Middle East Fork Project
Summary of Objection Issues and Suggested Remedies

Project Name: Middle East Fork Hazardous Fuels Reduction Project
Objector: Jim Miller, Friends of the Bitterroot
Objection Number: 0010

Issue 1. (COMM) USFS responsibility for fire protection, if any, would be only with FS land within the community protection zone, about 400 meters from a home or community.

Suggested remedy: None

Regional Review and Response: Per the "Cooperative Fire Management Agreement", the State of Montana and the Federal wildland agencies in the State of Montana have entered into an offset agreement whereby the Bitterroot National Forest has the primary wildland fire responsibilities on certain state and private lands. On the Sula Ranger District this includes all state and private property with the exception of a small portion of the French Basin. All lands within the Middle East Fork (MEF) project are included. For more information see the Original Master Agreement dated 3/98 in project file.

Issue 2. (OG) The Rationale to cut large trees beyond the WUI is not scientifically supportable.

Suggested remedy: None

Regional Review and Response: Generally the largest live healthy trees are retained with all treatments, inside and outside of the wildland urban interface (WUI). The concern of treatments outside the WUI was addressed in the response to Public Concern Statements 63013, 63004, and 63038 and 3601, 3620, and 23011 in Volume 2 of the Final Environmental Impact Statement (FEIS).

Part of the Purpose and Need of the MEF proposal is to restore fire adapted ecosystems and restore stands affected by the Douglas fir bark beetle to promote ecosystem function, composition and structure (FEIS, Section 1.2). The purpose of treatments outside the WUI is to improve fire regime condition class (FRCC), restore fire adapted ecosystems and forest health (FEIS, Section 1.2); however there is an associated benefit in that strategically placed fuel treatments (SPLATs) in the non- WUI landscape will reduce the risk of loss due to wildfire in the WUI by improving controllability (Finney, 2002) and by reducing fire severity. Pollet and Omi (2002) found that more open stands experienced lower fire severity than more densely stocked stands. See also FEIS, Section 3.1.6.A. To quantify this benefit, from non-WUI treatments, the Forest added FARSITE modeling to the FEIS (see pp. 3.1-40 through 3.1-48).

Issue 3. (OG) Forest Plan requirement to protect all snags is routinely ignored and this is of particular concern in old growth. Large snags are essentially irreplaceable components of a healthy forest.

Suggested remedy: None

Regional Review and Response: Snags are currently an abundant resource on the Bitterroot National Forest and in the Middle East Fork drainage. The intent of the site specific Forest Plan Snag Standard is clarified on pages 1-12 of the FEIS and on page 2-52: Standard 2.e.(3) (FP, p. II-20) would be clarified and amended, for this project only, to read: "Snags should be maintained within the Middle East Fork project activity area at or above the levels specified in the following table and explanations:

HT Group	Snags (average trees per acre)
A & B	2-5
C, G	4-12
E, F, H	10-15

Distribution of retained snags will be based on site specific conditions and may be irregular and clumped. In order to meet federal safety (OSHA) requirements for a safe work environment, retained snags must be grouped in helicopter harvest units. Groups may be retained in concentrations within treatment units. Retained snags will include representation across size classes in the unit, including the largest tree classes. Snags retained in riparian habitat conservation areas (RHCA) exclusion zones will be in addition to the snags per acre left in treatment units. In areas where there are not sufficient snags, recruitment snags (currently green) will be left."

Stand level prescriptions by a certified silviculturist and wildlife biologist will provide unit specific snag retention requirements including spatial distribution, species, and snag sizes. Prescriptions will meet the proposed snag standards including the following number of snags retained by habitat type (HT) groups. HT groups are described in Chapter 3, Sec. 3.2.6. Irregular distribution and small clumps are desirable. All clumps will be less than 4 acres in size unless otherwise agreed to by the wildlife biologist.

The effect of this site-specific Forest Plan amendment is discussed and disclosed on pages 3.6-21 through 3.6-24 and it is determined that the relatively minor effect of this proposal on snags is imperceptible and inconsequential when considered at the Forest scale.

Issue 4. (OG) Protection of homes and community is being held hostage to logging old growth stands miles away from homes.

Suggested remedy: None

Regional Review and Response: The harvest is related to stands with Douglas-fir bark beetle and improvement of FRCC and the preferred alternative does not include commercially harvesting in old growth. These prescriptions meet the purpose and need for the project and HFRA. Also see response to Issue 2 above.

Issue 5. (COMM) Work needs to be prioritized by looking at factors like housing density and legitimate fire hazard ratings.

Suggested remedy: None

Regional Review and Response: This was done in the Bitterroot Community Wildfire Protection Plan. The MEF WUI is the same as the Bitterroot Community-Based Wildfire Protection Plan (Community Fire Plan, PF-IRA-006). The Community Fire Plan is a valley-wide look at the population densities, infrastructure and hazardous fuel conditions. This methodology is recommended by The Wilderness Society in their paper T*argeting the Community Fire Planning Zone* (Wilmer and Aplet, 2005).

Issue 6. (LANDSCAPE) The confidence interval of speculative impacts, like "catastrophic" fire, needs to be disclosed along with the confidence level of impacts caused by the planned activities.

Suggested remedy: None

Regional Review and Response: Each of the resource sections have a methodology section where the analysis methodologies and their limitations are discussed. The Project File contains additional information on the modeling assumptions and limitations; the document is called Methods for Fire Behavior Modeling by Tonja Opperman (PF_FIRE_023).

Not all of the analysis tools are based on statistics where confidence intervals, standard deviations or standard errors can be assessed. This does not render the information scientifically invalid, unreliable or inadequate. Vegetation data (stand exams, mortality modeling, etc.) does have statistical analysis which is disclosed in the FEIS and included in the project file. This information shows the accuracy, standard deviation, standard errors and confidence intervals of the estimates (SILV-042, SILV-45, SILV-69, SILV-52, SILV-6).

Catastrophic*: A violent or sudden change in a feature of the earth, Websters Dictionary.* Catastrophic is not used to describe fire effects in the MEF FEIS.

Risk: *The possibility of meeting danger or suffering harm, Websters Dictionary*. When risk is used relative to wildland fires, it refers to the probability of escape resulting in financial and ecological loss. Alternative management scenarios generate different degrees of risk and ultimately a different set of economic outcomes (Hesslin and Rideout, 1999). MEF Fire analysis identifies the susceptibility of a project/planning area to wildfire in terms of risk and hazard to determine effects of proposed vegetation and fuels altering projects.

1. ***Fire Risk*** applies to the probability of an ignition occurring as determined from historical fire record data.

   The fire ignitions history of the MEF area is documented in the FEIS on pages 3.1-15 and 16 and in the cumulative effects section Appendix B. It is based on actual fire reports and scientific studies (Arno, 1976). Potential fire size is estimated for the MEF area using

FARSITE and documented on pages 3.1-26 and 40-46. A local fire risk analysis using PROBACRE is cited in the references (Boyd, 2002).

2. ***Fire Hazard*** identifies the availability of fuels to sustain a fire and using fire modeling results in varied intensity levels of fire behavior prediction. Where high risk coincides with high hazard, the probability of fire with undesirable effects is more likely.

   The hazard portion of the MEF analysis correlates directly to predicted fire behavior that is a function of fuels, weather and topography. The fuels and topography portion of the fire behavior triangle were analyzed through use of Forest Vegetation Simulator-Fire & Fuels Extension (FVS-FFE), FlamMap and FARSITE. Changes in Flame Length, Rate of Spread, and Crowning Index **for the WUI** are reported in the FEIS on pages 3.1-27 to 51.

   The fuels relates directly to standing vegetation as well as dead and down surface fuels. MEF field data (stands exams and Brown' transects) was collected for the analysis Representative weather data from WIMS archives for local weather stations (FEIS, pp. 3.1-10 and 11). Fire behavior predictions are based on 90th percentile conditions.

3. **Values At Risk** -- include critical watersheds/viewsheds, erosive soils, threatened and endangered species habitat, commercial timber, communities at risk and other infrastructure (communications sites, campgrounds, summer home groups etc). The values help establish priorities and quantify the effects of the action and no action alternatives.

Issue 7. (PROCESS) The Community Wildfire Protection Plan has never been afforded NEPA analysis or public review; hence, 'tiering' to it is therefore not appropriate.

Suggested remedy: The Community Wildfire Protection Plan needs NEPA review if it is to be tiered to by this or other projects.

Regional Review and Response: Federal involvement in planning and developing Community Wildfire Protection Plans is exempt from National Environmental Policy Act (NEPA) (HFRA Interim Guide, February 2004, p. 34).

Issue 8. (PROCESS) Public process and collaborative process had failures. Conservation groups not invited and the 1st meeting was not advertised as HFRA.

Suggested remedy: The EIS process should begin anew with a genuine collaborative approach facilitated by qualified, trained facilitators. Sufficient scientific and legal information should be provided to adequately inform the citizen participants, including best available science that contradicts the FS contentions. Alternative 3 should not be arbitrarily narrowed, except where possibly necessary to comply with HFRA. The public process should be directed by a person independent of the FS, from outside the community and trained in facilitating collaborative efforts, for example Jim Burchfield of the Bolle Center for People and Forests.

Regional Review and Response: In fact, the following Environmental and Conservation groups, agencies and newsmedia were invited to the March meeting by direct mail invitation. The groups highlighted in **BOLD** are groups the Native Forest Network, in a communication to the Forest, incorrectly stated were not invited. The names crossed off the list that appear here were crossed off because the notification was sent to a different person or address for that organization.

Alliance for the Wild Rockies
American Wildlands
Bitterroot Backcountry Horsemen
Bitterroot Audubon
Ecology Center
Friends of the Bitterroot
Montana Fish Wildlife and Parks
Montana Wilderness Association
Montana Chapter of the Sierra Club
National Wildlife Federation
Ravalli County Fish & Wildlife Association
Ravalli County Republic
US Fish and Wildlife Service

The local Montana Wilderness Association representative in Stevensville, MT was invited to the meeting but because the project is not located in wilderness or proposed wilderness other wilderness organizations were not included in this direct mailing. The Middle East Fork Project does not affect the Clearwater River so the Friends of the Clearwater, located in Moscow Idaho, were not directly invited. The local media was sent a direct invitation; the Missoulian and other media outlets, including radio were all sent our news release about the meeting.

In addition to the groups listed above, the following Conservation and Environmental Groups were directly invited to the September 2004 public meeting.

Bitterroot Trout Unlimited
Friends of the Clearwater
KLYQ Radio
Native Forest Network
Pacific Legal Foundation
The Wilderness Society
Wilderness Watch

The decision to use Healthy Forests Restoration Act (HFRA) as the planning tool had not been made before the March 18th meeting. With HFRA projects the emphasis is on collaboration early in the process, before NEPA even starts, to develop one acceptable proposed action. For the Middle East Fork project this early work started just after the fires of 2000.

Issue 9. (PROCESS) The USFS arbitrarily elimination of most of the proposed road and watershed restoration work in Alternative 3 because they said the HFRA did not allow for road restoration beyond mitigation of haul roads.

Suggested remedy: None

Regional Review and Response: This concern was addressed in the responses to Public Concerns 10017, 3620 and 3152. In summary, in the draft the Forest did not include restoration beyond what was needed for mitigation to offset project effects. In response to public comment, additional mitigation was analyzed and included to reduce sediment impacts in the analysis area and meet the direction described in the Draft Bitterroot Headwaters TMDL. In the FEIS additional watershed improvement projects were identified that would help to directly restore watershed conditions in Jennings Camp and Guide Creeks, two watersheds within the analysis area historically impacted by valley bottom roads and/or high road densities. This restoration/mitigation would eliminate or restore 13 stream crossings, decompacting and putting into long-term storage 4.2 miles of road, reduce potential access for Off Highway Vehicle's (OHV's) along an intermittent tributary to Jennings Camp by recontouring old skid trails. The restoration/mitigation also includes gating a non-system road in Springer Creek that currently allows for OHV access to a closed road system; allowing for only administrative or permittee access, and replacing or removing four fish barrier pipes that are located in Springer (2 pipes), Bertie Lord Creeks (2 pipes). This restoration work is included in both action alternatives with the difference being that in Alternative 2 all but the fish passage restoration would be accomplished using project related funds while in Alternative 3 additional appropriated dollars would be needed for most of the identified restoration work. Please see Table 3.3-4 and 3.3-5 for details on proposed restoration/mitigation and likely funding opportunities.

Issue 10. (PROCESS)At a meeting to present Alternative 3 on 5/3/05, the only objections voiced related to work beyond that contained in Alternative 3, no significant objections were made about work contained in Alternative 3, thus it became clear that Alternative 3 represents the common ground of that diverse group.

Suggested remedy: See below.

Regional Review and Response: The Forest strongly disagrees that there was any agreement reached in this meeting on anything. The Forest's record of comments made during the meeting, both before and after the questions by proponents of Alternative 3 of whether there was at least agreement in going forward with Alternative 3, support that there were a range of views and concerns and no agreements (PF-SCOPE-091). Comments received during the Draft Environmental Impact Statement (DEIS) comment period from others who attended that meeting also support this. No agreement on Alternative 3, or anything else was reached.

Issue 11. (PROCESS) Comments were discounted as forms, but are more detailed than some of the initial comments that are considered by the BNF

Suggested remedy: None

Regional Review and Response: When the Forest receives more than 5 letters with the same content it is considered a form letter, however that does not mean the content is discounted. The content of comments were analyzed whether the comment came from one or numerous commenters. It is explained in the FEIS that "It is important to understand that this process makes no attempt to treat comments as votes." (Volume II, Appendix H, p. H-10).

Issue 12. (PROCESS) Pre-decisional tree marking makes a mockery of public process.

Suggested remedy: None

Regional Review and Response: It is inappropriate for Forests to make an irreversible or irretrievable commitment of resources prior to a decision. However, it is appropriate, and not uncommon, for some preliminary work to be done on the ground prior to decisions especially in northern tiered states where field seasons are so short. Forest Service policy in (Forest Service Manual) FSM 2432.31a states that marking timber is not implementation of a decision for the purposes of NEPA. In the case of vegetation treatments, early marking allows the public, FS and other agency specialists, and land managers to have a better visual understanding of how the proposed treatment will actually look. In the past, members of the public have expressed concerns that it is difficult to visualize what the Forest was proposing. If the marked trees are part of the final decision, the early marking allows for more efficient implementation of the decision.

Issue 13. (PROCESS) Comments received on time from the Wilderness Society, Pacific Rivers Council and Joe Fox were excluded from inclusion or response in the FEIS.

Suggested remedy: None

Regional Review and Response: All comments received during the comment period were reviewed and considered and incorporated into the FEIS and Appendix H. There are two exceptions to this which is explained below.

All three of the comments mentioned by the objector have been reviewed and analyzed by the Interdisciplinary Team (IDT) to see if any new information or issues were raised that were not addressed in the FEIS (PF- RESPONSE-001, 002, and 004). The Forest received the Pacific Rivers Council's email on June 14th, after the June 13th deadline, so it was correctly not included in the FEIS. No error was made in this case. These comments have subsequently been reviewed and responded to by the IDT and this information will be reviewed by the deciding officer before a decision is made.

Dr. Joseph Fox emailed his comments on June 10. On June 20 Sandy Mack emailed Dr. Fox explaining that due to a processing error the Forest had lost the attachment containing his comments. In the note she apologized for the error and requested that he resend his comments (PF-SCOPE-083). Dr. Fox did not respond nor resend his comments. Dr. Fox, told Sandy Mack in a phone conversation on October 16 (PF-SCOPE-152) that he had forwarded her email to Matthew Koehler and Matthew told him he did not need to respond; that the problem was with the form letter emails. The same email Sandy sent to Dr. Fox went to three other commenters

whose comments in the form of email attachments were inadvertently lost on June 10th as well. All three of those commenters understood the request in the email and resent their comments which were considered in the FEIS. Dr. Fox's comments have subsequently been reviewed and responded to by the IDT and this information will be reviewed by the deciding officer before a decision is made.

The Wilderness Society's letter was received on June 13th but was not included in the FEIS because of a processing error. When the letter was printed for coding the date on the letter was a date after June 13th. This was due to an option the Wilderness Society author used to have the current date printed on the letter whenever it is printed. In error, when an employee saw that this date was after the public comment period it was incorrectly put into a late comment folder. Once the error was brought to the Forest's attention they addressed the issue. These comments have subsequently been reviewed and responded to by the IDT and this information will be reviewed by the deciding officer before a decision is made.

The Forest has professionally and responsibly considered all public comments. When an error or problem was found in the processing of the comments they worked conscientiously to correct the issue or problem in the best manner possible.

Issue 14. (PROCESS) Object to their treatment at the press conference where members of the public were selected to attend because they agreed with Alternative 2. Believe Constitutional rights were violated by barring members from the press conference.

Suggested remedy: None

Regional Review and Response: The Bitterroot National Forest held a press conference on September 22nd. The press conference was not designed as a public meeting, but rather was held to communicate directly with the media about the release of the Final Environmental Impact Statement for the Middle East Fork Hazardous Fuel Reduction Project and the origins of the preferred alternative, and to explain the next steps in the process leading up to a decision.

No constitutional rights were violated. All members of the public, including the objector, had multiple and extensive opportunities to express their views on the Middle East Fork project.

Issue 15. (PROCESS) Object to the USFS's use of fear and propaganda in an attempt to get the public to accept the known, assured ecosystem damage that would result from logging as prescribed by Alterative 2 to avoid speculative catastrophic fire and continued beetle infestation.

Suggested remedy: None

Regional Review and Response: We disagree with this statement on several accounts. Project design and mitigation measures have been conscientiously developed by the IDT to avoid or minimize impacts to resources while meeting the purpose and need of the project.

The word "catastrophic" was avoided in the analysis of fire in the Middle East Fork because it is value laden. The fire analysis is based on the best available science.

Fire Risk *applies to the probability of an ignition occurring as determined from historical fire record data.*

> The fire ignitions history of the MEF area is documented in the FEIS on pages 3.1-15 and 16 and in the cumulative effects section Appendix B. It is based on actual fire reports and scientific studies (Arno, 1976). Potential fire size, without suppression action, is estimated for the MEF area using FARSITE and documented on pages 3.1-26 and 40-46. A local fire risk analysis using PROBACRE, which includes suppression actions, is cited in the references (Boyd, 2002). The results show that the probability of having a fire that exceeds the suppression capabilities of firefighting handcrews is 37% in one year. On average, one of those fires will result in a large fire (180-15,000 acres) every 6.5 years (5-7 year range). Boyd's report also corroborates the MEF finding that crown fires in this area are fuel driven and generally will escape initial attack suppression.

Fire Hazard *identifies the availability of fuels to sustain a fire and using fire modeling results in varied intensity levels of fire behavior prediction. Where high risk coincides with high hazard, the probability of fire with undesirable effects is more likely.*

> The hazard portion of the MEF analysis correlates directly to predicted fire behavior that is a function of fuels, weather and topography. The fuels and topography portion of the fire behavior triangle were analyzed through use of FVS-FFE, FlamMap and FARSITE. Changes in Flame Length, Rate of Spread, and Crowning Index for the WUI are reported in the FEIS on pages 3.1-27 to 51.
>
> The fuels relates directly to standing vegetation as well as dead and down surface fuels. MEF field data (stands exams and Brown' transects) was collected for the analysis. Representative weather data is from Weather Information Management System (WIMS) archives for local weather stations (FEIS, pp. 3.1-10 and 11). Fire behavior predictions are based on 90^{th} percentile conditions.

Issue 16. (OTHER) Object to the FEIS's analysis of the possible damage to ecosystem components from fire for the no-action alternative being grossly overstated, while analysis of the possible damage to ecosystem components from fire for alternative 2 being negligible or nonexistent.

Suggested remedy: None

Regional Review and Response: It appears the objector is defining crown fire as high severity and ground fire as low severity, if that is the case than a quick way to view the differences in fire type between alternatives is to review the FlamMap figures in the FEIS, pages 3.1-48 through 50. Note that both types of fire are evident with all alternatives. The FEIS states that the models are for comparison and are not to be used for absolute numeric values (p. 3.1-12). Also, it seems the methods may have been misinterpreted. Identical burning conditions were used for the

comparisons. Public concern 63040 lists numerous citations used in this analysis, which further address the concern that there is not a creditable comparison.

The analysis shows (p. 3.1-37, FEIS) that crown fire potential increases on 794 acres within the WUI with Alternative 1 (No Action), and decreases by 472 acres in the WUI with Alternative 2. Again, these numbers should be considered relatively – not as absolute numbers.

Issue 17. (PROCESS) HFRA with its Section 106 restrictions on judicial review violates the U.S. Constitution and its separation of powers.

Suggested remedy: This project should not proceed under HFRA authority.

Regional Review and Response: We disagree with this opinion.

Issue 18. (DFB) HFRA Section 404 "Applied Silvicultural Assessments" which is also 16 U.S.C. 6554 states that on land determined to be "at risk of infestation by, or infested with, forest-damaging insects" the project, before being carried out, must be "peer reviewed by scientific experts." This was either not done, in violation of HFRA, or it was not disclosed in the EIS, in violation of NEPA.

Suggested remedy: Conduct the required peer review and disclose the resulting report in a new draft EIS.

Regional Review and Response: This information comes from Title IV of HFRA. The Middle East Fork project is authorized under Title I of HFRA. The phrase "applied silvicultural assessments" means any vegetative or other treatment carried out for information gathering and research purposes, which is not the purpose of the MEF project.

Issue 19. (OG) Alternative 2, the preferred alternative, does not comply with HFRA, Section 102(e)(D) which requires "retaining large trees contributing to old growth structure".

Suggested remedy: Eliminate removal of large trees from Alternative 2.

Regional Review and Response: The Middle East Fork project does comply with Section 102(e). Section 102(e)(D), mentioned by the objector, is a Definition of old growth for that subsection and subsection (f). Section 102(e)(D) does not talk about retaining large trees. It states: (D) OLD GROWTH STAND.—The term ''old growth stand'' has the meaning given the term under management direction used pursuant to paragraphs (3) and (4), based on the structure and composition characteristic of the forest type, and in accordance with applicable law, including section 6(g)(3)(B) of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1604(g)(3)(B)).

To be very clear, the preferred alternative does not include commercial harvest in old growth habitat – this translates to large trees will be retained. The objector is likely referring to Section

102(e)(2), which does mention "retaining large trees contributing to old growth structure." Again, the Middle East Fork project complies with all applicable elements of Section 102(e).

Issue 20. (OG) Failure to maintain old growth. Not yet successfully mapped old growth and potential old growth in the planning areas as required by HFRA.

Suggested remedy: Eliminate removal of large trees from Alternative 2.

Regional Review and Response: The preferred alternative does not include logging of "large trees" in old growth habitat. It does not include commercial logging in old growth habitat. Furthermore, the project maximizes the retention of large trees, as appropriate for the forest type, to the extent that the trees promote fire-resilient stands. This is explained in Section 3.6.5 A of the FEIS. Public concern statements also respond to this issue: 3605 (p. 34), 33201 (p. 126), 33203 (p. 127), 36125 (p. 155), 36127 (p. 157) and 63009 (p. 172).

There is no requirement specific to HFRA to map old growth and potential old growth in the planning area as stated by the objector. However, as stated on page 3.6-7 of the FEIS old growth habitat was verified and mapped based on review of all proposed treatment areas and field surveys, as needed, in 2004. Over 4,421 acres were evaluated on the ground. Every unit considered for treatment in the preliminary proposed action, that may have had old growth habitat had a field review in the summer of 2004 to determine if it was old growth habitat. Areas not planned for treatment were mapped with the Timber Stand Management Record System (TSMRS) data base and reviewed by a wildlife biologist and or silviculturist familiar with the Middle East Fork area and with a knowledge of the habitat requirements (See Section 3.2.5 for information on the MEF specific 2004 field verifications and updates made to the TSMRS data base). Because of the high level of Douglas-fir bark beetle mortality stand exams were repeated in the summer of 2005 in old growth stands with proposed treatments to assess current conditions. Exams were completed on stands within 5 units planned for treatment prior to this document being published. Reexamination of other stands is continuing.

Some members of the public have indicated that they view individual large, old, live trees and large, old, dead trees as old growth. These same trees may be a component of old growth habitat but do not constitute old growth habitat as defined in the Forest Plan or the scientific literature by themselves. Old growth habitat classification, consistent with the Forest Plan, is based on stand-wide structure and characteristics. Large snags are important to wildlife and the effects of this project on snags are presented in Section 3.6.5 B. Mature trees that are not in old growth habitat as defined here, are important to various wildlife species as well. The effects on mature stands, as they relate to impacts to specific wildlife species habitat are discussed in the effects analysis Sections 3.6.5 E.

Issue 21. (OG) Adequacy of the Forest Plan old growth standards has never been validated by population monitoring. What is the scientific basis for the BNF's position, namely that maintaining 3 to 8% old-growth?

Suggested remedy: None

Regional Review and Response: The scientific basis for the Forest Plan old growth standards were derived from the publication Wildlife Habitats in Managed Forests the Blue Mountains of Oregon and Washington (USDA, 1979) as stated in the Bitterroot National Forest Plan, 1987. The standards for Management Areas 1 (3%), 2 (8%), 3a (8%), 3b (25% and 50%) and 3c (8%), when taken collectively, equate to about nine percent old growth habitat in the portion of the Forest allocated to timber harvest activity. None of the old growth habitat occurring outside these Management Areas can be used to satisfy needs for old growth habitat in the "managed" portion of the Forest.

The Forest has complied with monitoring requirements for Management Indicator species specified in the Forest Plan, 1987. Those results are published in the Annual Monitoring reports, and while they do not include population estimates, they show no worrisome population trends.

Issue 22. (SOIL) Regional Review of McBride's work is substantially flawed as well as very superficial.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: Regional Review was requested by members of the public in comments received on the DEIS. Ken McBride was informed of and asked to participate in the Regional Review but elected not to. In Ken's letter that you included in your objection (Appendix 4) there are errors in his table. Since Ken did not participate in the review it is understandable that he was not aware of the exact methods used or numbers of samples taken in the peer review. The peer review included: 77 points; Moscow Lab calibrated penetrometer - 47 points with 3 insertions at each point; Shovel test soil pits dug at approx each location - 77 points (these pits are "mini" soil pits the depth of the shovel); At each point/shovel pit, the team looked at soil structure, root abundance, vegetation. This is based on 7 soil categories defined in PF-SOIL-089 (Howes Survey Method). The regional review also used Global Positioning System (GPS) to document the location of each transect. It should be emphasized this was a team approach (10 soil scientists including soil researchers who have projects on the Bitterroot National Forest (BNF) so they are very familiar with the soils), thus there was much conversation at each shovel pit so although the group had not been on the site before, their collective knowledge of soil properties lead to reasoned calls. Also, the group did have available to them the soil survey, the soil survey maps, and air photos. As stated in the FEIS on page 3.5-3, the 10 soil scientists on the review, including 3 researchers, all came within about 10% of each other using the "Howes" survey method.

Issue 23. (SOIL) Ocular inspection of 77 field points by people unfamiliar with the area's soils is not substitute for McBride's hard look at 3,889 sample sites, painstakingly calibrated by several approaches, including instruments that do not rely on personal judgment.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: Along with the combined knowledge of all members of the regional review team there were several researchers who have projects on the BNF so they are

very familiar with the soils. The FEIS reflects that the regional review was not as thorough as Ken's review and disclosed that they reviewed only 5 units, therefore it is not a substitute and was not characterized as such in the FEIS. Ken's original data was displayed and used in the FEIS, although, based on the findings of the regional review, the information was disclosed as soil disturbance, not necessarily detrimental soil disturbance as Ken had originally characterized. The project design and mitigations measures, however, were developed as though disturbance equals detrimental disturbance in the FEIS.

Issue 24. (SOIL) Review team failed to recognize platy structure as detrimental soil damage in spite of the fact that the R1 Soil Quality Monitoring Task-group report of May 2000 lists the occurrence of platy structure as an indicator of "Detrimental" soil damage in the Soil Condition Rating Guide.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: When platy structure is observed the soil scientist must do additional investigation to determine if it is detrimental or not. Platy structure does not automatically equate to detrimental disturbance. The aerial extent, depth, degree (how strong the plates are), and type of soil texture must be included in an evaluation of detrimental soil conditions when plates are encountered. Not all plates prevent root penetration and water infiltration and percolation. In addition, plates are one indicator, but not the only indicator of detrimental soil conditions. When soils are detrimentally damaged, they are impaired and will not grow or support the potential natural community (either above or below ground). All of these considerations were included in the soil determinations by the regional soil review team. The R1 Soil Quality Task-Group report of May 2000 does not identify all platy structure as detrimental. Platy structure that is detrimental is that which "breaks apart with difficulty and is noticeably higher in density."

Issue 25. (PROCESS) Purging of 28 documents from the Project File in this campaign of cover up is blatantly unethical not to mention probably illegal.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: A project file for a NEPA document is an evolving, dynamic entity, with information being added and deleted throughout the process up until the time a Record of Decision or Finding of no Significant Impact is issued. This is a standard practice to provide relevant, current data and information in the project file. The soils section of the project file is no exception to this. In preparing the FEIS, the soils section of the project file was cleaned up and edited to reflect the FEIS and focus information to the MEF Planning Area. The soil items were originally included in the project file by Ken McBride who did not continue with the project so the Forest tracked the items that were removed and why they were removed for clarity and disclosure in PF-SOIL-099. How the complete and total disclosure of this could be viewed as a "cover up" is difficult to understand.

A member of this objector's organization reviewed the project file and saw the documentation and disclosure that information was removed from the soils section and why it was removed.

Based on this objection, and that of others concerned about the issue, the Forest has reinstated these documents back into the project file however, the relevance and use of the documents is still questionable.

Issue 26. (SOIL) The FEIS does not disclose the level or duration of soil damage that would be considered irreversible or the actual loss of soil productivity.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: Correct, exact duration of compaction is not known but a range of 20–40 years is given on page 3.5-24 based on literature. Soils do decompact over time and this analysis is also displayed on page 3.5-24 FEIS. Existing soil conditions do convey the current level of compaction within a unit and are displayed in Table 3.5-2 FEIS.

Issue 27. (SOIL) We believe the Region One soil quality standards (SQS) are not adequate to fulfill the need to protect soils as mandated in the National Forest Management Act. It is hardly conducive to insuring against irreversible damage to soils from repeated logging projects.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: The FEIS, page 3.5-49 addresses consistency with National Forest Management Act (NFMA). In summary, the National Forest Management Act requires the Forest Service to insure that timber will be harvested only where soil will not be irreversibly damaged (16 USC Section 1604 (g)(3)(E)(i)) and even-aged regeneration harvest be carried out in a manner consistent with the protection of soil (16 USC Section 1604 (g)(3)(F)(v)). Nothing in the proposed activities for either Alternative 2 or 3 will result in irreversible effects on the soil resource (PF-SOIL-088).

It is recognized that ground disturbing activities can have impacts on the soil resource; the key is to minimize the impact (see public comment response 3121, Appendix H, pg 1 of 193 and 31214, Appendix H, pg 103 of 193). The Soil Quality Standards (SQS) were developed based on the best available science (Powers 1990). The 15% SQS is only part of what the Forest looks for in evaluating NFMA and soil and site productivity; they also look at the vegetation and hydrology of the site to ensure that it is functioning to capture, store, and safely release water and erosional materials.

Issue 28. (SOIL) Regional Soil Standards have not received NEPA review. They are a proxy for productivity and are not supported or substantiated adequately by science to show they do indeed protect soils. The actual loss of productivity in the area, not just detrimental soil damage, needs to be disclosed in the FEIS.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: No loss of productivity is expected. Refer to the Regulatory Framework and Consistency section of the FEIS, pages 3.5-47 to 49.

Issue 29. (SOIL) The description change of % detrimental soil disturbance to "% disturbance" in Table 3.5-2 in the FEIS (from table 3.5-1 in the DEIS), dilutes the significance of the actual situation on the ground. We object to the arbitrary revision by the EIS author, who is not a soils scientist.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: The tables the objector refers to from the FEIS present the same data as was displayed in the DEIS; the numbers are the same. The numbers, however, are correctly disclosed in the FEIS as representing percent disturbance, but not necessarily the percent detrimental disturbance. There was no change in the actual numbers because there was not additional field work performed, thus Ken McBride's field work was used for the analysis. The scientific basis for disclosing that these figures may not represent detrimental disturbance, based on the findings of 10 different soil scientists involved in the regional review, are explained in the methodology section on page 3.5-3 and in the affected environment section on pages 3.5-10 through 3.5-12 of the FEIS. You will note however, that the end result is the same in the DEIS and the FEIS; the units identified as not meeting standards and guidelines in the DEIS are the same in the FEIS and the essence of the effects analysis is likewise the same.

Table 3.5-3 in the FEIS is an estimate since it is based on aerial photo interpretation and not ground truthed. This is professional judgment, thus it is impossible to say with any certainty that the numbers represent detrimental soil damage.

The objector is incorrect in their statement that the author of the soils section in the FEIS is not a soils scientist. The individual who authored the soils portion for the FEIS was at the time the Bitterroot National Forest Watershed Program Manager. She has a master's degree in soil science from Oregon State University and 10 years of soil experience gained as a field soil scientist with the Forest Service in Region 6. She was trained by the current Regional Soil Scientist, Steve Howes (Region 6), in the use of Geist and Howes soil inventory procedures, the same inventory procedures that the Region 1 Soil Scientist has requested that all soil scientists use. Ken McBride did not use this method.

Issue 30. (SOIL) Forty six units were not traversed on the ground but were analyzed "based on aerial photo and professional interpretation". This technique may not be legally sufficient to determine actual condition of soils on the ground.

Example given was unit 30b was found to be 19% disturbed (based on field review), yet the field notes indicated no sign of logging entry and the TSMRS database does not indicate any harvest entry.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: It should be noted that the table the objector mentioned is identical to the table found in the DEIS. This issue is addressed in response to Public Concern Statement 3121. It is recognized that ground-disturbing activities can have impacts on the soil

resource; the key is to minimize the impact. The Middle East Fork DEIS discloses potential effects and consistency with the Forest Plan standards and other regulatory requirements (DEIS 3.5.6.A:14-27; DEIS 3.5.7:28; FEIS 3.5.6; FEIS 3.5.7).

Detailed site-specific soil investigations were conducted for the MEF on 75 percent of the ground-based units and on 40 percent of skyline and helicopter units (there were no changes in data to tables DEIS 3.5-1 or 3.5-2 other than they are renumbered in the FEIS and are now Tables 3.5-2 and 3.5-3). The Forest Soil Scientist did not conduct detailed site-specific reviews of the precommercial thinning units or non commercial fuel treatment units since no heavy equipment was going to be used and also did not conduct detailed reviews of the terraced units, those to be pre-commercially thinned, as they are known to be above soil quality standards (DEIS 3.5.5.D; FEIS 3.5.6 Cumulative Effects Existing and Past Activity).

Units that were above SQS prior to harvest would be left such that post-activity detrimental soil damage is not more than was found prior to activities and that the unit is on an improving trend. For the units that did not receive a detailed soil survey, soil investigations encompassed aerial photography review based on the soil scientist's knowledge of the area and site-specific review of other units.

Reviews were conducted by the Forest Soil Scientist with 14 years of experience on the Bitterroot NF, experience which includes mapping of forest soils for the Bitterroot Landtype Inventory (NRCS Soil Survey). The Forest Soil Scientist undertook soil conditions surveys on the units he perceived to be sensitive and most at risk. Further, in September 2005 the restoration technician field visited units 42, 8, 7, 39, 237, 31b, 31a, 30b, 41, 46, 44a, 382 and 407.

As stated in both the DEIS (3.5.4:3; 3.5.5.C:6-7) and FEIS (3.5.4; 3.5.5.B), all calls were conservative, if there were any questions regarding a unit, it was assumed existing soil disturbance exceeded the soil quality standards. Regional direction provides policy to mitigate for detrimental soil disturbance above 15% (refer to public concern 31214). This policy states "Design new activities that do not create detrimental soil conditions on more than 15 percent of an activity area. In areas where less than 15 percent detrimental soil conditions exist from prior activities, the cumulative detrimental effect of the current activity following project implementation and restoration must not exceed 15 percent. In areas where more than 15 percent detrimental soil conditions exist 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."

Issue 31. (SOIL) All subwatersheds in the project area, except for Bunch Gulch, exceed the 15% level. The entire cumulative picture of the extent of soil damage is lacking because of the failure to inventory all roads, including user made ATV roads.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: The landscape level (7th level sub-watershed) GIS soils analysis was conducted in January and February 2005 for the Middle East Fork project. The objective was to help evaluate overall watershed condition related to soil and water processes at

the 7th level sub-watershed scale. Using information (Geographic Information System (GIS) and TSMRS and INFRA databases) about past disturbance from harvest activities, the road system, and fire history; a disturbance rating was assigned to each timber stand polygon. This information was then combined to the 7th level watershed scale (PF-SOIL-006, 007).

The Forest found, based on field review, that the GIS analysis did not give them information they could correlate to either site-specific detrimental soil disturbance or stream channel condition. Though the analysis could provide information as to the location of disturbance on the landscape (maps in PF-SOIL-082, 083, 084), this disturbance could not be linked to detrimental disturbance and Regional Soil Quality Standards (SQS). This site-specific link is not possible because of the variability in soil texture, the amount of organic matter and ground cover, soil response to past projects, and the intensity of past projects.

It should be noted that this exercise was not a substitute for unit-specific soil condition surveys or determinations. Unit-specific soil condition surveys were conducted during the summer of 2004 (PF-SOIL-078 and 079). It is this unit-specific information that is evaluated against the Regional SQS (FEIS Table 3.5-2).

Further, as illustrated in the Watershed section on page 3.3-10, there was little correlation between high levels of soil disturbance at the sub-watershed scale (as calculated by the landscape analysis) and stream channel condition. For example, the landscape level analysis from the Bertie Lord Creek existing condition is discussed on page 3.3-15 as follows:

> *"A GIS review of past activities within Bertie Lord indicates that approximately 21% of the watershed has likely experienced soil disturbance due to ground based yarding or dozer piling, this occurred in the Sleeping Child burn area that was harvested following the fire (PF-SOILS-6 and SOILS-90). This level indicates a possible concern for hydrologic function such as increases in overland flow that could result from detrimentally compacted soils. However, this legacy watershed level soil conditions is not well correlated with stream condition because of the many interconnected variables between soil and water yield.*
>
> *Stream surveys in Bertie Lord Creek indicate that channel conditions are fair and likely on an improving trend. The area in Bertie Lord Creek highlighted by this analysis is within the Sleeping Child burn area and was heavily roaded and harvested in the 1960's. The majority of these roads, old harvest units and burned area, are now overgrown with dense stands of lodgepole pine. The roads are no longer accessible to vehicle travel."*

The ATV issue is addressed in response to Public Concern 45002 which directs readers to Section 3.7. Page 3.7-3, which states, in summary: The Bitterroot NF has mapped known motorized trails as of January 2001. The Forest has an OHV Ranger, numerous Forest Protection Officers, and two Law Enforcement Officers who enforce this order. There is not 100% assurance of compliance to this or any order, however the Forest has been successful in monitoring and restricting illegal OHV use in other areas that have been thinned. When adverse environmental effects are occurring from OHV use, local managers have the ability to immediately close the road, trail, or area and/or rehab the damage.

Issue 32. (SOIL) The FS is arbitrarily allowing essentially permanent loss of productivity on an undisclosed amount of soils by excluding roads and landings from the analysis of detrimental soil damage.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: Roads and landings within units are included in the current condition when they are within the units. Systems roads are considered a permanent change in the natural environment. Temporary roads and landings are included in the Cumulative Effects analysis (Table 3.5-6, p. 3.5-45, FEIS).

Issue 33. (SOIL) We object to logging activities that would result in "units that exceed soil quality standards" (FEIS at 3.5-26).

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: Both Alternative 2 and 3 propose treatments in units that currently have over 15% soil disturbance. Regional soil policy allows harvest in areas >15% as long as the area is no worse upon completion. Page 3.5-47 of the FEIS states: All proposed activities are designed to meet the Region 1 Soil Quality Standards and Supplement direction (PF-SOIL-088). These standards require that soil properties and site characteristics be managed in a manner consistent with the maintenance of long-term soil productivity, soil hydrologic function, and ecosystem health. Activities within harvest areas are designed to detrimentally disturb less than 15% of the activity area. Where the activity area is currently above 15% detrimental soil disturbance or the proposed actions will result in greater than 15% detrimental disturbance, rehabilitation projects will take place, where feasible.

We agree, and it is consistent with the FEIS that any amelioration would occur within the unit, not outside.

Issue 34. (SOIL) It appears that a significant amount of the "soil amelioration for detrimental soil damage" for the units listed would occur on soils not even figured into the 15% SQA assessment, but rather on roads, which are arbitrarily excluded from assessment of the units. Thus, the R1 SQS stipulation that "the cumulative detrimental effects from project implementation and restoration should not exceed the conditions prior to the planned activity" would not be met because amelioration mitigation is simply occurring on land that was not counted in the "conditions prior to the planned activity" while the additional detrimental effects of the planned activity go unmitigated.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: A restoration plan was not completed for the units above SQS prior to the release of the FEIS. Any restoration would be completed within a unit, not outside a unit as envisioned by the objector.

During September 2005, a restoration plan was completed by a restoration technician, for units proposed for harvest with above 15% soil disturbance. He found little opportunity for restoration due to a concern that ripping would provide a seed bed for weeds on locations where native vegetation is already growing. Again, roads within units are included in the existing condition assessment and are included in the percentages in Table 3.5-2 and 3.5-3. Roads outside of units are not.

Issue 35. (SOIL) Soil amelioration techniques are largely ineffective and can increase detrimental soil damage. The effectiveness of soil amelioration mitigation has not been adequately substantiated or validated in the FEIS.

Suggested remedy: See remedy under Issue 44.

Response: Research is needed in this arena although there is some information from Canada which is cited.

Issue 36. (SOIL) There is no quantitative discussion of acres of planned amelioration mitigation compared to acres of additional detrimental soil damage in units over the 15% SQS, nor any discussion of the specific soil restoration technique to be used. The "site-specific restoration plans" to follow sound like empty promises.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: Site specific restoration plans had not been developed at the time of the FEIS. A site-specific restoration plan has been developed (September 2005) and is found in PF-SOIL-101. The general finding is that active soil amelioration opportunities were found in only a few of the 14 units reviewed. The primary reason for little active soil amelioration opportunities within the units is the presence of noxious weeds and the desire to limit further spread by not providing a seed bed through active amelioration. Further, many of the roads and old skid trails identified in the FEIS have good cover of native grass, shrubs, and trees. Moving equipment onto these sites would negate the vegetation and hydrologic recovery that is already occurring.

Issue 37. (SOIL) There is no such thing as immaculate logging; additional soil damage is inevitable in unit 46 (37% detrimental soil damage, winter tractor logging) and unit 407 (20% detrimental soil damage, skyline logging) if these units are logged and they would therefore "exceed the conditions prior to the planned activity", which is prohibited by R1 SQS.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: The intent of NFMA would be met by limiting the activities through use of BMP's, mitigations, and contract specifications. Regional soil policy provides that in areas where there is existing detrimental soil disturbance greater than 15% that after activities the area should not exceed the conditions prior to the planned activity and should move toward a net improvement. Any disturbance caused by the MEF project would be ameliorated.

For example, summer harvest skid trails would be scarified, waterbarred, seeded, and mulched. Landings and any temporary roads would also be treated. In the end, the unit would be in the same condition or on an upward trend following the project.

Issue 38. (SOIL) Subsoiling and ripping are ground disturbing activities (see PF Soil – 063) and need to be fully analyzed and disclosed in the FEIS. This has not been done. Its application has been left to a post-harvest restoration plan. (FEIS p. 3.5 – 26) Subsoiling and ripping can cause soil mixing which can significantly reduce productivity over a long term. Soil mixing is not considered detrimental soil damage by the R1 SQS, which leaves the R1 SQS inadequate to protect soil productivity.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: Restoration and effects are fully disclosed on FEIS pg 3.5-32 to 3.5-33 with reference to SOIL-091. The objective of restoration is to move the units toward an improved condition.

Issue 39. (SOIL) FEIS mitigation of landings appears to require only scarifying and no assurance of topsoil replacement. (FEIS p. 2-48) This is not adequate to assure de-compaction and could leave a long lasting legacy of detrimental soil damage. This approach would certainly not be adequate for amelioration of units over the 15% SQS.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: Restoration and effects are fully disclosed on FEIS pg 3.5-32 to 3.5-33 with reference to SOIL-091. The mitigation for landings on page 2-48 is reasoned and implementable and adequate. It states "For constructed landings, retain and stockpile topsoil to the extent possible and replace after use to encourage faster recovery of vegetation. After all activities, rip (scarify), replace topsoil (if saved), and revegetate…"

Issue 40. (SOIL) Ken McBride's contention that, "The changes mostly are omissions of what I consider important information needed by readers, reviewers, and the decision maker to properly understand and appreciate the condition of the soil resource in the project area. Much of the information edited out in the DEIS is critical for the public reviewer and decision maker to reach an understanding about present soils conditions and expectable impacts from implementation of any decision.

Suggested remedy: A new FEIS analysis of soils to address the above problems and issues. Ken McBride's reports should be reinstated in the FEIS as the best available. No activity areas presently over 15% detrimental soil damage should be subject to additional damage. Effectiveness of amelioration mitigation techniques should be validated. The R1 SQS needs to be peer reviewed and validated for effectiveness in addressing the requirements of NFMA, then subject to NEPA review. Purged documents should be returned to the project file.

Regional Review and Response: Ken McBride retired from the Forest Service, prior to completion of the project. PF-SOIL-104 is a comparison of the DEIS to the FEIS and fully

discloses the changes and why they were made. Ken's original draft specialist report (draft, never released or published) was reviewed and edited by the Regional Soil Scientist (PF-SOIL-047). The conclusions between the DEIS and FEIS are the same, although the tone is different and other information is provided to illustrate contrary opinions. Unit or logging system changes are the result of the IDT process and the decision maker.

The individual who authored the soils portion for the FEIS was at the time the Bitterroot National Forest Watershed Program Manager. She has a master's degree in soil science from Oregon State University and 10 years of soil experience gained as a field soil scientist with the Forest Service in Region 6. She was trained by the current Regional Soil Scientist, Steve Howes (Region 6), in the use of Geist and Howes soil inventory procedures, the same inventory procedures that the Region 1 Soil Scientist has requested that all soil scientists use. Ken McBride did not use this method.

Issue 41. (WATER) FEIS p. 3.3-23 reports that haul routes could contribute 58 tons/year to tributary streams, and possibly much more if not properly managed. This would violate the Clean Water Act.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: The estimated 58 tons is based upon annual sediment contributions and is a worst case scenario that assumes that all hauling would occur during unacceptable wet, muddy conditions for the entire year on sediment contributing portions of all haul routes (PF-WAT-41). This is not the intended outcome nor is it likely to be the case. Although hauling might occur during unacceptable conditions for short time periods, monitoring would identify poor conditions (likely within hours, certainly within a day). Monitoring (Public Concern Statement 31522) would occur most every day by Sale Administrators and specialists and would identify poor conditions and shut down hauling when poor conditions occurred. These efforts would limit hauling sediment to levels less than the worst case scenario described above. See also the discussion found of page 3.3-22 and 23 of the FEIS and the response to Public Concern Statement 31525. PF-WAT-49 is a letter from Environmental Protection Agency (EPA) than indicates that mitigation associated with the project would meet the intent of the Headwaters TMDL that is currently in process.

Issue 42. (WATER) Mitigation of road sediment problems using BMPs has not been validated. Sediment was observed moving off the Jennings Camp road on a field trip on June 1, 2005 (photos available) leaving doubt as to the effectiveness of BMP upgrades.

Suggested remedy: Additional sediment to the East Fork needs to be eliminated.

Regional Review and Response: Allegations have been made that the Best Management Practices (BMP) upgrade work on Road 723 was ineffective and poorly done. Specifically at question is a sediment contributing stream crossing on Road 723 that was photographed during a Native Forest Network (NFN) field trip. This crossing is actually a Road 723 crossing on a headwater fork of Lyman Creek. However, Road 723 would be a main haul road in the Middle

East Fork project, and the potential for increased sediment contributions from hauling traffic could still occur and were considered.

The Forest's review of the site included the design of a repair: 1) Line the entire in slope ditch with rock; 2) Install two new ditch relief culverts at key locations; 3) Gravel the stream crossing and steep pitch of road uphill from the crossing. This work is estimated at $13,000. The Forest has been told that sufficient funds should be available to complete the work as soon as the site is accessible and dry enough in late spring or early summer, 2006.

The review (by fisheries biologist and engineer) included the entire length of Road 723 and checked out the other three legal locations identified as possible sediment contributing areas; no significant sediment problems at those sites were identified and the review team determined that the BMP work that had already been completed at those sites was sufficiently done. The road work in the Jennings Camp drainage resulted from excess funds from another BMP upgrade project in the vicinity; and the upgrade work was designed to fix problems in the Jennings Camp Creek drainage, particularly on the 1.1 miles of road that directly encroaches on Jennings Camp Creek. The BMP upgrade work on Road 723 has significantly reduced road erosion and sedimentation to Jennings Camp Creek. The difference in road integrity on the graveled segments and native surface segments during storms is dramatic. Refer also to PF-WAT-50.

Issue 43. (WATER) Some road restoration is not tied to project funding and so may not be done for a long time, if ever, like the road restoration promised in the BNF Burned Area Settlement.

Suggested remedy: See remedy under Issue 44.

Regional Review and Response: In the FEIS in Tables 3.3-4 and 3.3-5, the road work implementation schedule is displayed. Most of the work identified in Alternative 2 would be completed prior to completion of the vegetation management portion of the project. For Alternative 3, additional funding would need to be obtained for most of the identified work. See also response to public comment 3153.

Issue 44. (WATER) Colvert, Jennings camp, Guide and Springer creeks already exceed the recommended ceiling of 20 – 25% equivalent clearcut area (ECA) and the Middle East Fork as a whole has 19.4% ECA and would increase to 20.9% with the planned activities (FEIS p. 3.3-25). These excessive ECAs jeopardize stream channel stability.

Suggested remedy: Watersheds at 20% ECA should be excluded from planned activities.

Regional Review and Response: Because initial analysis showed that high ECA's were found in these watersheds, more analysis was completed to more completely analyze the effect of past harvest, tree mortality and the proposed treatments on the streams in question and determine effects of proposed actions (PF-WAT-30). This analysis involved considering both existing channel conditions and an estimation of water yields for Colvert, Jennings Camp, Guide and Springer Creeks using the Bitterroot Water Yield Analysis Procedure. The additional analysis

found that the project should not result in water yields that would further harm streams. Refer also to response to public comment 31520 and pages 3.3-34 through 41 of the FEIS.