



File 1570 (215) Date: June 9, 1999  
Code:  
Route  
To:  
Subject: Musselshell Ecosystem Management Project ROD, Appeal #99-01-00-0119,  
Clearwater National Forest  
To: Appeal Deciding Officer

This is my recommendation on disposition of the appeal filed by Gary Macfarlane on behalf of Friends of the Clearwater, The Ecology Center, Alliance for the Wild Rockies, The Lands Council, and Idaho Conservation League protesting the Musselshell Ecosystem Management Project Record of Decision (ROD) signed by the Clearwater National Forest Supervisor.

The Forest Supervisor's decision adopts Alternative E which allows for timber harvest, reforestation, underburning, road construction and reconstruction, road obliteration, and Off Highway Vehicle (ORV) trail construction and reconstruction in the Musselshell Creek watershed.

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 Clean Water Act (CWA), the Endangered Species Act (ESA), and the National Forest Management Act (NFMA). The Appellants request the decision be remanded. An informal meeting was held but no resolution was reached.

## ISSUE REVIEW

### **Objection 1: The Forest Service violated NEPA by failing to consider an adequate range of alternatives.**

The Appellants contend that alternatives that included uneven age management and using fire as a regeneration tool should have been considered. They object to the dismissal of an alternative that would not harvest timber and would implement watershed restoration activities. They also object to each of the action alternatives including new road construction.

Response: An EIS must "rigorously explore and objectively evaluate all reasonable alternatives" [40 CFR 1502.14(a)]. The courts have established that this direction does not mean that every conceivable alternative must be considered, but that selection and discussion of alternatives must permit a reasoned choice and foster informed decision making and informed public participation.

Chapter II of the Final EIS describes how comments received in public scoping were used to identify issues and develop alternatives. The Final EIS describes alternatives considered but dropped from further analysis (Final EIS, II-4 and 5), as well as alternatives considered in detail. The action alternatives were designed to meet as many elements of the purpose and need for



action as possible. The rationale for not considering uneven age management is provided in Response to Comments on the Draft EIS. The response explains that uneven aged management is not compatible with the lethal fire regime operating in the Musselshell area and may result in increasing the likelihood of stand replacing fires (Final EIS, V-4 and 5).

The Interdisciplinary Team (IDT) did not consider an alternative that used fire alone but did discuss the effects of fire in the Musselshell drainage at length (Project File, Doc. 55, p. 7; Doc. 59, pp. 2-5). The Final EIS also discloses the effects of fires occurring in the area on a large scale (Final EIS, IV-19).

The ROD and Final EIS provide the rationale for dismissing the 'watershed restoration only' alternative (ROD, p. 23; Final EIS, II-4 and 5). The alternative was not considered in detail because it is not consistent with the Forest Service Ecosystem Management policy, which is described in the ROD (ROD, p. 24). The alternative was also dismissed because it would not address the need for vegetative rehabilitation (restoration of blister rust-resistant white pine).

While it is true that each of the action alternatives include new road construction, the effects of road construction have been mitigated so that sediment production resulting from the road will not be delivered to streams (Final EIS, IV-9). The no action alternative considered the effects of no road construction.

**Objection 2: The Forest Service violated NEPA because the decision and analysis regarding OHV trail improvements are unclear.**

The Appellants contend that the ROD discusses OHV trail improvement activities but the Final EIS includes no analysis of OHV trails.

Response: Although watershed stabilization activities in the OHV area are included in the decision, the analysis for OHV trail work was completed in a separate NEPA document.

**Objection 3: The Forest Service violated NEPA, the Clean Water Act, the Forest Plan, and the settlement agreement by failing to adequately analyze the effects of the project on water quality.**

The Appellants make many interrelated allegations regarding the water quality analysis contained in the Musselshell EIS. They are particularly concerned with the use of the WATBAL and FISHSED models in conjunction with professional judgment to determine that there would be no measurable effect to water resources. The Appellants also contend that PACFISH buffers will not prevent sediment delivery to stream channels due to landslides.

Response: The Final EIS adequately discloses the direct, indirect, and cumulative effects of the project on aquatic resources and soils (Final EIS, IV-5 through 14). The information provided is well supported by extensive documentation in the Appendices and the Project File (Final EIS, Appendix C; Appendix I; Project File, Vol. 3, Fisheries Habitat/Stream Survey Section; Riparian/RHCA's Section; Vol. 6, all).

Appendix C of the Final EIS describes the assumptions and methods used to conduct the watershed analysis for the Musselshell project. As stated on page C-2, the model operates on several assumptions and has some limitations. The WATBAL model was used as a base from which to determine the effects of the project. Appendix C explains that, "The WATBAL model is not intended to provide an accurate determination of actual sediment production... Outputs from the

model are best estimates of the likely response of the watershed..." (Appendix C, p. 1). The Final EIS at IV-9 explains that the FISHSED model uses WATBAL sediment production

predictions to predict changes to instream cobble embeddedness and makes the following disclosure based on the watershed analysis:

Though WATBAL modelling indicates an increase in sediment production within the watershed, the model does not estimate how much of the sediment produced may actually be delivered to stream channels.

Due to the distance of new ridgetop road construction from any live water, and the intent of road reconstruction and obliteration activities..., professional judgement indicates that any soil disturbance as a result of any of the action alternatives could result in a small, short-term pulse of sediment, with long-term benefits of sediment abatement and resultant decreases in instream cobble embeddedness, contrary to the predictions of WATBAL and FISHSED.

The Musselshell watershed is included in the area covered by the PACFISH EA, which provides direction for establishing Riparian Habitat Conservation Areas (RHCAs). The selected alternative will implement default PACFISH buffers throughout most of the project area. Appendix E of the Final EIS describes the rationale behind implementing three site specific RHCAs. The areas proposed for site specific buffers were visited by representatives of the Forest Service and the National Marine Fisheries Service (NMFS), who concurred that the site-specific buffers were not likely to adversely affect fisheries habitat or listed species (Final EIS, Appendix E, p. 2).

Based on the information provided in the Final EIS and project file, the Forest Supervisor concludes that:

The selected action is not without risks, although those risks are believed to be manageable. Proper road design, BMPs, default PACFISH stream buffers, and the stable character of the landforms themselves make the risk to aquatic systems minimal (ROD, p. 13).

**Objection 4: The Forest Service has violated NEPA and NFMA by failing to provide enough information about compliance with Forest Plan requirements for old growth.**

Again, the Appellants make many interrelated allegations regarding the old growth analysis. They contend that the decision fails to comply with the Forest Plan, and fails to ensure sufficient well-distributed habitat for old growth Management Indicator Species (MIS).

Response: The Appellants raise concerns about several specific stands. Some of the stands were identified as old forest but do not currently meet Forest Plan requirements for old growth. The ROD identifies the Forest Supervisor's decision regarding silvicultural treatments for these stands (ROD, Table 2, pp. 21 and 22). Additional clarification for these prescriptions is provided in the transmittal letter. Some of the stands were among those reviewed in June 1998 (Project File, Doc. 234). Three of the stands are outside the Musselshell analysis area, four do not meet Forest Plan or North Idaho Guideline requirements for old growth, and two were verified as old growth but not considered for treatment in the Final EIS.

The Final EIS describes in detail the difference between "old growth" and "old forest" and states that the terms are not interchangeable (Final EIS, S-1, III-1). The Final EIS describes the existing old growth habitat and states that, "Results of the June 1998 old growth review indicate that approximately 775 acres, or 5 percent of the Musselshell analysis area, meets the Forest Plan and North Idaho Guidelines definitions for old growth" (Final EIS, III-31; Project File, Doc. 234). The Final EIS also discloses the effects of the project on old forest vegetation (Final EIS, IV-19 and 20) and old growth habitat (Final EIS, IV-23 and 24). Based on the analysis disclosed in the Final EIS and supported by information in the project file (Project File, Vol. 3, Old Growth Section), the Forest Supervisor states:

Meeting Forest Plan standards for old growth was a mitigated issue for this project. There are sufficient existing old growth stands to meet Forest Plan standards. No old growth habitat is proposed for harvest under Alternative E (ROD, p. 9).

**Objection 5: The Forest Service has violated NEPA and NFMA with regard to snag and cavity-nesting species habitat.**

The Appellants contend that the analysis of snag and cavity-nesting species is deficient and that Forest Plan standards for snag habitat will not be met and are inadequate.

Response: The wildlife habitat analysis, particularly concerning snag habitat, was updated between the Draft and Final EIS. The ROD at page 18 states:

The Draft EIS indicated that analysis unit 103/104 (the area potentially affected by the Musselshell project) does not meet Forest Plan standards for snag habitat potential. Snag habitat in the Musselshell area was reanalyzed for the Final EIS using stand exam data and GIS technology. Current conditions indicate that available habitat meets the standards described in the Forest Plan for cavity-dependent species. Planned management actions, including implementation of the snag marking guidelines described on II-14 and the retention of late seral forest throughout the analysis area, will ensure that adequate habitat for viable populations of cavity-dependent species will be retained in the future.

Management objectives for snags in the Musselshell area are displayed in the Final EIS (Final EIS, II-14). The snag habitat assessment and management rationale was reviewed by the Clearwater National Forest wildlife biologist, Clearwater National Forest ecologist, and Musselshell Project wildlife biologist. They concluded that current and planned conditions will meet the Forest Plan standards for cavity-dependent species (Project File, Doc. 239).

The adequacy of the Forest Plan standards for snag habitat is beyond the scope of the Musselshell analysis.

**Objection 6: The Forest Service has violated NEPA and NFMA with regard to elk habitat.**

The Appellants contend that the analysis for elk habitat and other species requiring security from motorized access is inadequate. They also contend that the project will not meet Forest Plan standards for elk habitat.

Response: The analysis regarding elk habitat effectiveness was updated between the Draft and Final EIS. The ROD at page 18 states:

The Draft EIS indicated that the Musselshell Elk Habitat Analysis Unit did not meet Forest Plan standards for elk habitat effectiveness. This analysis was redone between the Draft and Final EIS. Geographic Information Systems (GIS) technology was used to more accurately define road mileages and cover percentages. Smaller security areas based on site-specific conditions were delineated, and road access restrictions were updated based on more recent information. The results of this assessment indicate that all four Elk Habitat Analysis Units in the Musselshell project area currently meet or exceed Forest Plan standards for elk habitat effectiveness.

The Final EIS explains that the differences between the habitat effectiveness numbers in the Draft and Final EIS resulted from using smaller security areas; more accurate, computer-based analysis for cover versus noncover; more accurate, computer-generated road mileages; and a more accurate assessment of road status (Final EIS, III-30). The effects of the Musselshell project on elk habitat is well documented

in the Final EIS (Final EIS, III-29 through 31; IV-22 and 23) and Project File (Project File, Docs. 229, 230, 238, and 247).

**Objection 7: The Forest Service has violated NEPA and ESA with regard to lynx and lynx habitat.**

The Appellants contend that additional surveys should be conducted to support conclusive statements about lynx occurrence in the area. They also contend that the U.S. Fish and Wildlife Service (USFWS) should have been consulted.

Response: As stated in the Final EIS, a survey for lynx habitat was done in the Musselshell analysis area. The survey identified approximately 8,400 acres which provide suitable lynx habitat, however, there is a low probability that lynx inhabit the Musselshell analysis area (III-37).

The Biological Evaluation (BE) for this project found that it "will not affect the viability or jeopardize the continued existence" of lynx or its habitat (Final EIS, Appendix J, p. 6). The ESA does not require conferencing or consultation for projects which will not affect listed or proposed species.

**Objection 8: The Forest Service has violated NFMA by failing to adequately analyze the population viability of existing native and desired non-native plants, fish and wildlife species.**

The Appellants contend that the analysis contained in the Musselshell EIS fails to assure the maintenance of viable populations, violates NFMA, and falls short of meeting the requirements of scientifically sound "ecosystem" analysis. They contend that the principles of Conservation Biology on a landscape level should be used.

Response: The NFMA implementation regulations state in part:

In order to estimate the effects of each alternative on fish and wildlife populations, certain vertebrate and/or invertebrate species present in the area shall be identified and selected as management indicator species.... [36 CFR 219.19(a)(1)].

Planning alternatives shall be stated and evaluated in terms of both amount and quality of habitat and of animal population trends of the management indicator species [36 CFR 219.19(a)(2)].

The Musselshell Final EIS discloses the effects of the project on MIS species as well as TES species (Final EIS, III-32 through 39; IV-24 through 26). Additional information is contained in the Wildlife, TES, and Old Growth Status Report (Project File, Doc. 238).

Analysis of population viability at a landscape scale is a Forest Plan or higher level of analysis and beyond the scope of the Musselshell project.

**Objection 9: The Forest Service failed to complete a Biological Evaluation for the three species recently added to the Region 1 Sensitive species list.**

Response: The BA/BE has been updated based on the current species list (Project File, Docs. 448 and 448-A).

**Objection 10: The Forest Service violated NEPA and ESA with regard to bull trout.**

The Appellants contend that additional surveys should be conducted to support conclusive statements about bull trout occurrence in the area. They also contend that the U.S. Fish and Wildlife Service (USFWS) should have been consulted.

Response: The Final EIS discloses the effects of the project on fish and fish habitat, including bull trout (Final EIS, III-11 and 12; IV-5 through 14). The BA/BE determined that there would be "no effect" on bull trout. The BA/BE states, "This finding was discussed with the [USFWS] and the document was submitted to the USFWS for their information" (Final EIS, Appendix J, p. 4). The ESA does not require conferencing or consultation for projects which will not affect listed or proposed species.

**Objection 11: The Forest Service has violated NEPA by failing to adequately analyze the effects on soils and soil productivity.**

The Appellants contend that the ROD and EIS ignore the issue of soil productivity, cumulative effects on soils, and the Forest Plan standards which outline methodology for assuring soils are protected and conserved during management activities.

Response: The Final EIS adequately discloses the effects of the project on soils (Final EIS, IV-10 through 14). Additional information is contained in Docs. 325 through 328 of the Project File.

**Objection 12: The Forest Service has violated NEPA by failing to adequately consider the economic impacts of the project.**

The Appellants contend that the economic analysis failed to consider the nontimber value of a standing forest, as well as the external costs of the proposed timber sale.

Response: Consideration of the effects of all alternatives on the social and economic resources is disclosed in the Final EIS (Final EIS, III-20 and 21; IV-16 through 18). The analysis meets the management direction contained in the Forest Plan for Management Area E1. As stated in the Final EIS, "Costs and benefits from some noncommodity resources are difficult to display, because their value is in other forms such as solitude, spiritual upliftment, etc.... These values may be reduced in the short term during logging operations, but aren't predicted to be affected in the long term for this area" (Final EIS, IV-17).

**Objection 13: The Forest Service has violated NFMA because Forest Plan monitoring is inadequate.**

The Appellants list several monitoring items for which they contend the Forest is lacking valid or complete monitoring results. They state that due to incomplete monitoring, the impacts of the Musselshell project are not sufficiently understood.

Response: Analysis of Forest Plan effectiveness monitoring is outside the scope of the Musselshell project. The Final EIS describes the mitigation measures and monitoring common to all the action alternatives on pages II-5 through 15. The Clearwater National Forest Monitoring and Evaluation report documents programmatic and site-specific effectiveness monitoring done on the Forest on an annual basis.

**Objection 14: The Forest Service violated NEPA by failing to adequately consider public comments.**

The Appellants contend that Responses to Comments on the Draft EIS were inadequate.

Response: Upon review of public involvement throughout the project planning process and the Response to Comments (Final EIS, Chapter 5), I find that the Appellants' comments on the Draft EIS were considered and adequately addressed.

#### RECOMMENDATION

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

/s/ Katherine Q. Solberg (For)

KATHERINE Q. SOLBERG  
Reviewing Officer