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 - Sheep Creek Salvage Project ROD - Beaverhead-Deerlodge NF - Appeal #05-01-00-0022 - The Ecology Center, et al.

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 Friends of the Bitterroot, protesting the Sheep Creek Salvage Project Record of Decision on the Beaverhead-Deerlodge National Forest.

The decision includes the following activities:

1. Salvage harvest approximately 776 acres of trees killed by the Sheep Creek Fire. Snags will be designated to leave. Submerchantable material will be slashed, piled, and burned to break up fuel continuity and decrease fuel loads in strategic locations. Douglas-fir infested with Douglas-fir bark beetles within harvest units will be harvested if mortality is evident or eminently predictable.

2. Harvest approximately 88 acres of dead trees and trees posing a public safety hazard along Forest Road 1085. This includes trees infested by Douglas-fir bark beetles.

3. Construct 2.6 miles of temporary roads, which will be obliterated after project completion. Obliteration will recontour the road prism and spread available debris over the road surface.

4. Site-specifically amend the Beaverhead Forest Plan standards for elk effective cover (EEC) within the project area.

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), and the Clean Water Act (CWA). 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 ROD represents a failure of the Forest Service to maintain the public process under NEPA and NFMA.

Response: Public involvement was ongoing and very thorough for this project. The ROD summarized the public involvement process (p. 3), identified key issues (pp. 3 and 4), provided rationale for the decision, and responded specifically to issues and comments raised by the public (pp. 13 to 18). The FEIS (pp. 9 and 10) also addressed public involvement and responded to public comments in Chapter V. Appellants did not state which scientific issues they felt were not addressed; however, the Response to Comments section of the FEIS (pp. 251 to 318) shows that the Forest addressed numerous scientific issues raised by the appellants. Resource specialists also had on-going discussion with the appellants throughout the process. I find that the public involvement process was appropriate for the project.

Issue 2. The FEIS failed to adequately analyze soil productivity.

Response: The FEIS addressed the affected environment and environmental effects of the proposed project on the soils resources on pages 165 to 184. Mitigation options to maintain soil productivity include operating during winter conditions, coarse woody debris management, and preserving groundcover (FEIS, p. 173; ROD, Appendix A).

Restoration activities, largely in connection with roads, have been put in place throughout the analysis area to target and reduce sediment sources from past activities, and restoration activities would be implemented to ensure continued recovery beyond pretreatment levels as mandated by the soil guidelines (FEIS, pp. 152 and 173). Impacts of temporary roads were considered when analyzing soils and all temporary roads and log landings would be reclaimed. Since restoration techniques may have mixed success, recommended restorative treatments would be assessed and implemented through consultation with the Forest soil scientist. Treatments would include: (1) installing erosion control measures, (2) decompacting detrimentally-compacted areas with a disc or subsoiler within the activity area, (3) seeding/transplanting native grasses/shrubs only in viable planting areas, (4) placing coarse wood debris at 10-15 tons/acre, and/or (5) recontouring skid trails to the existing slope. These restorative treatments would likely improve soil functional attributes to conditions above pretreatment levels, and thereby maintain direction of Regional guidelines (FEIS, p. 177).

Following the fire, a Burned Area Emergency Response Team surveyed the burned area (FEIS, p. 1). The Sheep Creek Fire burned at a range of intensities, severities, and durations resulting in varied effects on the vegetation and soil. Most of the fire was classified by the BAER team as a low-intensity burn, although high levels of mortality occurred in most stands within the fire (FEIS, pp. 1 and 40). The Sheep Creek Fire suppression efforts included approximately 7.9

miles of dozer line and 1.2 miles of hand line. During line construction, local resource advisors worked closely with division supervisors to ensure that fireline placement did not increase the likelihood of sediment transport and erosion. All fireline construction was rehabilitated following suppression of the fire and prior to snowfall (FEIS, pp. 31 and 138). Because of the large proportion of low burn intensity/severity, the BAER Team recommended that no emergency rehabilitation was needed to prevent extensive soil erosion.

To establish baseline information on soil strength for monitoring harvest impacts to soils, soil condition surveys were done in summer 2002. Proposed treatment units 2, 3, 5, 6 and 12, along with two control areas nearby were surveyed. Proposed timber units differed significantly when comparing average strength scores using a one-way analysis of variance, though none were found to have root-limiting soil resistance (FEIS, Figure 27). All results were below known threshold values of roughly 290 pounds [about two Mega Pascals (M Pa)]; assuming dry soils (FEIS, p. 167). Supporting data on soil monitoring can be found in the FEIS and project record (Docs, J-8, J-25, J-46 and J-52).

For the proposed treatment units, significant impairment to long-term soil productivity is not evident. The findings indicate none of the proposed units have substantial past harvest impacts, and show that site differences do exist for interpreting future readings (FEIS, p. 168). None of the action alternatives had significant effects from past harvest within proposed treatment areas since harvest occurred outside these areas. However, past harvest units adjacent to units 3 and 8 may be utilized for skidding with mechanized equipment. These units would meet soil guidelines with the combination of added protection from winter conditions and restoration following treatment to further soil recovery beyond pretreatment levels (FEIS, p. 182).

Soil monitoring information can be found in the project record in Document J-56 (Elkhorn Timber Sale Compaction Monitoring), Document J-57 (Ruby Allotment, Wisdom District – Soil Compaction Report), Document J-19 (Managing Coarse Woody Debris in Forests of the Rocky Mountains) and Document J-41 (Sheep Creek Soil Monitoring Data). Additional soils analysis and information is provided in the Sheep Creek Fire BAER Report (Document J-51), the soil specialist Report (Document J-1) and the Sheep Creek Soil Monitoring Data (Document J-41). Similar soils issues are addressed in Response to Comments 135, 137, 138, 141, 147 and 140 (FEIS, pp. 306 and 307).

In order to meet NFMA direction and manage National Forest System lands without permanent impairment, the policy of the Northern Region is to "…not create detrimental soil conditions on more than 15 percent of an activity area" (FSM, 2554.03). The action alternatives would not exceed Regional soil guidelines for soil quality with mitigation for proposed treatment units and hazard tree removal areas. Soil guidelines would also be met for 2 acres where old skid trails would be used outside units 3 and 8. Restoration activities would be implemented to ensure continued recovery beyond pretreatment levels as mandated by the soil guidelines (USDA FS

1999, p 2). By meeting soil quality guidelines, these proposed actions would likely not impact soil productivity significantly. Regional guidance for maintaining soil productivity by limiting detrimental soil disturbance to less than 15 percent (FSM 2554, R1 Supplement 2500-99-1, Document J-39) was based on best professional judgment and was intended as early warnings, not as absolute limits (Powers, et al., 1998). Table 43 (p. 173) outlines the projected percentages of detrimental disturbance for the action alternatives.

The cumulative effects of potential skidding disturbance on previously harvested sites is expected to be minor because skidding would occur during winter or under frozen ground conditions (FEIS, p. 183). Harvest operations during winter, when soil is either frozen to a depth of 4 inches, or under settled 24-inch snow cover, will minimize compaction and displacement from harvest activities. Monitoring and supporting research supporting this mitigation is provided in the FEIS (p. 177) and project record (Docs. J-41, 43, 49, 62 and 63).

The cumulative effects analysis considers impacts from roads and past fire suppression activities (FEIS, pp. 182 to 184). The cumulative impact from recent wildfire, in addition to proposed harvest activities, would not likely lead to long-term impairment to soil productivity. The impact of the fire was generally low, as indicated from soil quality assessments done in three proposed treatment units; units 2, 3, and 5 (FEIS, p. 183).

The Interdisciplinary Team (IDT) and decision maker considered scientific information (literature) that was applicable to the project during project development. Specifically, in the case of the Beschta paper, the resource protection principles contained in the Beschta paper were carefully considered by the IDT and decision maker as documented throughout Chapter 4 of the FEIS, and were used to guide the development of design criteria, alternative actions, mitigation measures, and monitoring requirements. A discussion of the Beschta report and hydrology of Sheep Creek Salvage Project is addressed in detail in Appendix G.

Best Management Practices (BMPs) are designed to prevent soil erosion and protect water quality, as well as help prevent soil damage. In a Memorandum of Understanding with the State of Montana, the Forest Service has agreed to follow BMPs during timber harvest, road construction, and road maintenance activities. The Sheep Creek Salvage Project would use all applicable BMPs during project design and implementation as described in Best Management Practices for Forestry in Montana (MSU Extension Service 2001) (FEIS, p. 135). The Beaverhead Forest Plan directs that Soil and Water Conservation Practices be incorporated into project design and implementation to ensure that soil and water resources are protected (FSH 2509.22). Soil and water standards were reviewed to insure all the alternatives meet these Forest Plan standards (FEIS, pp. 135 and 136). Additional mitigation provides for protection beyond that required by BMPs. Supporting information on BMPs is provided in the project record (Docs. J-49, J-61, H-15, and H-22).

Issue 3. The FEIS fails to adequately address unroaded areas or the adjacent inventoried roadless areas.

Response: The FEIS (p. 196) defines unroaded lands as all areas without the presence of classified roads and outside existing inventoried roadless areas. Figure 31 (FEIS, p. 193) shows the IRAs, existing classified roads, and Sheep Creek Fire perimeter. Given the definition of unroaded lands in the FEIS and the map, the unroaded lands can easily be identified. Resource values were analyzed for both inventoried roadless areas and unroaded areas (FEIS, pp. 192 to 201). The resource values considered are very similar to the wilderness attributes used in the RARE II process. The combined impacts of the project on unroaded areas, adjacent IRAs, and recreation are found on pages 199 and 200 of the FEIS. The analysis clearly states that the addition of unroaded lands to the IRA is possible. The No Action alternative was analyzed in detail, which maintains the wilderness values of all inventoried roadless and uninventoried roadless lands in the project area.

A roads analysis is included in the project record (Doc. O-3). The Alternative 2 map shows existing classified roads, inventoried roadless areas, and treatment units.

Issue 4. Black-backed woodpecker: NFMA, NEPA and ESA violations.

Response: The Forest Service Manual (FSM) at 2621.2 states, "units must develop conservations strategies for those sensitive species whose continued existence may be negatively affected by the forest plan or a proposed project." The wildlife biologist found the project "may impact individuals or habitat, but will not likely result in a trend in federal listing or reduced viability for the population or species." Conservation strategies are, therefore, not required for any species.

Within the Biological Evaluation, the biologist provides an extensive discussion of cumulative effects for the black-backed woodpecker (FEIS, pp. 90 to 92; Appendix A, pp. 361 to 364). The biologist made a reasoned determination of "may impact individuals or habitat, but will not likely result in a trend in federal listing or reduced viability for the population or species" for the black-backed woodpecker, utilizing current information and taking into account past, present and reasonably foreseeable future actions (FEIS, p. 359), and additional supporting data (FEIS, Appendix A, pp. 361 to 364) within the cumulative effects analysis area.

Direct and indirect effects on black-backed woodpeckers are disclosed in the FEIS (pp. 89 and 90) and in the Biological Evaluation (FEIS, Appendix A, pp. 355 to 356). The science used in the analysis is disclosed in the FEIS (pp. 91 to 92) and in the Biological Evaluation (FEIS, Appendix A, pp. 347 to 349 and 362 to 364). The biologist concluded that the Sheep Creek Fire Salvage project is not expected to increase risk to viability of the black-backed woodpecker, and provided adequate, reasoned rationale (FEIS, p. 364; Appendix A, pp. 363 and 364).

The FEIS (p. 89) discloses that black-backed woodpeckers were not identified in the project area during surveys in 2003 (PR, Vol. G, Doc. 230). The BE estimated the number of potential black-backed pairs (FEIS, Appendix A, pp. 361 and 362):

> Implementation of Alternative 2 (the maximum treatment), plus the Hazard Tree Removal, and the reasonably foreseeable activities could reduce existing habitat for 12.4 woodpecker pairs in the analysis area. This represents 12.9 percent of the estimated potential number of woodpecker pairs (96) that could occupy the burned area. Within the analysis area, the amount of mature old forest not included in the burned portion, has a substantial dead or dying component that also provides habitat for another 322 pairs of blacked-backed woodpeckers. Habitat potential within the analysis area should be sufficient to maintain population variability. Therefore, none of the reasonably foreseeable activities, except for fire suppression, planned for this area, including the proposed action, would cumulatively affect the population sustainability of black-backed woodpeckers.

The FEIS (p. 89) discloses that approximately 17,631 acres of forested habitat burned within the analysis area between 2000 and 2003 (PR, Vol. G, Doc. 224). The FEIS (p. 90) also discloses that 95 percent of burned habitat in the analysis area would be unaffected by the project. Status and habitat restrictions of black-backed woodpeckers are disclosed in the Biological Evaluation (FEIS, Appendix A, pp. 362 to 364).

The Forest Supervisor acknowledges concerns from the public regarding snags and snag-dependent species, and the fact that Alternative 2 will harvest more snags than either of the other two alternatives. He considered this in the context of the 84,000+ acres that were burned in this part of the Wisdom District and the adjacent District to the north (ROD, p. 13):

> "Analysis in the FEIS shows salvage on this scale will not significantly impede habitat for cavity nesting birds or fire-dependent birds like the black-backed woodpecker, which have more habitat on the District than at any other time in recorded history… Implementing Alternative 2 will not significantly diminish these species' habitat opportunities."

He further states in his ROD (p. 17):

> "I recognize that loss of newly created snag habitat could be a concern. However, considering that Sheep Creek is not the only sizeable fire to occur in the area in recent times, and that we will be retaining snags in our harvest units, I believe snag habitat will be plentiful for snag-dependent species. For these reason, I believe the selected alternative will not significantly affect snag habitat."

This concern was adequately addressed in the Response to Comments (FEIS, pp. 286 to 287). The FEIS, Table 34 (p. 123), discloses that less than 5 percent of snags available within the analysis area would be harvested. This means that 95 percent of the snags available would be unharvested and left to natural processes (Id.). The Forest also responds that the three snags per acre in treatment units was not meant to fully supply

snag needs in the analysis area, because at least 95 percent of the snags created by the fire would be available to do that (Id.). This project does mitigate against loss of snags by requiring snags be left in wet areas, or near the edges of harvest units to limit blowdown, where available (Id.). The limitations of the Forest Plan snag standards was recognized and addressed with the three snags/acre mitigation in treatment units (Id.). Mitigation for snag management is found in the FEIS, page 18.

The FEIS (p. 348) discusses snag density recommendations by several researchers to support the potential density of woodpeckers and other cavity-nesting birds on a landscape. The recommended snag densities range from 2.1 to 11 snags/acre >9" d.b.h. The three to ten snags/acre >10" d.b.h. fits within these recommendations.

I find that the Forest did take a hard look at, and fully disclosed the potential direct, indirect, and cumulative impacts of the project on the black-backed woodpecker. The Forest used the best scientific information applicable to the Beaverhead-Deerlodge National Forest in their analysis of potential impacts.

Issue 5. Sensitive species, old-growth species, and management indicator species.

Response: The FEIS (p. 129) discloses the analysis that was done using Forest Inventory and Analysis (FIA) data to estimate old growth and large snags on the Beaverhead-Deerlodge National Forest and the Big Hole Landscape (Bush and Leach, 2003). The analysis estimates, for all forest types on the Beaverhead-Deerlodge, 20.95 percent old growth, and 13.49 percent old growth for the Big Hole Landscape (Id.). The Forest-wide estimates for cover types, lodgepole pine, Engelmann spruce, subalpine fir, Douglas-fir, whitebark pine, and limber pine are 14.19 percent, 34.40 percent, 30.59 percent, 19.81 percent, 29.47 percent, and 28 percent, respectively (Id.). Although the FIA old growth estimates are not susceptible to being mapped to the analysis area timber compartments, the old growth percentages across the Beaverhead-Deerlodge National Forest and the Big Hole Landscape exceed the 10 percent standard by a substantial margin (Id.).

The Forest will not violate the Forest Plan direction for old growth with implementation of Alternative 2 (FEIS, p. 128). The proposed action would not eliminate any current old growth stand (FEIS, p. 128). The FEIS clearly displays and discusses old growth habitat (total and percent of area) prior to and after the fires (FEIS, pp. 125 to 129; Table 35, p. 129). Analysis was completed using FIA data to estimate old growth and large snags in the project area (PR, Vol. G. Doc. 26). The biologist looked at the existing condition for old growth and took this information into account when making his final determination of impacts on old growth-dependent species (FEIS, Appendix A). Those old-growth Douglas-fir stands that have been thinned have fewer downed logs than those not harvested but they retain minimum old-growth criteria (FEIS, p. 125). Those units proposed for harvest under Alternative 2 no longer meet or retain the old growth characteristics (Id.).

The FEIS provides a discussion related specifically to biodiversity, fragmentation and linkages with information on background, existing condition, direct and indirect effects of the No Action and two action alternatives, as well as cumulative effects to biodiversity, fragmentation and linkages (pp. 130 to 133). The FEIS states that the cumulative result of past timber harvest and road construction activities has been a reduction of forest interior and Douglas-fir-dependent bird habitat in the regeneration harvest units, and that this has been factored into the baseline for analysis (p. 132). The Forest looked at the past, present, and reasonably foreseeable future action (FEIS, pp. 29 to 38) and concluded that prior harvest and personal use woodcutters would have possible cumulative effects/impacts to biodiversity/fragmentation/linkages (FEIS, p. 132).

The biological information section of the FEIS for marten (old growth MIS for the Forest) discusses timber harvest and trapping, two human activities most responsible for declines in marten populations in the Northern Rockies (FEIS, p. 103). Timber harvest may directly affect marten by altering habitat structure and most logged-over sites do not provide the structural diversity offered by late-seral forests (Id.). Timber harvest in over-mature lodgepole pine could eliminate suitable foraging habitat for marten, and also indirectly affect marten by introducing roads, and consequently trappers, into previously inaccessible drainages (Id.). The biologist considered the direct, indirect, and cumulative impacts of the Sheep Creek Fire Salvage project and concluded (FEIS, pp. 108 and 109):

> It is not expected to increase a risk to viability of pine marten based on (1) the wide distribution of habitat for pine marten on the Forest as shown by the Forest-wide habitat mapping, (2) the FIA old growth analysis, and (3) the very small percentage of marten habitat affected by the proposed actions in the analysis area and in the Beaverhead-Deerlodge National Forest. At the project-level scale, all riparian areas that provide the larger snags for marten habitat would receive 50- to 150-foot no-treatment buffers. Winter logging requirements would minimize risk of disturbing marten activities within the unburned portions of the project and analysis areas. The SMZ buffers and winter logging are expected to minimize any potential effects to martens utilizing the project and analysis areas. Pine marten viability on the Forest would not be reduced by this project.

Fragmentation is further discussed in the FEIS Neotropical Migratory Bird section (pp. 119 and 120), and it was concluded that considering the natural habitat modification caused by the fires of 2000, 2002 and 2003, and proposed snag retention levels within each of the harvest units, no significant loss of migratory bird habitat is expected from the implementation of any of the proposed action alternatives (FEIS, p. 120). Implementation of Alternative 2 would not create problems typically associated with forest fragmentation such has overall habitat loss, increase in high-contrast edge habitat and edge effects, isolation effects, and increased predator pressure (Id).

With regard to the contention about results of monitoring for old growth wildlife species, I find that indicator species have been monitored on the Forest as evidenced by documents provided in the project record (Doc. G-88, A Study of Northern Goshawks in Southwestern Montana: Summary of Finding for 1998; Doc. G-89, A Study of Northern Goshawks in Southwestern Montana: Summary of Finding for 1999; Doc. G-90, A Study of Northern Goshawks in Southwestern Montana: Summary of Finding for 2000; Doc. G-91, A Study of Northern Goshawks in Southwestern Montana: Results for 2001; Doc. G-92, A Study of Northern Goshawks in Southwestern Montana: Results for 2002; Doc. G-93, A Study of Northern Goshawks in Southwestern Montana: Results for 2003; Doc. G-97, Pine Marten Populations and Habitat Relationships in Southwest Montana; Doc. G-157, Forest-wide Goshawk Survey & Monitoring Supervisor's Office B-D NF for Fiscal Year 2001; Doc. G-162, Threatened, Endangered and Candidate Species for the Beaverhead-Deerlodge National Forest; and Doc. G-175, Forest Carnivore Surveys; Doc. G-182, Northern Goshawk Inventory Forms (5) and Flammulated Owl Survey Form (1) completed for Basin analysis area in 1996; Doc. G-184, Winter Survey for Forest Carnivores: Lynx, Wolverine, Fisher, Marten; Doc. G-187, FY2001 Beaverhead-Deerlodge Goshawk Survey and Monitoring Plan; Doc. G-190, Northern Region 1 – ADA letter in response to petition to list the northern goshawk under ESA; and Doc. G-191, Furbearer Survey, Trapping, Hunting, and Harvest Report by District and County).

Issue 6. The FEIS contains no real analysis of fisher habitat.

Response: The Forest conducted a habitat viability analysis for the fisher. Table 21 (FEIS, p. 78) shows that habitat/species is present in the analysis area and that habitat/species may be impacted by proposed treatments. Direct, indirect, and cumulative effects for fisher are discussed in the FEIS (pp. 95 and 96) and the BE (FEIS, Appendix A, pp. 339, 341 to 342, 354, and 365). With regard to the fisher, the Forest biologist states,

> Based on the wide distribution of habitat for fisher on the Forest, as shown by the Forest-wide habitat mapping and the FIA old growth analysis, the Sheep Creek Fire Salvage project is not expected to increase risk to viability of this species (Project Record, Docs. D-22, G-5, G-26, G-40, G-225, and G-235). At the project-level scale, all riparian areas that provide the highest density of and largest snags for potential fisher denning and foraging habitats would receive 50- to 150-foot no-treatment buffers. Winter logging requirements could increase risk of disturbing fisher denning activities within the unburned portions of the project and analysis areas. However, there is no evidence that fishers actually occupy or are breeding in the project or analysis areas. Overall, the SMZ buffers and winter logging are expected to minimize any potential effects to fisher utilizing the project and analysis areas. Fisher viability on the Beaverhead-Deerlodge National Forest would not be reduced by this project.

> Based upon the discussion provided in both the FEIS and BE, the biologist determined that there would be no cumulative effects caused by implementation of this project on this species. Suitable habitat does not exist in or near any of the units proposed for treatment. For these reasons the Sheep Creek Fire Salvage Project "may impact individuals or habitat, but would not likely result in a trend in Federal listing or reduced viability" for the fisher population or species (FEIS, p. 96; Appendix A, p. 339, Table 54).

Issue 7. The FEIS does not cite to any goshawk surveys in this project area in recent years, but admits the area may provide some goshawk habitat.

Response: With regard to goshawk surveys, please see response to Issue 5 above. The biologist adequately discusses the existing condition of old growth and potential impacts to the goshawk and old growth habitat under the three proposed alternatives (FEIS, pp. 83 to 88). Within the BE, the biologist provides an extensive discussion of cumulative effects for northern goshawk (FEIS, Appendix A, pp. 358 to 361). The biologist made a reasoned determination of "may impact individuals or habitat, but will not likely result in a trend in federal listing or reduced viability for the population or species" for the goshawk, utilizing current information and taking into account past, present and reasonably foreseeable future actions (FEIS, p. 359) and additional supporting data (PR, Vol. G, Docs. 26, 70, and 88 to 93; FEIS, p. 281). The biologist concluded that the Sheep Creek Fire Salvage project is not expected to increase risk to viability of the goshawk and provided adequate, reasoned rationale (FEIS, p. 360).

Issue 8. The FEIS does not consider cumulative effects on boreal toads or their upland habitat.

Response: Within the BE, the biologist provides a discussion of cumulative effects for boreal toads (FEIS, Appendix A, pp. 367 and 368). The biologist made a reasoned determination of "may impact individuals or habitat, but will not likely result in a trend in federal listing or reduced viability for the population or species" for the boreal toad, utilizing current information and taking into account past, present and reasonably foreseeable future actions (FEIS, p. 102), and additional supporting data (PR, Vol. G, Docs. 192 to 217; FEIS, pp. 100 to 102). The biologist concluded that boreal toad viability on the Forest would not be reduced by this project and provided adequate, reasoned rationale. In addition, Response to Comment #61 (FEIS, p. 275) states that habitat for boreal toads will not be harvested nor have equipment operations based on hydrology and fisheries mitigation measures protecting streams and riparian areas.

Issue 9. The FEIS makes no determination regarding the significance of the pine marten habitat loss associated with the fire or past or proposed logging.

Response: Existing condition and effects analysis for pine marten are adequately discussed in the FEIS (pp. 103 to 109). The FEIS specifically discusses population viability of the pine marten, and concludes that pine marten viability on the Beaverhead-Deerlodge National Forest would not be reduced by this project (pp. 107 to 109). Additional supporting documentation upon which the biologist relied in making his determination are included in the project record (Doc. G-36, Winter Ecology of American Marten in Southwestern Montana; Doc. G-50, Southwest Montana Pine Marten Research Project, Progress Report; Doc. G-61, Marten Home Range and Population Fluctuations; Doc. G-97, Pine Marten Populations and Habitat Relationships in Southwest Montana; and Doc. G-174, Marten Populations in Uncut and Logged Boreal Forests in Ontario).

Issue 10. Canada Lynx: NEPA, NFMA, and ESA Violations.

Response: The Forest Supervisor took into account the Lynx Conservation and Assessment Strategy (PR, Doc. G-223) and determined, based on supporting analysis in the document and project record, that the Sheep Creek Salvage Project will comply with the conservation measures detailed in the strategy action plan (ROD, p. 26). Effects analysis show that the project would not cause a substantial reduction of lynx habitat (FEIS, p. 81) and that the project conforms to all LCAS standards for timber management and wildland fire management in lynx habitat (Id.). The BA for lynx provides specific discussion as to how the project meets the LCAS standards (FEIS, Appendix B, pp. 392 and 393). The biologist provides adequate discussion and reasoned rationale to support his determination of "may affect the lynx but is not likely to adversely affect the lynx or its habitat" (FEIS, Appendix B, p. 394). The USFWS concurred with this determination (PR, Doc. G-11).

The October 25, 2000, Biological Opinion (BO) from the Fish and Wildlife Service for the Programmatic BA found that "… current plans as implemented in conjunction with the Conservation Agreement (CA) of February 7, 2000, are not likely to jeopardize the continued existence of the lynx" (BO, p. 54). In the Incidental Take section, the BO (pp. 56 to 58) finds that the application of the CAs substantively reduces the potential for incidental take to occur as a result of actions implemented under the current plans. Projects that comply with the standards and guidelines in the LCAS in most cases would not adversely affect lynx, and therefore no take would be anticipated in most instances. Projects not complying with the LCAS standards, and likely to adversely affect lynx will be deferred until Plans are amended (USFS CA). Therefore, if projects that are likely to adversely affect lynx are deferred, no incidental take is anticipated. The Sheep Creek Salvage Project was determined NOT likely to affect lynx (NLAA), and this determination was concurred with by the Fish and Wildlife Service (PR, Doc. G-11). Because of the NLAA determination, no take of lynx would occur, and was therefore not discussed in the FEIS or BA.

The FEIS (pp. 392 and 393) discloses that the project is consistent with the applicable standards appropriate to a salvage sale under the resource categories of Timber Management and Wildland Fire Management. The USFWS issued a letter of concurrence for a NLAA for lynx based on the use of those resource categories (PR, Doc. G-11).

The FEIS (pp. 391 and 392) discloses the cumulative effects to lynx, including the effects of motorized recreation (p. 391). The USFWS issued a letter of concurrence for a NLAA for lynx based on the cumulative effects analysis (PR, Doc. G-11). Document G-226 shows the LAU Cumulative Effects Analysis Area. The majority of the analysis area, including the project area, is closed to livestock grazing.

Issue 11. The cumulative effects of past management actions and results of past monitoring are not adequately considered.

Response: See responses to issues above for discussion of adequate and reasoned cumulative effects analysis and discussion related to goshawk, marten, biodiversity/fragmentation/linkages, etc. Based on the responses to issues provided above, I find that cumulative effects of past management actions and results of past monitoring have been adequately considered.

Issue 12. Habitat analysis based on scientifically flawed methodology.

Response: In the Response to Comments, the Forest acknowledges that limitations of the timber stand database for habitat modeling is not discussed in the EIS, and recognize that their data may have such limitations as those referenced from the IPNFs (FEIS, Comment 88, p. 287). The FEIS discloses that habitat models used are based on FIA and SILC-3 data. Cumulative effects analysis for species was based upon current best available habitat information for the Forest, utilizing GIS, using information collected from satellite imagery or SILC and FIA data (FEIS, pp. 86 and 87, northern goshawk; p. 92, black-backed woodpecker; p. 94, wolverine; pp. 95 and 96, fisher; p. 98, northern bog lemming; pp. 101 and 102, boreal toad; p. 108, marten; p. 118, great gray owl; p. 124, snags; p. 129, old growth; and PR, Docs. G-5 through G-10, Query maps: Wildlife habitat viability analysis).

Issue 13. The Sheep Creek Salvage Project Violates NFMA and the Clean Water Act.

Response: One of the key issues identified by the public and internal scoping was "degradation of soils and impaired waters (Water Quality Limited Segments)" (ROD, p. 4). The Forest Supervisor explains how well Alternative 2 responds to this issue in his ROD (pp. 15 and 16) and concludes that given the design features and mitigations planned, as well as additional measures added to the FEIS, will adequately protect water quality and prevent degradation of beneficial uses (ROD, p. 16). The Forest Supervisor states that his decision complies with Federal and State water quality standards, based upon his review of the analysis in the FEIS and the project record.

The FEIS (p. 135) discusses BMPs and their relationship to reasonable land, soil, and water conservation practices. It states, "All alternatives would meet Montana State Water Quality Standards." Analysis in the Post-Fire Vegetation FEIS (PR, Doc. H-23) states, "Current surveys

(1999-2001) show mixed conditions throughout the watershed, but generally streams seem to have improved since 1985." The FEIS (p. 135) provides a discussion of Montana State Water Quality Law and its relationship to BMP's. With regard to Trail Creek, field reconnaissance of five tributaries of Trail Creek was conducted in the fall of 2003 to determine existing sediment condition (FEIS, p. 136). Monitoring data for Trail Creek and its tributaries suggest the watershed is recovering from past disturbance and that the condition of Trail Creek is on an upward trend (FEIS, pp. 140 and 141). Within the cumulative effects discussion for hydrology it states, monitoring over the past 2 decades has shown that road improvement work in the early 1990's designed to reduce sediment delivery to Trail Creek and improved livestock grazing management have resulted in a decrease in sediment delivery over time. As described previously, recent surveys of Trail Creek show that it is still in good condition following the fire. The proposed action is not predicted to deliver any additional sediment to the five tributaries of Trail Creek (FEIS, p. 150), and that all alternatives would meet Montana State Water Quality Standards.

The accuracy of the WEPP, WATSED, and MK models are adequately addressed in the approach to direct and indirect effects analysis section of the soils analysis (FEIS, pp. 141 to 143). Appendix F of the FEIS addresses soil erosion predictions using the WEPP model in detail, and sediment modeling is also addressed in Document H-2 of the project record.

Issue 14. The FS uses unscientific "reburn" hypothesis to support logging and provides no specific cites to scientifically support the proposed logging activities to reduce future fire risk. The FEIS fails to analyze the potential for post-fire logging to hinder natural regeneration.

Response: Reburn conditions and related scientific research is addressed in the FEIS on pages 51 to 53. The purpose and need of the fuel reduction portions of the Sheep Creek Fire project proposal is not to reduce the probability of ignition or the occurrence of future fires; it is to reduce the intensity and severity of inevitable future fires by reducing the amount of dead vegetation that would accumulate. Supporting documentation for the analysis can be found in the project record (Docs. E-14, 28, 41, 43, 45, and 53; G-17; H-6; and J-14 and J-45).

The potential impacts of logging-related disturbance and tree regeneration and growth is addressed on page 67 of the FEIS. No planting of trees is planned for this project at this time. A similar fire situation occurred in the Gibbons Pass area in 1985. That burn area was salvage logged and regenerated with natural regeneration. Stocking today is often in excess of several thousand seedlings per acre. All harvested acres proposed under this project would be monitored and would receive stocking exams. Those areas that fail to meet stocking standards will be planted. This issue is also addressed in Response to Comments (FEIS, pp. 270 and 301).

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/Larry J. Dawson
LARRY J. DAWSON
Appeal Reviewing Officer