Forest Service

Bitterroot National Forest

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To: Appeal Deciding Official

This is my recommendation on disposition of the appeal filed by Jeff Juel, on behalf of The Lands Council, of the Pilgrim Creek Timber Sale Record of Decision (ROD) signed by the Forest Supervisor of the Kootenai National Forest.

The Forest Supervisor's decision includes timber harvest and fuel treatments on approximately 1,434 acres, tree planting on 357 to 725 acres depending on site-specific conditions, and road construction of 4.7 mile of new permanent road, 47 miles of reconstruction, and 1.1 miles of new temporary road construction.

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 appellant's 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 appellant(s) allege(s) violations of the National Environmental Policy Act (NEPA), the National Forest Management Act (NFMA), the Endangered Species Act (ESA), the Administrative Procedures Act (APA), and the Kootenai Forest Plan. The appellant requests the ROD be withdrawn or remanded. An informal meeting was held but no resolution of the issues was reached.

ISSUE REVIEW

Issue 1. BIASED DESIRED CONDITIONS DRIVES PROJECT DEVELOPMENT IN SCIENTIFICALLY UNJUSTIFIED DIRECTION AND IN VIOLATION OF THE FOREST PLAN

But much of the EIS's analyses are based upon "reference conditions" which are based on inadequate information, or are otherwise biased to support the arbitrary Purpose and Need statements.

Response: The Forest Plan provides broad direction in regard to desired conditions. Management Area goals and standards (Vol. 1, Chapter III) provide a basis for the development of project specific desired conditions at the project level. The four listed Desired Conditions for the Pilgrim Creek project area (DEIS, p. 1-3) are consistent with the Forest Plan (DEIS, pp. 1-13 to 1-14).

There is no evidence of bias in the development of the project's desired conditions or purpose and need. Chapter 1 of the DEIS clearly explains how the project was developed, including an assessment of current conditions, development of desired conditions, and development of a purpose and need and proposed action that responds to the departure between current and desired conditions (DEIS, pp. 1-1 to 1-9). Reference conditions refer to past or historic conditions of an ecosystem. The purpose of describing reference conditions is to explain how human and natural disturbance have changed forest conditions and succession. Reference conditions provide insights to important questions such as natural frequency, intensity, and scale of disturbances; abundance and rareness of plant and animal species; and the age class and composition of trees (DEIS, pp. 3-11 to 3-12). It is logical and prudent to use reference conditions, existing conditions and desired conditions in the development of a vegetation management project's purpose and need and proposed action and indicates a methodical, scientific and professional approach to project development pertaining to ecosystem management.

The vegetation section of the DEIS clearly discloses and explains the use of and science behind Vegetation Response Unit Characterizations and Target Landscape Prescriptions in determining prioritization of silvicultural treatments across the landscape. Reference Conditions, Historic Range of Variability (HRV), and Natural Range of Variability (NRV) are defined and thoroughly discussed in regard to how they were used in the analysis, including recognition of the limitations associated with their use (DEIS, pp. 3-9 to 3-29) (PF, Vol. 4.1, Docs. 010, 012, 019, 028) (See also response to comments regarding reference conditions, FEIS, pp.10 to 12).

I find the EIS clearly articulates the project development and determination of the proposed action, including alternatives to the proposed action, were developed by an interdisciplinary team of resource specialist and based on a solid foundation of sound science. The process itself is well defined and clearly explained. I find there is no evidence of bias in the project development process and that the IDT "connected the dots" in determining the project's purpose and need statements based on thoughtful and scientific considerations of Forest Plan goals, existing vegetation conditions, and desired conditions developed from sound resource reasoning and accepted scientific information and data.

Issue 2. THE EIS AND ROD VIOLATE THE FOREST PLAN, NEPA, AND THE TRAVEL PLANNING REGULATIONS

Issue 2, Contention A: *Unfortunately, the EIS contains no "desired conditions" that would guide project activities toward the minimum necessary road system, despite ample national direction and policy. Instead, the Selected Action would build 4.7 miles of new permanent road, 1.1 mile of temporary road, and reconstruct 47 miles of road—some of the latter which may*

already have been essentially naturally reclaimed. The EIS and ROD reject other alternatives that would not build new roads, in pursuit of biased desired conditions which drove vegetation management activities in a scientifically unjustified direction.

The EIS and responses to comments do not cite any data source to support the KNF's confidence that unsurveyed road impacts would be "low", other than citing a ten year-old document that referred to such unsurveyed roads as "future risks."

The EIS did not identify the specific road reconstruction segments that have effects as adverse as new road construction, only analyzing their effects the same as maintenance, in violation of NEPA.

Response: The responsible official's decision does not violate the Forest Plan, National Environmental Policy Act or Travel Planning Regulations. A detailed Travel Route Analysis Process was conducted and provided as part of the project file (PF, Vol. 2, Doc. 11, pp. 8 to 21). This analysis follows the final National Forest System Road Management Rule. This rule revises regulations concerning the management, use, and maintenance of the National Forest Transportation System. Consistent with changes in public demands for use of National Forest System resources and the need to better manage funds available for road construction, reconstruction, maintenance, and decommissioning (as defined in 36 CFR 212.1). The analysis is intended to help ensure that additions to the National Forest System road network are those deemed essential for resource management and use; that construction, reconstruction, and maintenance of roads minimize adverse environmental impacts; and that unneeded roads are decommissioned and restoration of ecological processes are initiated. Additionally the Forest Plan states that "If it is determined during project design that the best way to meet the goals of the Forest Plan conflicts with a Forest Plan standard the Forest Supervisor may approve an exception to that standard for that project." The responsible official did in fact approve a site specific amendment modifying the open road density requirement for Management Area 12 from 0.75 of a mile to 2.6 miles per square mile for the life of the project only (ROD, pp. 18 to 20).

I find the responsible official appropriately followed regulations and policy for Forest Plan, National Environmental Policy Act, 40 Code of Federal Regulations 1502 and Travel Planning Regulations, 36 Code of Federal Regulations 212.

Issue 2, Contention B: *The EIS presents no economic analysis of the project area road system, one that informs the public of any likelihood that the post-project road network would be affordable and maintainable in ecologically sustainable conditions.*

The EIS rejected alternatives that would not build new roads, in the absence of any transportation analysis or other analyses that would explain what future vegetation or other management actions would serve any sector of society, be it timber, recreation, fish or wildlife.

Response: The responsible official did present a full economics analysis of the project area that included in its analysis the feasibility of maintaining the road network in the future (DEIS, pp. 3-334 to 3-343; PF, Vol. 17).

I find the responsible official appropriately followed regulations and policy for National Environmental Policy Act 40 Code of Federal Regulations 1508.8.

Issue 2, Contention C: *The EIS mentions the existence of motorized trails in the project area, but there is no map of their locations. Since off-road motorized intrusions in unauthorized locations create potential adverse impacts on soils, water quality, and wildlife, and help spread invasive noxious weeds, proper lack of analysis in the EIS does not comply with NEPA.*

Response: The responsible official did present a full noxious weed analysis for the project area that included in its analysis direct, indirect and cumulative effects associated with the project (DEIS, pp. 3-295 to 3-302). Since no new motorized trails are proposed as part of this project there is no reason to assume the present motorized trails will increase the spread of noxious weeds within the project area. Additionally, no map was included because there are no trails proposed under the Pilgrim Creek project. However, a detailed travel management map can be found on the Kootenai's motorized vehicle use map which covers the project area. The Kootenai Forest Motorized Vehicle Use Map can be found at:
http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5364513.pdf

I find the responsible official appropriately followed regulations and policy for National Environmental Policy Act 40 Code of Federal Regulations 1508.8.

Issue 3. OLD-GROWTH ASSOCIATED WILDLIFE, HABITAT, AND VIABILITY

Issue 3, Contention A: *The EIS does not disclose how much old growth, or how much habitat for old-growth associated wildlife species, has been destroyed or degraded by all the past logging in the project area. The significance of these past cumulative impacts is without analysis, contrary to NEPA.*

Response: The Council of Environmental Quality regulations implementing NEPA require that all federal agencies consider cumulative actions in determining the scope of an environmental impact statement (40 CFR 1508.25).

The past actions that have occurred in the Pilgrim Creek project area have been included in the affected environment discussions, and the corresponding cumulative effects analysis build upon the existing condition assessment by considering the incremental addition of direct and indirect effects of the proposed action as well as present and reasonably foreseeable actions (DEIS, p. 3-1). The cumulative effects catalogue (Summary of Past, Ongoing, and Reasonably Foreseeable Actions) is presented in the DEIS (pp. 3-1 to 3-8). The old growth analysis discusses the existing condition of old growth as a result of historical timber harvest and wildfires (DEIS, p. 3-48). I find the Forest is in compliance with NEPA regulations for analyzing cumulative effects.

Issue 3, Contention B: *The EIS fails to disclose the changes in wildlife habitat due to past*

management activities in terms, required under the NFMA, relating to the concept of viable populations, meaning minimum numbers of individual members of a species, well-distributed over the KNF. The EIS doesn't disclose how past actions have affected population numbers of MIS and TES species, nor their distributions in the project area or over the KNF.

Response: The DEIS considers past actions that have occurred in the Pilgrim Creek timber project area in the affected environment discussions; the corresponding cumulative effects analysis build upon the existing condition assessment by considering the incremental addition of direct and indirect effects of the proposed action as well as present and reasonably foreseeable actions (DEIS, p. 3-1). The cumulative effects catalogue (Summary of Past, Ongoing and Reasonably Foreseeable Actions) is presented in the DEIS (pp. 3-1 to 3-8).

A separate Biological Assessment, which analyzes cumulative effects to TES species, was prepared and submitted to the US Fish and Wildlife Service after release of the DEIS (FEIS, Appendix L). The BA discusses cumulative effects to TES wildlife. Given that the largest amount of harvest activities in any one decade since 1950 is three percent of the project area, and a total of 10 percent over 60 years, it is unlikely population numbers or the distribution of MIS or TES have been significantly affected. I find that the Forest Service is in compliance with NEPA regulations in regards to analyzing past actions as part of cumulative effects.

Issue 3, Contention C: *The EIS failed to explain how the forest plan old-growth inventory had gotten so many acres wrong. In other places, the EIS relies upon that same forestwide old growth inventory for demonstrating viability of wildlife. In any case, since there are no criteria for designating forest as "replacement old growth," the statement that four of the stands are "not suitable" is without basis.*

Response: The current project was the first major project in Pilgrim Creek since the Forest Plan was signed in 1987 and the initial designation of old growth was based largely on photo interpretation. The project area was subsequently evaluated to ensure that the old growth that had been designated was suitable, and based on the more recent accepted scientific definition applying Green et al. 1992 (DEIS p. 3-53). In some cases the designated stands were not the best old growth or replacement old growth in the project area and other more suitable stands were designated. The Kootenai Forest Plan (FP) standard (p. II-22) states, "At any time 10% of the Kootenai National Forest land base below 5,500 feet in elevation will be in an old-growth timber condition, providing habitat for those wildlife species dependent on old growth timber for their needs. The old growth will be spread evenly through most major drainages, and will represent the major forest types in each drainage." The DEIS wildlife analysis of old growth discusses edge effect (p. 3-53) and concludes that there "may be reduced old growth quality for some plant and animal species" and that the action alternatives "would maintain the designated management level of old growth" (p. 3-56).

I find the Forest is in compliance with NFMA requirements to follow the Kootenai FP standard for maintaining 10 percent of the forest at elevations below 5500 feet in an old growth condition.

Issue 3, Contention D: *The issue of protection of snags in old growth was an issue that was raised during the original Forest Planning public process, and the KNF promised it would take proactive steps to protect these important old-growth habitat components. Obviously, the KNF has failed to do so. The EIS fails to disclose the significance of the effects on old-growth species' populations of habitat degradation of old growth because of firewood cutting and illegal poaching of trees due to this unrestricted access. The EIS simply does not present a sufficient analysis of the impacts of roads through old growth.*

Response: The Forest Plan contains a cavity habitat (snag) standard of no less than 40 percent of potential. Northern Region Snag Management Protocol (2000) recommends 4-12 snags per acre be left in treatment units.

The appellant overstates the issue by referring to "unrestricted access." The Kootenai FP prohibits firewood cutting in old growth areas (USDA FS KNF III-55) and where open roads are adjacent to designated old growth or other key habitat, signs designating it as a "wildlife leave area—no firewood cutting" will be displayed as needed (USDA FS KNF FP Appendix 16-7). The DEIS states that old growth areas along open roads are signed as closed to firewood cutting (p. 3-54). No new roads or temporary roads were proposed to be constructed through old growth (pp. 3-55 and 3-63), so this project does not create a direct or indirect effect from roads through old growth. Further, the snag analysis accounted for any possible existing snag loss by buffering the existing roads by 200 feet when determining snag densities (p. 3-58). The DEIS informs that "within proposed harvest units, retention of all snags greater than 10" dbh is planned" (p. 3-63). The Selected Alternative meets or exceeds the FP standard (DEIS, p. 3-64; ROD, p. 23).

I find that the Forest Service is in compliance with NFMA requirements to follow the Kootenai FP standard for maintaining 10 percent of the forest at elevations below 5500 feet in an old growth condition and for following Kootenai FP direction for signing old growth as closed to firewood cutting.

Issue 3, Contention E: *Since there is no scientific basis for assuming that 10% old growth is adequate for insuring species viability, and since there is no scientific basis to support the KNF's use of its MIS pileated woodpecker as adequately "indicating" for other species including the Sensitive wolverine, black-backed woodpecker, fisher, flammulated owl, northern goshawk, etc., the proof would be in the monitoring. And no available data is cited which demonstrates the KNF has conducted monitoring that validate the assumption inherent in the Forest Plan's old-growth habitat standards—that they are adequate for insuring old-growth species' viability. That has been a chronic problem across the Northern Region—the agency has failed to meet Forest Plan old-growth standards, does not keep accurate old-growth inventories, and has not monitored population trends in response to management activities as required by Forest Plans and NFMA (Juel, 2003).*

Response: "The maintenance of viable populations of existing native and desirable non-native vertebrate species, as monitored through indicator species, will be attained through the maintenance of a diversity of plant communities and habitats" (USDA KNF FP II-22). The Kootenai FP (Vol. II, Appendix 12) lists the pileated woodpecker as the management indicator

species for snag and old growth timber habitat. Kootenai Forest Plan Monitoring and Evaluation Plan items (Kootenai FP IV-8 to IV-9) that apply to old growth and pileated woodpeckers are: C-4 "maintain viable population of old growth dependent species (greater than or equal to 40% of potential)"; C-5 "maintain habitat capable of supporting viable populations of old growth dependent species (10% old growth in each drainage)"; C-6 "maintain habitat capable of supporting viable populations of cavity nesters (greater than or equal to 40% of potential)"; and C-8 "maintain indicator species above minimum viable population levels for the Forest as a whole". The Kootenai FP prescribes these monitoring items to be reported every two to five years.

The KNF Monitoring Report 2007 (USDA FS KNF 2008, pp. 20 to 38 and pp. 50 to52) describes the monitoring and evaluation completed for each of these items. The KNF Monitoring Report 2010, (USDA FS KNF 2011, pp. 2 to 16) also describes the monitoring and evaluation completed for item C-5. The monitoring results for the pileated woodpecker conclude that: "Hutto's report, the preliminary population transects, and Forest staff observations all point to the same consistent interpretation, that pileated woodpeckers are widespread and are relatively common on the Kootenai National Forest. The information available at this time does not indicate that a significant downward trend approaching 40% of population potential is occurring. Information for the Region is similar for the pileated woodpecker as well as the two other species which are dependent on old growth for a portion of their lifecycle" (USDA FS KNF 2008, p. 23). Additionally, the wildlife analysis for pileated woodpecker based on population potential for available old growth habitat (DEIS, pp. 3-74 to 3-77) concludes that the pileated woodpecker population potential would not be changed by the project. The DEIS (p. 3-78) asserts that because sufficient old growth, snag, and down wood habitat for pileated woodpeckers is available, populations of other species using that habitat would remain viable.

I find that the Forest Service is in compliance with the Kootenai FP standard for maintaining viable populations of old growth dependent species by providing sufficient habitat for the pileated woodpecker. The Forest Service is also in compliance with the Kootenai FP monitoring and evaluation plan by reporting findings for population viability of pileated woodpecker.

Issue 3, Contention F: *The EIS relies upon Forest Service non-peer reviewed papers by Samson and Johnson to support its claim that there is enough habitat regionally and forestwide to maintain species viability. Those documents rely on data of unspecified reliability, and in fact there is nothing that scientifically validates the Forest Service's approach for viability purposes.*

Response: The NEPA implementing regulations of 1500.1(b) regarding using high quality information that is available to the public are applicable to this contention. There is no requirement that information used in environmental analyses be peer reviewed.

The DEIS uses a variety of sources to conduct environmental effects analysis, many of which are peer-reviewed research. I find that there is not a rule regarding using only peer reviewed science. The Forest is in compliance with NEPA.

Issue 3, Contention G: *One of those, Samson (2006b) reports says that 110 breeding individuals (i.e. 55 pairs) are necessary for a viable goshawk population in Region 1. Appeal Attachment 1 is a map showing the results from the 2005 R1 region-wide goshawk survey using their "Woodbridge and Hargis" goshawk monitoring protocol, which is published as a USFS technical report. That 2005 detection map says they'd had 40 detections by 2005 in Region 1. So the results of this survey basically showed that the population in Region 1 is not viable according to the Forest Service's own science (only 40 instead of 55). And some of the detections may have been individuals using the same nest, so the number of nests (and therefore number of breeding pairs) could be even lower than 40.*

Response: The objectives of the 2005 R1 region-wide goshawk survey did not include an estimate of the population. The purpose of the survey was to estimate the rate of goshawk occupancy within a grid that approximated the size of a territory and define and document the geographic distribution of the species. Large portions of the region were not surveyed, such as roadless areas (Kowalski 2005). It is inappropriate to extrapolate the results of that survey for an estimate of the population. The DEIS concludes that sufficient habitat would be maintained in the project area for goshawks to use and breed and continue to contribute to stable and well distributed populations across the Kootenai and the Northern Region (DEIS, p. 3-83).

I find that the Forest Service is in compliance with NFMA requirements to provide for diversity of plant and animal communities to meet multiple-use objectives by compliance with Forest Plan standards and guides.

Issue 3, Contention H: *The EIS fails to provide any kind of analysis of how these fragmentation effects reduce the ability of the 10% "proxy" to provide for wildlife viability on a project-level or forestwide scale. The FS has still not sufficiently dealt with the issue of fragmentation, road effects, and past logging on old-growth species' habitat.*

Response: This project does not include logging or road building in old growth habitat. The DEIS considers past actions that have occurred in the Pilgrim Creek project area in the affected environment discussions; the corresponding cumulative effects analysis build upon the existing condition assessment by considering the incremental addition of direct and indirect effects of the proposed action as well as present and reasonably foreseeable actions (DEIS, p. 3-1). The cumulative effects catalogue (Summary of Past, Ongoing, and Reasonably Foreseeable Actions) is presented in the DEIS (pp. 3-1 to 3-8). A separate Biological Assessment which, analyzes cumulative effects to TES species, was prepared and submitted to the US Fish and Wildlife Service after release of the DEIS (FEIS, Appendix L). The BA discusses cumulative effects to TES wildlife.

Fragmentation is considered in the analysis for the Pilgrim Creek Project (DEIS, pp. 3-52, 3-54, 3-75, 3-108). Further, the DEIS (p. 3-283) reveals that the existing natural landscape character is in a "slightly fragmented state" and that previous management activities on National Forest lands and adjacent private property have contributed to the altered character in Pilgrim Creek landscape.

I find the Forest is in compliance with CEQ regulations for considering cumulative effects in

environmental analysis and I find the Forest is in compliance with NFMA requirements for following the Kootenai FP standards for old growth.

Issue 4. SOIL PRODUCTIVITY – VIOLATIONS OF NEPA AND NFMA

The EIS's method of showing consistency with NFMA and Forest Plan requirements for soils is to limit "detrimental disturbance" (DD) of soil to less than 15% of the areal extent of an "activity area" (project timber or burn unit).

The Project File soil survey document "03_pilgrim_soil_surveys" show many instances of soil disturbance noted in activity areas, "light disturbance" that was not considered DD. In some units (8, 8T, 8s, 12, 21A, 27, 28A) observations of past skid trail damage was noted in written notes but don't logically correspond to DD calculations. The analysis methodology that discounts the damage is arbitrary, without scientific justification. The EIS does not provide adequate rationale justifying why some areas of damaged soil can be considered undamaged. There is no provided correlation with the methodology used with any objective measure of DD or soil productivity.

Furthermore, estimated DD from the log landings is not included in the calculations, as required by the SQS ("All temporary roads, skid trails, and landings are considered to be part of an activity area"). Footnote 6 accompanying the table of document "01_soils_table_dsd_unit_alternative" states, "For determining temporary road soil disturbance an average width of 12' has been applied for calculating area of DSD. Following harvest all temp roads and landings used for harvest activities will be scarified at least 6-12" based on the depth." That table does not account for the detrimental disturbance that would be created by the landings.

The EIS did not consider disturbed soils <u>outside of project activity areas</u>, despite indications that soil productivity in such other locations within the project area are just as important for hydrologic functioning, sustained yield of timber, and overall land productivity. USDA Forest Service 2009c discloses, for such areas where disturbed soils would not be restored by active management, "no action" ...would create indirect negative impacts by missing an opportunity to actively restore damaged soils." (Emphasis added.)

Despite the Forest Plan requirements to annually "monitor the effect of soil disturbance/displacement on land productivity," checking for "Annual Movement or compaction of soils reducing productivity more than 20 percent" the Forest Service has not adequately responded, failing to provide the essential feedback for "adaptive management."

The above problematic noncompliance with the soil quality standards—the agency's soil proxy—is on top of the agency's already arbitrary determination that it may permanently damage the soil in less than 15% of an activity area and that still meets NMFA and planning regulations, and is consistent with the best science. The EIS does not cite any scientific basis for adopting its percent numerical limits. Page-Dumroese et al. 2000 emphasize the importance of validating soil quality standards using the results of monitoring.

The EIS also relies upon Best Management Practices (BMPs) to base its claims that soil productivity will be maintained following logging practices. However, BMP monitoring does not even attempt to measure post-project soil productivity, since the audits are not scientifically designed to do so. Nor does it result in quantitative measures of detrimental disturbance, or soil productivity, which are the most relevant factors here.

Response: The Multiple Use-Sustained Yield Act of 1960 directs the Forest Service to achieve and maintain outputs of various renewable resources in perpetuity without permanent impairment of the land's productivity.

Section 6 of the National Forest Management Act of 1976 (NFMA) – Section 6(g)(3) states that harvest shall be "carried out in a manner that is consistent with the protection of soil resources" and that "soil, slope, or other watershed conditions will not be irreversibly damaged". To comply with NFMA, the Chief of the Forest Service has charged each Forest Service Region with developing soil quality standards for detecting soil disturbance and indicating a loss in long-term productive potential.

The Regional Soil Quality Standards (R-1 Supplement 2500-99-1) provides soil quality standards to assure the statutory requirements of NFMA are met. The Forest Service Manual direction is to not create detrimental soil conditions on more than 15 percent of an activity area. This is based on research indicating that a decline in productivity would have to be at least 15% to be detectable (Powers, 1990). In areas where more than 15 percent detrimental soil conditions exists from prior activities, the cumulative detrimental effects from project implementation and restoration should not exceed the conditions prior to the planned activity and should move toward a net improvement in soil quality. These standards do not apply to intensively developed sites such as permanent roads/landings, mines, developed recreation and administrative sites.

The Forest Plan states that soil and water conservation practices (SWCPs) as outlines in Water Conservation Practices Handbook R-1/R-4 Amendment No. 1 (FSH 2509.22) will be incorporated into all land use and project plans as a principle mechanism for controlling non-point pollution sources and meeting soil and water conservation practices or State standards will brought into compliance, modified, or stopped (Volume 1 p II-23). Best Management Practices consist of state-of-the art practices that fulfill Forest Plan objectives and are designated to minimize soil disturbance during harvest and road construction activities.

The Kootenai Forest Plan states that effects on soil productivity will be evaluated for all projects involving heavy equipment and that the total area allocated to concentrated equipment travel should be minimized.

The Pilgrim Creek Timber Sale soils inventory/monitoring methodology and analysis methodology is consistent with R-1 Supplement No. 2500-99-1 (Vol. 09, Doc. 002) as presented in the DEIS, Chapter 3, Pages 232-261. Consistent application of this Forest Service Manual 2500 supplement with corresponding definitions and direction meet National Forest Management Act (NFMA), National Environmental Policy Act (NEPA) and other legal mandates. All units containing evidence of existing soil disturbance related to past management activities received a

full qualitative field survey using R1 Soil Survey Procedures (Project File, Vol. 9, 001 through 005) The post-harvest, cumulative detrimental disturbance determinations for all proposed activity areas within all alternatives for the Pilgrim Creek Timber Sale are within and do not exceed the 15% detrimental soil disturbance standard prescribed in R-1 Supplement No. 2500-99-1 (DEIS, page 3-247 to 249, Table 3-71). The analysis discloses that the cumulative effects to soil productivity are analyzed for activity areas as opposed to the "watershed scale" because that is not considered an appropriate geographic area (DEIS, p. 3-236).

BMPs are accepted and proven practices for mitigating detrimental effects to soil productivity from management activities, including timber harvest and prescribed fire. BMPs are intended to reduce detrimental effects to soil productivity from management activities. BMP monitoring assesses whether BMPs were implemented as prescribed. When soil protection BMPs are implemented as prescribed, soil productivity is maintained. The EIS includes a section titled "Current Versus Historic Management Practices" that describes the improvements in management practices to protect soil resources over time and lists the Forest BMPs that are currently incorporated into timber harvest activities (DEIS, p. 3-256).

The soils analysis includes a comprehensive discussion and analysis regarding nutrient cycling, the importance of maintaining both fine and course woody debris (CWD), the science used for project design to insure maintenance of CWD, and how the recommended CWD requirements would be met within both regeneration and commercial thin harvests activity areas (EIS, pp. 3-254 to 3-255).

I find that the responsible official has followed the R-1 Supplement No. 2500-99-1and thus meets requirements under MUSY, NFMA, NEPA. The soils analysis is developed around minimizing detrimental effects to soil productivity and maximizing the long term preservation of soil productivity. The appropriate science used in the development of R-1 Supplement 2500-99-1 has been appropriately referenced in the analysis. The effects of the proposed management activities have been clearly articulated and disclose that the maintenance of long term soil-productivity, hydrologic function, and ecosystem health will be ensured (EIS, pp. 3-232 to 3-260). The scientific information used to conduct soils analysis is extensive, current and relevant (PR, Vol. 9.1). The EIS's disclosure that none of the pre-harvest or post-harvest treatment units will exceed the 15% detrimental disturbance prescribed in R1 Supplement 2500-99-1 validates that soil productivity is being maintained to meet legal mandates in the MUSY, NFMA, NEPA, and the Kootenai National Forest Plan.

Issue 5. INVENTORIED ROADLESS AND UNROADED AREAS

The EIS's analysis of the impacts of the proposed activities on Inventoried Roadless Areas (IRAs) and unroaded areas not included as part of IRAs (collectively, "roadless areas") is inadequate. There is no map accompanying the EIS's analysis of the two 1,000+ acre unroaded areas which would display the approved road construction and vegetation treatment activities in relation to the unroaded areas. Roadless areas such as those found in the project area vicinity, both inventoried and uninventoried, are of great importance to the public and of high ecological value. The absence of any action alternative in the EIS which excludes logging within roadless

represents a failure to consider a broad range of alternatives as required by NEPA.

Without a map and proper analysis, nobody would be able to discern if there are inaccuracies of the IRA boundaries/roadless inventory (Appeal Appendix 1), or what the EIS is talking about for the two identified unroaded areas, which the EIS discloses are approximately 1,846 acres and 1,717 acres in size. This means that the cumulative effects analysis of the proposed activities on the roadless resource is inadequate and does not comply with the NEPA.

While the Forest Service may claim it does not have an explicit legal obligation to protect these unroaded areas, it does have a legal obligation pursuant to NEPA to accurately, scientifically, and objectively describe the environmental consequences of logging and road building in these ecologically significant areas. NEPA also requires that the agency disclose all pertinent science, including ongoing scientific research and controversy. And NEPA requires the agency to develop scientifically sound environmentally protective action alternatives in EISs.

The EIS does not explain why shelterwood unit #4 doesn't partially fall within a properly conducted roadless area delineation. The same can be said for units 3, 28, 28A, 30, 36, and possibly others. The EIS Appendix F map shows IRA boundaries that appear arbitrary and in some cases nonsensical, without explanation or site-specific analysis.

The EIS did not integrate the results an up-to-date project area Transportation Analysis Process with the analysis of unroaded areas, which would make the issue of unroaded extent and boundaries much more transparent. In other words, it would make so much more sense if this analysis would disclose the details of the Transportation Analysis Process for all the roads in close proximity to the roadless areas.

Response: The responsible official's decision does not violate either the 2001 Roadless Area Conservation Rule or National Environmental Policy Act. A detailed site specific Inventoried Roadless and Unroaded Analysis Process was conducted for the project area and provided as part of the environmental impact statement and the project file (DEIS, pp. 3-277 to 3-288; PF, Vol. 11, Docs. 01 to 11). Maps of the inventoried roadless areas were provided as part of the environmental impact statement (DEIS, Appendix F) and the unroaded areas can be found on the Kootenai Forest Map at http://www.fs.usda.gov/main/kootenai/maps-pubs.

The Inventoried Roadless and Unroaded Analysis Process accurately, scientifically, and objectively described the environmental consequences of logging and road building in those inventoried roadless and unroaded areas. The appellant also contends that the environmental assessment doesn't consider a broad range of alternatives because it does not consider an alternative that does not have logging in the inventoried roadless area. However, no logging is proposed in the inventoried roadless areas under any of the alternatives considered (DEIS, pp. 2-1 to 2-55). Further, a detailed transportation analysis was conducted for the project area (PF, Vol. 2, Doc. 11) which discusses the transportation analysis process for all roads within the project area including those in close proximity to the inventoried roadless areas.

I find the responsible official appropriately followed regulations and policy for the 2001Roadless Area Conservation Rule and the National Environmental Policy Act.

Issue 7: FIRE AND SUSTAINABLE MANAGEMENT

The EIS discloses that 3,624 acres of national forest lands have been logged in the past in the project area. The EIS does not provide analyses disclosing how those actions have affected fuel profiles in areas not proposed for logging. It also does not explain how those past and proposed cuts would affect foreseeable wildland fire behavior across the project area and beyond. The EIS's analysis does not support its assumption that the project activities would adequately and significantly reduce tangible risks of fire.

Wildland fire operates beyond artificial ownership or other boundaries. In regards to the proper cumulative effects analysis area for fire risk, Finney and Cohen (2003) discuss the concept of a "fireshed involving a wide area around the community (for many miles that include areas that fires can come from)." In other words, for any given entity that would apparently have its risk of fire reduced by the proposed project (or affected cumulatively from past, ongoing, or foreseeable actions on land of all ownerships within this "fireshed")—just how effective would fuel reduction be? The EIS fails to include a thorough discussion and detailed disclosure of the current fuel situation within the fireshed within and outside the proposed treatment units, making it impossible to make scientifically supportable and reasonable conclusions about the manner and degree to which most fire behavior would be changed by the project.

Response: The responsible official's decision does not violate National Environmental Policy Act. The DEIS clearly states the purpose for the project is to maintain and increase forest resilience to insects, disease, and disturbance by increasing age class diversity in lodgepole pine stands, improving growing conditions and favoring root disease resistant species in mixed conifer stands affected by root disease, and improving big game forage production while providing for the local economy though commercial timber harvest (DEIS, p. 1-4). The purpose and need for the project was not to create a fire shed or reduce fuels loads within the wildland urban interface. While the reduction of fuels within the project area may be a result of the implementation of treatments it would be a secondary one (DEIS, pp. 1-3 to 1-6). The fire and fuels analysis does look at how each of the alternatives would alter the future behavior within the project area. Further, an EIS is to disclose the effects of the project on the landscape not to re-analyze past projects (other than to consider any continuing effects of them under cumulative effects).

I find the responsible official appropriately followed regulations and policy for the National Environmental Policy Act.

Issue 8. UNSUITABLE LANDS, NFMA, AND FOREST PLAN CONSISTENCY

The EIS at 1-16 states:

> *(S)ome areas of MA18 were reclassified as either MA10 or MA 12 in the upper West Fork of Pilgrim Creek. MA18 areas are considered difficult to regenerate following timber*

harvest for various reasons. In Pilgrim Creek, these areas were reclassified due to field verification of abundant regeneration occurring in these areas and deeper, more productive soils than is typical of other areas of MA18. Some areas where site conditions warranted a classification of MA18 still remain as such. This Forest Plan amendment process is documented in the administrative file for the Pilgrim Project.

Our comments on the DEIS included, "The DEIS indicates that the FS has completed amending the forest plan in regards to unsuitable lands in MA 18 without providing any analysis in the DEIS." The Forest Service responded, "The analysis for the Management Area validation is included in the project file."

The Forest Plan states that MA 18 "occurs on areas of slopes in excess of 40% ...(and) is distinguished by the difficulty in establishing coniferous regeneration after timber harvest."

In changing the Management Area for areas of the project area that were classified as MA 18 under the forest plan, the Forest Service is also significantly altering forest plan direction, such as standards. Some standards for MA 18 are:

- *Wildlife habitat will generally be managed in a natural condition, but enhancement may occur, with prescribed fire being an acceptable tool.*
- *Because of the sensitive nature of this MA and the steep slopes, water quality and soil erosion will be monitored as part of any timber harvest, road construction, or activity which disturbs the surface.*
- *Temporary roads will normally not be constructed.*
- *When local roads are open they will be maintained at level 2.*
- *Roads will be constructed and maintained at the lowest standard necessary for the intended activity at the lowest cost consistent with the other resource standards.*

NFMA requires that changes to forest plan direction require the forest plan amendment process, which itself invokes the NEPA process. That means disclosing to the public the areas of proposed changes, disclosing analysis of effects, and including a no-action alternative. In this case, the forest plan amendment process and NEPA were not followed, in violation of law and policy.

Response: For Management Area 18, the KNF Forest Plan states: "Except for Congressionally established or special administrative boundaries, the MA boundaries are not firm lines and do not always follow easily identified topographic features such as major ridges, rivers, streams, roads, etc. The boundaries represent a transition from one set of opportunities and constraints to another with direction established for each. The boundaries are flexible to assure that values identified are protected and to incorporate additional information gained from further on-the-ground reconnaissance and project level planning" (KNF Forest Plan, p.III-1).

KNF Forest Plan Management Area 18 direction allows the Forest to "Reassign the productive timberland to the suitable timber base when regeneration techniques can be assured and market conditions are such that the harvest of timber from this MA will contribute to the Net Public Benefit" (KNF Forest Plan; p. III-80; Timber, #6).

A Recommended Management Area Change Summary identifies 503 acres being proposed and approved for reassignment from their original designation within Management Area 18 to a reassigned designation within Management Area 12. The change is based on monitoring that has demonstrated regeneration is not a problem and areas proposed for change can meet the after harvest five year regeneration requirement under NFMA (PF, Vol. 2, Doc. 014). An additional letter to the District Ranger from the Forest Silviculturist, dated February 14, 2011, proposes certain lands in Skeleton Creek of Management Area 18 lands to be reassigned to a Management Area suitable for timber production based on the determination that techniques are available to insure regeneration after timber harvest (PF, Vol. 2, Doc. 012).
Recommendations for proposed management area changes are based on the four categories established in FSH Supplement 1909.12. The categories are:

> Category 1: changes simply correct mapping errors.
> Category 2: changes involve verification of the scientific and technical information which led to the original MA designation.
> Category 3: refers to legally mandated changes such as land exchanges, Congressional passage of a Wilderness Bill, or Record of Decision for a large mine or other major private initiative. This type of change may trigger a Forest Plan Amendment.
> Category 4: involves the realization that another MA designation for an area may be more preferable.

Category 1 and 2 changes are routine field validations that do not trigger a formal Forest Plan Amendment. The re-assignment of Management Area 18 acres to Management Area 12 acres fits within category 2 described above as this change involves verification of scientific and technical information, in this case the potential or lack thereof, for successful, adequate regeneration as prescribed in NFMA. Field verification has been completed and has documented that the change is appropriate because the areas proposed for change can be successfully regenerated as required by NFMA (Vol. 2, Doc. 012 and Doc. 014). This change is consistent with the Kootenai Forest Plan (Kootenai Forest Plan, p. III-80, Timber, #6). The project is in compliance with Forest Plan standards.

Issue 9. FOREST MANAGEMENT AND CARBON BALANCE

The science on climate change supports the idea that national forest management emphasis should shift away from logging to carbon storage. All old-growth forest areas and previously unlogged forest areas should be preserved indefinitely for their carbon storage value. Forests that have been logged should be restored and allowed to convert to eventual old-growth condition. This type of management has the potential to double the current level of carbon storage in some regions. (Harmon et al., 2002; Harmon, 2001; Harmon et al., 1990; Homan et al., 2005; Solomon et al., 2007; Turner et al., 1995; Turner et al., 1997; Woodbury et al., 2007)

Response: The appellant provided one brief comment on the DEIS related to climate change and carbon flux (FEIS, Response to Comments, p. 12). No supporting evidence or literature was provided with that comment. That comment by the appellant is only remotely reflected in his

current appeal contention. The Forest addressed the DEIS comment explicitly and appropriately (FEIS, Response to Comments, p. 13).

The appellant now includes in this appeal a two page argument (essentially a policy statement, not an allegation; no violations of law, regulation, or policy are asserted) with numerous additional literature citations. The appellant did not put the agency on notice of these additional concerns. This is not the first time this has occurred (e.g. see ARO Letter on Appeal #12-01-00-0071, pp. 29 to 30). The notice and comment period is intended to solicit information, concerns, and any issues specific to the proposed action and to provide such comments to the Responsible Official before the decision is made. The intent in requiring comments is to obtain meaningful and useful information from individuals about their concerns and issues, and use it to enhance project analysis and project planning. Waiting until the appeal period to raise additional issues and arguments or submit literature they believe is relevant to the decision does not give the Responsible Official an opportunity to consider the impacts of the project in light of public concerns.

Due to the fact the appellant did not bring these specific concerns to the attention of the Responsible Official at the appropriate time; I will not consider the contention further. I will note that the appellant raised almost identical issues recently on appeal of the Charlie Preston project and, prior to that, the East Fork Meadow Creek project and referenced the same literature. In the later case, the Appeal Reviewing Officer found, "The scientific and other literature provided by the appellant has limited direct relevancy to the issue under review…All represent valid studies or treatises on their particular subject matter…however their scope is either at the global scale or else study or focus on ecosystems quite different than those being considered here" (3/8/2012 ARO Letter on Appeal #12-01-00-0034, pp. 29 to 32). Based on these prior reviews and related analysis, I also conclude the current contentions and literature citations do not represent significant new information about the potential effects of this project.

For issues determined to not be significant, NEPA requires only a "brief presentation of why they will not have a significant effect on the human environment" (40 CFR 1501.7(a)(3)). The analysis is in compliance with NEPA (see also DEIS, pp. 3-29 to 3-31 and 3-35; FEIS, pp. 89, and 98 to 99).

Issue 10. SCIENTIFIC INTEGRITY

The EIS relies upon reports which are alleged to prove viability is being maintained for various wildlife species of concern on the KNF. However, those reports have not been subject to scientific peer review and thus fail to meet the best available science standard.

Response: There is no law or policy which states that the Forest Service must use only peer-reviewed references. Title 40 CFR 1500.1(b) and 1502.24 requires information used in environmental analyses be of high quality and the scientific analysis be accurate. However, there is no requirement that cited literature be peer reviewed.

In the ROD (p. 38) the Forest Supervisor discusses scientific integrity. He states, "Throughout Chapter 3 of the DEIS each specialist on the Interdisciplinary Team focused on use of scientific information which was relevant or applicable to the resource field, as reflected in the analysis documentation…Reference citation are found throughout the DEIS, indicating how the analysis is tiered to relevant science." The project and analysis are in compliance with 40 CFR 1500.1(b).

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

Julie K. King

JULIE K. KING
Forest Supervisor

cc: Paul Bradford, Janis L Bouma, Ray G Smith, Allen Byrd