAD  
Director of Public and Governmental Relations