

APPENDIX C

Response to Comments

INTRODUCTION

The Forest Service received 23 public comment letters on the Draft Environmental Impact Statement (DEIS). These comments have been documented, analyzed for content, and responses have been prepared. This section presents all of the substantive comments received on the DEIS and the agency's response to those comments. Comments that simply favor or oppose specific alternatives, or those that only agree or disagree with Agency policy were not considered substantive comments.

The substantive comments were grouped by key topics and sample excerpts are used to briefly describe the main points that are made in the comment letters. The comments are not presented here in their entirety, and are available for public review in the Project Record. Comment numbers included in the comment references refer to numbering used in the content analysis process and can be found in the Project Record.

Substantive comments are defined as those that encompass one or more of the following:

- ❖ **Question, with reasonable basis, the accuracy of information in the EIS.**
- ❖ **Question, with reasonable basis, the adequacy of environmental analysis.**
- ❖ **Present reasonable alternatives other than those presented in the EIS.**
- ❖ **Cause changes or revisions in the proposal. In other words, they raise debate, or question a point of fact or policy.**

SALVAGE PROPOSAL & MITIGATIONS

1. COMMENT: PROPOSAL

Recommend providing a clearer description of the planned remediation steps to be taken after the project work is conducted. (comment 2; State of New Mexico, Environment Dept.)

1. RESPONSE

The scope of the proposed project discussed in this EIS is to analyze effects on the environment associated with salvage logging and road management activities. Appendix A of the FEIS presents and discusses Best Management Practices (BMPs) that would be used during and after the proposed project to alleviate potential adverse effects to the environment.

2. COMMENT: MITIGATION/MONITORING

No parameters regarding mitigation measures and monitoring actions in DEIS. (comment 50; Herb Cohen)

Use of mitigation measures is not sufficient to ensure compliance with the law. (comment 164; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

2. RESPONSE

Section 2.5 of the FEIS presents and describes the mitigation measures and monitoring actions, and Appendix A presents BMPs for the proposed project. These mitigations (including BMPs) and monitoring measures were identified by resource specialists during analysis. The analysis determined that the implementation of these measures would eliminate or reduce environmental impacts. These

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mitigations will be monitored during implementation for their effectiveness in reducing or avoiding adverse effects. The District Ranger is responsible for insuring that the monitoring, evaluation, and adjustment loop is implemented.

3. COMMENT: RIPARIAN/STREAM BUFFERS

Support no tree removal in riparian areas, burned and unburned. (comment 86; Carson Forest Watch, Joanie Berde)

Recommend Streamside management zones at 200' on both sides of perennial streams and 50' to 100' on intermittent streams that have riparian vegetation. (comment 94; Sierra Club, Cliff Larsen)

3. RESPONSE

As stated on page 2-15 of the FEIS, "Streamside management zones of approximately 100 to 200 feet wide would be applied on both sides of all perennial streams for riparian area protection." Harvest activities would be excluded within these zones. Further, equipment would not be allowed in riparian areas outside of the streamside management zones or areas that do not have a streamside management zone designation. Intermittent streams in this area rarely contain riparian vegetation or saturated soil types; however, the application of the 25 to 50 ft equipment exclusion zone would also provide additional protection. These standards were developed in an interdisciplinary setting to protect water quality and riparian vegetation.

4. COMMENT: CUTTING LIVE TREES

Believe partially burned trees should not be cut, as there is a possibility that they will survive. (comment 98; Sangre de Cristo Audubon Society, Thomas Jarvis)

It is difficult to determine if only dead trees will be cut or if dying trees will be cut as well. (comment 142; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Logging companies are only interested in the green trees that will be cut for realignment of FR86 and reopening or currently closed roads. (comment 34; D. Americanhorse)

Concern about green trees harvested for skid trails and landings. (comment 99; Sangre de Cristo Audubon Society, Thomas Jarvis)

The agency must put into writing a standard to use based on proper science to ensure that only dead trees are taken. (comment 200; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

4. RESPONSE

As stated in Section 1.4 on page 1-4 of the FEIS, "...to harvest a portion of the fire-killed trees...Salvage harvesting would be restricted to the high- and moderate-severity burn areas..." This means that partially burned trees or trees showing signs of survival would not be cut, and only dead trees would be harvested. The standard presented in the FEIS states that only trees with out green needles would be considered fire-killed and available for salvage (FEIS, page 1-4).

Green trees harvested for road realignments would not be part of the salvage sale. The amount of green trees available for harvest due to road realignment would be insignificant compared to the number of burned trees. The reopening of closed roads would require cutting few, if any live trees.

Skid trails and landings that would be designated by the U.S. Forest Service (USFS) would take into account avoiding harvest of live trees (with green needles) where possible. The salvage blocks were

located in the high and moderate intensity burn areas that contain very few green trees. Thus, few if any green trees would be harvested for skid trails or landings.

5. COMMENTS: PROPOSAL DESCRIPTION

The DEIS fails to adequately describe the locations, character and extent of land-disturbing activities planned under each of the alternatives. (comment 117; Wild Watershed and Forest Guardians, Sam Hitt)

The proposed action is not carefully explained in the DEIS and it is difficult for the public to understand exactly what the Forest Service is proposing other than general salvage of 40-80 percent of standing fire killed trees across 5,600 acres, roadside salvage on 1,100, plus reopening 43 miles of decommissioned roadway. (comment 141; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

5. RESPONSE

Maps on pages 2-8, 2-12, and 2-13 of the FEIS display the locations and extent of land disturbing activities for each action alternative. Section 2.4.2 of the FEIS carefully explains the proposed action, beyond simply the percent of trees to be harvested, acreages, and miles of road to re-open. Additional details describe the design of the alternatives, including the distance of harvest activities from roads, slope limitations, sensitive areas that would be avoided, seasonal operating restrictions, and numerous design and mitigation measures that expand on the “character” of the activities. No activities, other than what is described in Section 2.4.2, are included in the proposed action.

As a side note, the majority of roads to be reopened are administratively closed to public use with a simple barrier, rather than being considered decommissioned roadways (FEIS, pages 2-9 and 2-10).

6. COMMENTS: ALTERNATIVES CONSIDERED

The agency has not presented an alternative that would provide personal use products to the local community without the damaging impacts of commercial salvage sales and road construction. (comment 151; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

A non-commercial restoration alternative must be analyzed. (comment 208; Forest Guardians, Lars Ortegren). These organizations will continue to oppose this proposal until an alternative is presented that will carry out ecosystem restoration activities and concentrate efforts on protecting structures in the WUI. (comment 153; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird) support a "Conservation and Local Economy Alternative" and expect that this alternative will be incorporated and analyzed fully and fairly in the final EIS. (comment 154; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Would be comfortable with a non-commercial modification of Alternative 4. (comment 92; Sierra Club, Cliff Larsen)

6. RESPONSE

All action alternatives would provide personal use products to the local community without incurring any long-term adverse impacts to the environment. The EIS illustrates how the salvage alternatives conserve and protect resources while providing local economic opportunities, which is consistent with a “conservation and local economy alternative”. Alternatives 2 and 3 may offer opportunities for local or non-local commercial timber companies as well. The EIS describes how only minimal, short-term environmental effects would result from salvage activities under any of the



alternatives. Furthermore, there will be no new road construction to facilitate logging under any of the alternatives.

Alternative 4 does not include a large commercial salvage sale and was developed to reduce the effects of the salvage logging to a minimum while still providing for the recovery of wood products from the area. The fact that Alternative 4 limits harvest to the removal of selected dead trees from within 150 feet of the roads and on 2,600 acres would not likely appeal to most commercial operators, particularly non-local operators (FEIS, p. 2-11). Most of the anticipated small commercial sales and product permits would be available and sold to the local community. It provides the best opportunity for supplying personal-use products to locals. However, the environmental consequences of the project are not related to whether or not the wood is sold through personal-use permits or small commercial contracts, and all alternatives provide opportunities to increase the employment and wood supply in the local communities. Even a small commercial sale could offer increased local employment while supplying the public with firewood, vigas, latillas, or other wood products. Thus, the purpose and need for the project would be met regardless of whether the wood is sold commercially or non-commercially. Furthermore, a “restoration” alternative would not answer the purpose and need described in the FEIS (page 1-4). The underlying need for the project involves post-fire wood recovery, with post-fire restoration activities being implemented as part of the Burned Area Emergency Rehabilitation (BAER) plan.

7. COMMENTS: REFORESTATION

Areas that are logged are to be replanted within 5 years, unless natural re-growth is deemed sufficient. That leaves it open for no reforestation at all. (comment 41; D. Americanhorse)

Does the 5000 acres planned for reforestation include private land? Bustamante Ranch was intentionally back burned. (comment 75; Albino C. Bustamante)

7. RESPONSE:

The requirement to replant or otherwise ensure adequate restocking of stands within 5 years after harvest does not apply to this salvage harvest project. It applies to regeneration harvest projects under National Forest Management Act regulations at 36 CFR 219.27. However, as a separate endeavor, National Forest System lands within the entire Viveash Fire area will be evaluated to assess the need for planting, and any replanting will be completed where natural regrowth of forest vegetation is deemed insufficient and planting conditions (e.g., depth of soil) warranty seeding survival. (FEIS, page 4-1).

Reforestation of the burn area is not a part of the Viveash Fire Salvage. Reforestation actions are associated with the BAER projects. The 5,000 acres of reforestation proposed in the BAER report is on National Forest System lands. Contact the District Office for details regarding the BAER activities, including reforestation. The Forest Service is not planning to conduct planting on any private lands. Private landowners who are interested in reforestation should contact their local office of New Mexico State Forestry.



8. COMMENTS: OLD GROWTH

The Ranger District should have completed the EMA-wide old growth before planning was undertaken on the Viveash Fire Salvage to prevent the loss of potential old growth reserves. (comment 194; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Direction has not been followed to "allocate no less than 20% of each forested ecosystem management area to old growth;" and to "use quantitative modes at the appropriate scales when considering the importance of various factors" used in old growth allocation. (comment 252; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Until the required mapping and 20% allocation in the EMA is completed and quantitative methods used to determine the adequacy of such an allocation, the salvage sale cannot proceed. (comment 253; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

8. RESPONSE

The District is in the process of completing the Ecosystem Management Area (EMA)-wide old growth allocations, which is consistent with Forest Plan direction (Forest Plan, pages 68-69). However, analysis has no bearing on this project because the salvage would not result in any potential loss of old growth reserves. The moderate to high severity areas would not have sufficient live mature trees to function as old growth or meet the Forest Plan definition of old growth stands. Roadside salvage of fire-killed trees involves leaving sufficient number of snags, down logs, and live trees that the salvage would not reduce the potential for those stands to be managed for old growth in the future. In sum, the requirement for old growth allocation is not applicable to each individual project, and does not need to occur prior to salvaging fire-killed trees. Old growth management allocations are being applied at the EMA level across the Santa Fe National Forest.

9. COMMENT: WILDERNESS PROTECTION

Scale back the action alternatives by expanding the buffers to the wilderness areas and near Elk Mountain. (comment 88; Carson Forest Watch, Joanie Berde)

9. RESPONSE

Roadside salvage is the only activity that is close to the Pecos Wilderness boundary. The road is already a significant feature on the landscape next to the Pecos Wilderness. The roads closest to the Wilderness Area were utilized as fire control lines and only the south side was burned, thus little salvage would occur on roadsides closest to the Wilderness Area. Currently, there is no management direction or requirement to have buffers for wilderness areas. Salvage activities near the Pecos Wilderness Area would occur in Management Area (MA) B (Forest Plan, page 104), which allows harvest activities. The roadside salvage areas would be limited to burned trees within 150 feet on either side of the road.

The Viveash Fire burned close to the summit of Elk Mountain, which is also in MA B. The fire basically ran out of trees near the top. There are no special management designations for Elk Mountain that would prevent salvage activities.



10. COMMENT: FIRE/FUELS

The likelihood that a home will ignite from wildfire is almost entirely determined by the landscape with 40 meters of the building and by the materials and design of the building. (Cohen reference) (comment 236; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Management activity, including fire reduction, beyond 40 meters away from a home has little effect on the likelihood that a home will ignite during a wildfire. (Cohen reference) (comment 237; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The DEIS makes the customary reburn claim. (comment 157; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

10. RESPONSE

The Viveash Fire Salvage project is not designed as a fuel reduction or fire hazard reduction project and does not state such. Fire management activities, including activities near homes and other buildings are not within the scope of this project. See FEIS page 1-4 for the purpose and need for this project. The analysis of fuels and fire in the FEIS is in Sections 3.2.5 and 4.4.5. The Fire and Fuels analysis concludes that no impacts are expected on fire and fuels (FEIS, page 3-34).

11. COMMENT: PUBLIC DISCLOSURE

Suggest that data be disclosed to the public and decision-makers early in the process so that comments and informed decisions can be made. (comment 204; Forest Guardians, Lars Ortegren)

11. RESPONSE

A public scoping meeting was held March 16, 2001 in order to distribute information and provide a forum for early input. Interested parties may request a review of the information that the project relies on at any time in the process. FEIS pages 2-4 through 2-6 describe the public involvement process, and along with documents in the Project Record, show that relevant information was provided to the public and decision-makers early in and throughout the process.

12. COMMENT: ECOLOGY/LOGGING

There are no legitimate ecological justifications for salvage logging. Erosion and sedimentation, and the accompanying loss of soil nutrients, are acknowledged to be major issues in salvage logging operations, especially post-fire operations. (comment 190; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Salvage logging usually does significant damage, significantly changes the plant and animal succession, and has no ecological benefit. There is no scientific literature in support of salvage logging, but there is substantial literature explaining the negative impacts of such logging. (comment 238, 251; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

It has been strongly recommended that salvage logging be prohibited in sensitive areas, including such areas as Viveash Fire Salvage, or in any site where accelerated erosion is possible. (comment 249; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

12. RESPONSE

Under the National Environmental Policy Act (NEPA), alternatives that are analyzed must meet the purpose and need for the proposed action. As stated in the FEIS, in Section 1.3, "the primary purpose of the proposed salvage harvesting is to recover some of the value of the wood in a portion of the burn area by putting it to beneficial use by the local and regional communities." An ecological

justification was not used to develop this salvage project, and is not required. It is within the scope of the agency's mission to provide economic opportunities and beneficial commodities to the public, while protecting natural resource values. In addition, the Forest Plan allows salvage of fire-killed trees (pages 11, 20, 74, 100, and 119). While erosion and sedimentation are acknowledged to be major issues with logging and road building operations, this project was carefully designed and appropriate mitigations (including BMPs) were applied to avoid or minimize those potential adverse effects. Therefore, an alternative that focuses simply on restoring, improving, or conserving ecosystems without salvage logging would not address the purpose and need for action. The FEIS documents how and why the project activities would not be expected to result in significant damage to the environment (FEIS, Chapter 4). Salvage logging is prohibited in sensitive areas such as on steep slopes, in streamside management zones, in occupied spotted owl or goshawk habitats, and further than ¼ mile from existing roads. Those and other measures would help ensure adequate protection of natural resources in the area and allow for post-fire recovery. Also note that many post-fire restoration activities are being implemented in this area in accordance with the BAER plan.

13. COMMENT: FISH

DEIS contains contradictions that make it difficult to interpret potential impacts of the proposed alternative on the watershed. For example, statements in the Fisheries and Aquatic Resources and the Hydrology Section contradict with the Forest Vegetation Section (comment 9; State of New Mexico, Dept. of Game and Fish, Conservation Services Division)

13. RESPONSE

The statement in the DEIS on page 4-16 about Alternative 2 having the greatest potential for effects is in the Fisheries and Aquatic Resources section. This statement is supported in the soil erosion analysis, which shows that Alternative 2 has the largest potential increase in soil erosion of 5 percent (FEIS, page 4-9). The statement on page 4-33 of the FEIS in the Forest Vegetation section does not contradict the statement in the Fisheries and Aquatic Resources section (FEIS, page 4-16) because they address different issues. The statement in the Forest Vegetation refers to the forest vegetation in the landscape and not soil movements. Similarly, the statement on page 3-42 in the Hydrology (Flooding) section and the statement on page 4-33 in the Forest Vegetation section are different issues. The two statements in the Forest Vegetation section (FEIS, page 4-33) are consistent.

Logging

14. COMMENT: LOGGERS

Most beneficial approach is to allow logging by both a responsible logging company as well as by citizens of the counties who wish to participate. (comment 30; Ted Gonzales)

14. RESPONSE

The salvage alternatives allow logging by both a responsible logging company as well as by citizens of the counties who wish to participate. Nothing in the EIS would exclude companies or individuals from bidding on a commercial sale or applying for a permit once the wood is offered for sale and/or permit. Any logging company that would operate on National Forest land in the Viveash Fire area would be required to operate within a contract that includes restrictions and requirements on their operations as well as monitoring of their compliance. Logging done by citizens under a permit rather



than a contract typically requires additional Forest Service administration and monitoring to ensure that protection measures are appropriately carried out.

15. COMMENT LOGGING/PRIVATE LAND

Logging contractual control and how will BMPs be enforced. What about postfire effects from logging that has already occurred on private land? This appears to be a major oversight by the DEIS considering that what has occurred on private lands thus far would not likely fall into "best management" classification (comment 55; Herb Cohen)

The DEIS fails to quantify the acreage of private land logging or its potential contribution to the significant issues. (comment 160; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

15. RESPONSE

Any logging company that would operate on National Forest land in the Viveash Fire area would be required to operate within a contract that includes restrictions and requirements on their operations as well as monitoring of their compliance.

The effects of logging on private land are part of the cumulative effects analysis in the FEIS. Logging on private lands falls under the jurisdiction of the State Department of Forestry. The exact number of acres logged on private land is difficult to quantify but is estimated as 1,000 to 1,500 acres. See FEIS page 4-3.

16. COMMENT: LOG LANDINGS

The DEIS fails to disclose the location, number and type of landings. (comment 119; Wild Watershed and Forest Guardians, Sam Hitt)

Landings may affect sediment delivery to streams if located within 300 feet. (comment 120; Wild Watershed and Forest Guardians, Sam Hitt)

16. RESPONSE

The location, number, and type or size of landings in any timber operation is based on: topography, width of the road, type of skidder or loader, and daily production of an operator. Some of the Viveash Project Area was logged in the past and those landings would be reused. The locations of landings and skid trails would be pre-approved by the sale administrator (page 2-11). The landings and skid trails would be required to use specific BMPs (24.18 through 24.25 and 24.27 through 24.28 see FEIS, Appendix A). Landings would not be located close to streams or within riparian areas. The effects of landings on erosion and sediment is included in the WEPP model (refer to FEIS Section 4.3.1 for details). Refer to other comments regarding potential impacts to soil and water resources.

17. COMMENT: CERRO GRANDE

Are the burned areas of the Cerro Grande fire being logged? (comment 213; Kerry and Larissa Lewis)

17. RESPONSE

The Cerro Grande fire occurred on the Espanola District of the Santa Fe National Forest and is not a portion of the Viveash Salvage proposal. Therefore, it is outside the scope of this analysis. However, most of burned areas on Santa Clara Pueblo lands have been extensively salvage logged



and completed within a year of the fire. The Cerro Grande analysis (Valle 2) includes alternatives that allow for product removal.

Project Area

18. COMMENT: SOIL/WATER

The DEIS considers only the upper 1/3 of the Cow Creek watershed. Are there any studies on what has or will happen in the 2/3 of the watershed not in the Project Area? Recovery of fisheries in Cow Creek will be delayed in the watershed area south of the Project Area. (comment 59,47, 51; Herb Cohen)

The DEIS did not evaluate impacts to the section of Cow Creek below the Project Area; Project appears to have little merit when viewed from downstream. It will take longer for sand bars to wash out if logging occurs. (comment 48, 64, 54; Herb Cohen)

Cumulative effects section should include downstream effects with regard to erosion, fish habitat, flooding, turbidity, warming and other clean water related problems. The downstream effects will include degradation of fish habitats and other beneficial uses. (comment 215, 217; Herb Cohen)

FS failed to study long-term effects on Cow Creek and the Pecos. (comment 21; R. M. Lienau)

18. RESPONSE

The FEIS discloses that none of the proposed alternatives would be expected to generate noticeable sediment delivery or flooding in the Project Area (FEIS, Section 4.3.1 and 4.3.2). Sediment yield recovery is not expected to be delayed; therefore, it is unlikely that it will take longer for sand bars to wash out if salvage occurs.

Effects, including debris flow, sedimentation, and flooding, did occur throughout the Project Area following the Viveash fire. Because of the interconnectedness of watershed systems, channels downstream of the Project Area also experienced increased sedimentation and flooding. Sand bars were created in lower Cow Creek. The sediment supplying these sand bars will continue downstream through the Cow Creek system for many years. Numerous studies have documented that streams take many years to fully transport pulses of sediment like those still washing through lower Cow Creek, although no studies have been conducted there. Therefore, no long-term effects are expected in the stream channel within or downstream of the Project Area. Because minimal effects are expected, recovery of fish habitat and restoration of the former channel morphology are not expected to be delayed by any of the action alternatives.

The completed cumulative effects analysis for soil and water resources considers downstream impacts. The delineation of cumulative effects analysis areas was based upon anticipated effects of the project alternatives. An analysis based on a larger area would dilute the direct and indirect effects. For example the area proposed for salvage harvesting would be a much smaller percentage and would appear to be relatively less important. Because of this dilution effect, the analysis areas for direct and indirect effects are focused on as small an area as practical to display the maximum effects of the alternatives. See also responses to comments 186, 187, 189, and 246 on page 12.

The cumulative effects areas can be larger if the effects analysis identifies an important cumulative effect outside of the Project Area. For water quality in this FEIS, it was determined that there were no measurable effects beyond the Project Area and the analysis stopped there. The effects of the fire were dramatic further downstream.



NEPA PROCESS

19. COMMENT: DECISION-MAKING PROCESS

The Pecos office should share the decision with others in order to avoid conflicts of interest or any bias in the decision-making process. (comment 28; Kerry and Larissa Lewis)

19. RESPONSE

The District Ranger for the Pecos/Las Vegas Ranger District is the deciding official based on NEPA regulations and Forest Service delegations of authority. However, other Forest Service offices, other federal, state, and local agencies, other groups, and private citizens have provided input into the planning process, and comments from these agencies, groups, and citizens were considered in making a final decision (see the Record of Decision (ROD)).

20. COMMENT: ANALYSIS

The DEIS has defects in the analysis of soils, watersheds and other aquatic resources. The DEIS obscures the environmental impacts. (comment 102; Wild Watershed and Forest Guardians, Sam Hitt)

The Viveash Fire Salvage DEIS is unacceptably vague, conjectural and unsubstantive. (comment 140; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

There is very limited quantitative information in the DEIS. (comment 143; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

There is no concrete evidence provided that the direct, indirect and cumulative impacts of the proposed salvage will not be significant. (comment 150; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The proposed actions are not supported by any scientific body of knowledge, and many predicted impacts are contrary to best available science. (comment 156; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Several resource issues are simply ignored based solely on BMPs and mitigation measures. (comment 163; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The DEIS fails to provide "quantified" or "detailed" information. (comment 188; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The analysis on which the Forest has relied is inadequate, flawed and biased in a number of ways, rendering any potential decision arbitrary and capricious. (comment 233; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

NEPA mandates that a federal agency take a "hard look" at the environmental consequences of its proposed action. Taking a proper hard look prohibits "general statements about 'possible' effects, and requires the Forest Service to reference material in support of or in opposition to its conclusions. Such reference must be made in the EA. (comment 243; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Comments regarding failure to address or respond to the substantial body of literature, discussed in several places in this appeal, which demonstrates that fire salvage logging is detrimental to forest health and specifically to soils, and failure to address pertinent science related to tree mortality after fires were not responded to after scoping. (comment 254; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

DEIS does not comply with the mandates of NEPA because of severe defects in the analyses of direct, indirect, and cumulative effects on soils, watersheds, and other aquatic resources. (comment 103; Wild Watershed and Forest Guardians, Sam Hitt)

20. RESPONSE

The direct, indirect, and cumulative effects are clearly stated in the FEIS and the supporting analyses. The FEIS contains both quantitative and qualitative details, particularly with respect to the key issues of soils, water, and fish habitat (pages 4-4 through 4-23). The emphasis on these issues and de-emphasis on non-significant issues is consistent with NEPA regulations. In addition, the specialist's analysis reports were too large to include in their entirety within the FEIS. Therefore, the FEIS summarizes and incorporates by reference some of the data, assumptions, and other detailed information contained in the Project Record, in accordance with NEPA regulations. Other, more detailed supporting documents, including the Roads Analysis (Foster Wheeler Environmental 2000a) and Socioeconomic Analysis (Foster Wheeler Environmental 2000c) are also available in the Project Record. The FEIS contains numerous scientific references to provide supporting evidence, used along with the professional judgment of the interdisciplinary planning team. The FEIS contains quantified data where relevant and uses the best information available. NEPA documents are not intended to be the same as research studies or similar reports. The scope and content of the EIS was developed consistently with NEPA regulations and the Forest Service NEPA Handbook. NEPA regulations require EISs to be concise.

See also response to comments 129 and 225. (Pages 23 and 26)

Comment: Tom's comment: either include a matrix or cite the page number where the response is found.

21. COMMENT: SUPPLEMENTAL EIS

The Forest Service must prepare a supplemental DEIS. (comment 107; Wild Watershed and Forest Guardians, Sam Hitt)

A supplemental DEIS should be prepared that includes at least one alternative that eliminates grazing. (comment 116; Wild Watershed and Forest Guardians, Sam Hitt)

21. RESPONSE

The deciding official will review the comments and responses, and make a determination if a supplemental EIS is needed. The CEQ's NEPA guidance (48 Fed. Reg. 34263) states;

“A supplemental EIS is required when an agency makes substantial changes in the proposed action relevant to environmental concerns, or when there are significant new circumstances or information relevant to environmental concerns bearing on the proposed action, and is optional when an agency otherwise determines to supplement an EIS.”

Developing an alternative that eliminates grazing is not within the scope, purpose, or need of this project.

22. COMMENT: NEPA

The FS has failed to meet the requirements of 40 CFR 1502 regarding environmental assessments because the analyses...are inadequate, biased and flawed in a number of ways, rendering any potential decision arbitrary and capricious. (comment 155; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

22. RESPONSE

The environmental analysis for this project was not documented in an Environmental Assessment (EA), but rather in an EIS. The comment does not specify examples that show the failure to comply



with 40 CFR 1502. The EIS was developed by the USFS in accordance with requirements set forth in 40 CFR 1502.

23. COMMENT: EXISTING WATERSHED DISTURBANCE

The DEIS fails to adequately analyze and disclose the existing levels of watershed disturbance within the Project Area. (comment 121; Wild Watershed and Forest Guardians, Sam Hitt)

23. RESPONSE

The Watershed Analysis Technical Report (Foster Wheeler Environmental 2001b) offers additional details of the analyses presented in the FEIS on pages 3-1 through 3-4. The existing disturbance in the watersheds is the effects from Viveash Fire and subsequent flooding. The existing levels of watershed disturbance in the Project Area were considered within the scope of the cumulative effects analysis (FEIS, Section 4.3.2).

24. COMMENT: CUMULATIVE EFFECTS ANALYSIS

The FS and FWENC have not attempted to complete a legally adequate cumulative effects analysis for any aspect of the environment affected. (comment 186; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The DEIS avoids the required analysis and ignores important contributors to cumulative effects. (comment 187; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Nowhere in the DEIS are the past, present or future projects that may contribute to cumulative impacts listed or discussed in any greater detail than a casual reference. (comment 189; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The Forest Service avoids the required cumulative effects analysis by separating each analysis and ignoring the overall impacts of the proposed action across the Project Area, and relying on BMPs. (comment 246; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

24. RESPONSE

The EIS includes a cumulative effects analysis developed in accordance with NEPA regulations. Cumulative effects are defined under CEQ Regulations, 40 CFR 1508.7 Cumulative Impact: "Cumulative impact is the impact on the environment that results from the incremental increase of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes them."

The past, present, and reasonably foreseeable future projects that may contribute to cumulative impacts are listed in the FEIS (Section 4.2 pages 4-1 through 4-3). Chapter 4 defines cumulative effects, presents evaluation criteria for each technical area for cumulative effects, and provides a detailed cumulative effects analysis for each technical area.

Compliance with Regulation

25. COMMENT RESTORATION/WUI PROJECTS

Urges the use of SWFA guidelines on restoration and WUI projects. (comment 84; Carson Forest Watch, Joanie Berde)

These organizations will continue to oppose this proposal until an alternative is presented that will carry out ecosystem restoration activities and concentrate efforts on protecting structures in the WUI. (comment 153; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

25. RESPONSE

The Viveash Fire Salvage project is not intended to be a restoration project, or a wildland urban interface fuel reduction project. The purpose and need is made clear on page 1-4 of the FEIS. Appropriate mitigation measures and monitoring requirements were developed and incorporated into the action alternatives for this project (FEIS, Section 2.5).

26. COMMENT: AQUATIC/FISH

The DEIS fails to disclose compliance with state and federal laws and the Forest Plan direction related to aquatic resources. (comment 104 and 105; Wild Watershed and Forest Guardians, Sam Hitt)

26. RESPONSE

The evaluation criteria for Fisheries and Aquatic Resources are tied to the New Mexico standards (FEIS, page 4-19). Also the Fisheries and Aquatic Resources analysis is tied to the Water Quality analysis, which is compared to applicable regulations (FEIS, Section 4.3.2.2). See also comments on Pages 4-13 and 4-54 that discuss compliance with the Clean Water Act and other laws. Furthermore, the alternative and analyses comply with the Forest Plan (FEIS, Section 4.7).

27. COMMENT: LAWS/FOREST PLAN

Alternatives do not comply with NFMA, CWA and ESA. (comment 106; Wild Watershed and Forest Guardians, Sam Hitt)

The overdependence on the concepts of BMPs, mitigation measures, and adaptive management significantly weakens the DEIS and fails to meet the concrete requirements of NEPA, NFMA, FSM and FSH. (comment 144; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The concept of adaptive management is not arguably applicable to a salvage logging project. (comment 145; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The Viveash Fire Salvage is in violation of several standards and guidelines adopted in the Santa Fe NF Land and Resource Management Plan. (comment 192; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

27. RESPONSE

The commenter failed to disclose specific regulations, aspects of the law, standards, or guidelines that the alternatives do not comply with, and therefore, the comments cannot be addressed in this response. However, other responses address comments regarding compliance with NFMA, CWA,



and ESA; see comments 4, 104, 105, 209, 210, 131, and 229 (RTC pages 13, 17, 18, and 20). The FEIS specifically addresses compliance with these Acts, as well as Forest Plan consistency.

The selected BMPs and mitigation measures have been used many times with success in mitigating impacts and have become virtually standard operating procedures. Many are directly from the Forest Plan standards and guidelines and have been used for over 15 years. Thus, the effects are not overly dependent on these concepts. The BMPs have been effective in meeting the Clean Water Act, and the mitigations are directly from Fish and Wildlife Service's recovery plan and other guidance provided to protect Mexican spotted owl and its habitat, in accordance with ESA. Furthermore, the USFWS has given concurrence that the proposed action is in compliance with the ESA. The analysis of the soil and water resources determined that the proposed action would be in compliance with the Clean Water Act without the use of mitigation measures. Other measures similarly address other environmental protection needs. Adaptive management is applicable to all projects including salvage logging, because it is desirable to utilize monitoring, evaluate monitoring results, and apply corrective changes as indicated.

28. COMMENT: FOREST PLAN

Comment regarding failure to address compliance with the 1999 Forest Plan amendments was not responded to after scoping. (comment 257; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

28. RESPONSE

There was no Forest Plan Amendment in 1999. The latest Forest Plan Amendment was in 1996, with other amendments in 1988 through 1994. The 1996 amendment added standards and guidelines for managing Mexican spotted owl habitat, northern goshawk habitat, old growth, and livestock grazing. The comments referred to a 1999 amendment that addressed the Gallinas watershed. A portion of the Gallinas watershed burned in the Viveash Fire but is not included in this project.

Socio-economics

29. COMMENTS: ECONOMICS/NET BENEFITS

The DEIS...fails to place any economic value on existing uses and functions of the sale area, including recreation, flood control, pest control...and many other ecosystem services. (comment 166 and 167; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Substantive comments not responded to include failure to account for value of non-market benefits that may be impacted due to salvage logging and log truck traffic; Value of undisturbed forest or standing timber in economic analysis; fails entirely to account for any existing socioeconomic benefits (comment 255, 170, 148; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The socioeconomic analysis produced by FWENC does not meet the letter or intent of the law and borders on primitive. (comment 147; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The FS has failed to complete an economic analysis of the Viveash Fire Salvage that provides the public with a full and fair accounting of net economic benefits. (comment 165; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

An economic analysis for the project must be prepared that provides that public with a full and fair accounting of the net economic benefits. (comment 207; Forest Guardians, Lars Ortegren)

29. RESPONSE

While this project was designed to meet a socio-economic purpose and need, there is no requirement to assess the economic value of all existing uses and functions within the Project Area. Forest Service Manual for project-level socio-economic states, “Select cost effective methods of conducting economic and social impact analyses to ensure that the degree of analysis is commensurate with the scope and complexity of the proposed action” [FSM 1970.3(6)]. “The responsible line officer determines the scope, appropriate level, and complexity of economic and social analysis needed” (FSM 1970.6).

The purpose of the economic analysis is to assist in decision-making. The FEIS discloses the most relevant social and economic effects of the project activities, such as the number of job opportunities and predicted incomes and revenues (FEIS, Section 4.5.1). Some of the data for the costs and revenue specific to the proposed project was obtained from USFS personnel, with additional economic data obtained from the U.S. Department of Commerce Bureau of Economic Analysis and the IMPLAN Model ES202 based sectoral statistics. More detailed socio-economic analysis descriptions are contained in the Socioeconomic Report in the Project Record. The FEIS includes an estimate of Present Net Value (PNV). A complete accounting of all costs and benefits (both traded and non-market) is not necessary in order to make an informed decision on this project, and would be practically impossible to do in a cost-efficient or scientifically valid manner. Public values for amenities such as forest recreation, scenery, wildlife, and environmental preservation are highly variable.

30. COMMENTS COUNTY: ECONOMY

The DEIS fails to disclose the diversity of the economy in San Miguel county and discuss the important contributions of the non-timber sector. (comment 168; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Creating jobs would be good economic stimulus to the county. (comment 74; Albino C. Bustamante)

30. RESPONSE:

San Miguel County is discussed in the FEIS in Section 3.3.1, Socioeconomics, and details income, labor force and employment, and poverty rates. The section also covers the contribution of major economic sectors to the total overall labor pool, referencing the shares of those sectors that are important in the county. Additional information on county per capita income and poverty rates are also discussed to see comparisons of San Miguel County with that of the State and Nation. Additional, in-depth descriptions are contained in the Socioeconomics Technical Report in the Project Record.

According to the socio-economic analysis, an increase in jobs and dollars to the region would be realized, providing a good economic stimulus to the County.

31. COMMENT: LOGGERS/JOBS

Benefit local people and businesses by issuing permits to cut firewood and vigas in least invasive areas. (comment 46; Cole Americanhorse)

Logging should be limited to small local operations. (comment 69; Ben J. Ruiz)

Viveash Fire Salvage EIS



31. RESPONSE

All action alternatives would allow local businesses and individuals to obtain permits to cut firewood and vigas. Federal regulations do not allow the Forest Service to limit permits or contracts to people based on where they reside; therefore, the agency cannot limit logging to small local operations only. Alternative 4, by limiting salvage to 150 feet of roads and not requiring specialized logging equipment, is designed more for small local businesses or individuals rather than larger timber companies.

32. COMMENTS: JOBS

The USFS has chosen to entirely ignore the current non-timber jobs in this sector of the "National Forest economy" in the analysis area. (comment 169; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Did not mention that jobs were only temporary. (comment 44; D. Americanhorse)

Does not believe the number of jobs stated in the EIS would be created. (comment 57; Herb Cohen)

32. RESPONSE:

The non-timber jobs were used as a portion of the background economy to determine a change in employment rates. Calculations used the conventional industrial classification scheme that list all economic sectors at the Standard Industrial Classification one-digit level.

Employment in each of the counties closest to the fire, covering San Miguel, Santa Fe, and Rio Arriba are analyzed to portray the importance of each industry sector. These three counties are all partially located within Santa Fe National Forest. Although the Viveash fire only occurred in San Miguel County it was important in the EIS to provide a regional perspective to determine how the regional economy would be affected by the salvage timber sales.

The FEIS mentions that the jobs would be temporary, stating, "the duration of the total number of full time equivalent job opportunities created would take place over a 3-5 year period" (FEIS, page 4-37). The number of jobs estimated by professionals on the FEIS team is based on several other estimates and assumptions, as described in the socio-economic technical report, and is simply a prediction.

33. COMMENT: WOOD VALUE

The burned timber is virtually worthless for wood products. (comment 33; D. Americanhorse)

33. RESPONSE

The value of the burned trees as wood products has declined but still has some value. The value of these trees is presented in the economics analysis.

34. COMMENT: WOOD PERMITS

Permits for materials should be sold at 50% current price to encourage citizens to participate. (comment 31; Ted Gonzales)

34. RESPONSE

The cost for permits would be considered during their issuing.

35. COMMENT: NEGATIVE ECONOMICS

Public concerned with cost (to taxpayer, property value, project in the red). (comment 63; Herb Cohen)

Concerned with the adverse economic effects of the National Forest logging program. (comment 146; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Is there a breakdown of expenses for the economic efficiency analysis in table 4-6? Why are expenses higher than revenue? (comment 82; Albino C. Bustamante)Response

Planning a high-volume salvage timber sale with extensive road reconstruction while attempting to couch it in economic stimulus without considering any of the other socioeconomic benefits borders on fraud. (comment 149; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

35. RESPONSE:

Although the monetary value of the wood that would be salvaged from the proposed project does not pay for the full cost of the proposed project, the effects to the region are shown to be positive. The amount of dollars produced in the form of jobs from the proposed project show a substantial positive effect. Based on the maximum amount of wood that could be salvaged, approximately \$7,826,000 would be created in the form of jobs from salvage logging, specialty wood products salvaged, and indirect and induced income to the region. This value is greater than the estimated \$840,000 cost of the project.

Table 4-6 (page 4-38) of the FEIS has been added since the DEIS to give a breakdown of the expenses associated with Table 4-6 of the DEIS. As shown in Table 4-6, in the FEIS, the majority of the costs associated with the proposed project are associated with NEPA documentation and analysis. In addition, the monetary value of the wood is not as high due to the damage from the fire and decay. However, the value of the wood as sawtimber, specialty wood products, and firewood is still recognizable, even though the trees have been seriously damaged.

The primary purpose of the salvage project is to recover some of the value of the wood in a portion of the burn area by putting it to beneficial use by the local and regional communities (FEIS, page 1-4). The road management actions, including relocation/realignment, decommissioning, and improving drainage and water flow, would also have a positive social value through the effect of reducing road-related stream sedimentation and road density, and improving public safety.

Water Quality and Clean Water Act

36. COMMENT: CLEAN WATER ACT (CWA)

New Mexico's anti-degradation policies prohibit the proposed project in water quality limited waters. BMPs discussed in the DEIS fail to take into consideration that streams within the Project Area are already severely degraded and thus will not be protected by the application of generic BMPs. (comment 209, 210, 211; Forest Guardians, Lars Ortegren)

36. RESPONSE

New Mexico's standards for sediment are not numeric. They are designed to protect beneficial uses through the application of BMPs. Beneficial uses in 1975 would not be different than those today. The beneficial use of cold water fisheries is the most restrictive for sediment and would not be different based upon 1975 or pre-fire conditions.



There is no language in the State of New Mexico's Standards for Interstate and Intrastate Surface Waters (20.6.4 NMAC) or the antidegradation policy (20.6.4.8 NMAC) that prohibits projects in water quality limited waters.

The FEIS and supporting documents in the Project Record show that the appropriate non-point source pollution considerations, which include BMPs, were made during the planning process. New Mexico Environment Department's Surface Water Quality Bureau was consulted and provided input that was incorporated into the project design. The BMPs are standard types of actions that have been proven effective on past timber harvest projects in reducing nonpoint sources of pollution, while improving soil productivity. The BMPs designed to minimize sediment contribution to streams would not be any different if the streams were not already degraded. Appendix A of the FEIS presents and explains in detail the BMPs associated with this project. Through adherence with the BMPs and careful monitoring during and immediately after project implementation, there should be no violation of CWA or the State's antidegradation policy.

37. COMMENTS: CLEAN WATER ACT/PERMITS

Address requirement for Federal Clean Water Act Section 404 permit and Section 401 certification. (comment 4; State of New Mexico, Environment Dept., Peter Maggiore, Secretary)

37. RESPONSE

If implemented, any alternative that would include culvert removal, resizing, or drainage control for roads and trails involving in-stream work would require both a Section 404 permit from the Army Corps of Engineers and a Section 401 certification from the New Mexico Environment Department. Applications for these permits would include detailed descriptions of the projects, anticipated effects, and specific mitigation measures to minimize impacts (refer to FEIS, page 2-14).

38. COMMENTS: WATER

The DEIS does not adequately disclose the effect of existing watershed disturbances on soils and relationship to the Santa Fe Forest Plan and NFMA provisions. (comment 126; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS fails to examine the effects of cumulative increases in sediment delivery under the alternatives and effects on turbidity and water quality standards. (comment 138; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS must be revised to correctly disclose the persistence of adverse substrate effects from short-term increases in sediment delivery and the limited benefits of longer term sediment delivery reductions for substrate conditions. (comment 139; Wild Watershed and Forest Guardians, Sam Hitt)

Believes that changes will occur that will affect compliance with the CWA. (comment 62; Herb Cohen)

Nowhere is any attempt made to quantify the cumulative watershed impacts using such standard measures as sedimentation, turbidity, water temperature, etc. Cumulative impacts are analyzed in context only of "large scale harvest area", no attention is provided to other factors. (comment 248; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

38. RESPONSE

The FEIS fully discloses the potential short- and long-term effects of the proposed alternatives on changes in erosion rates and sediment delivery to streams. Adverse substrate effects from short-term increases in sediment delivery can result in long-term stream habitat degradation. However,



Sections 4.3.1, 4.3.2, and 4.4.1 explain that effects of the proposed activities would be short in duration and have a small magnitude and geographic extent. There would be an 11% increase in soil erosion, but most of that detached soil would not end up in stream channels. The predicted sediment yield increase would delay recovery of sediment yield to pre-fire conditions by less than one year. Also, the 11% increase does not reflect application of BMPs, thus actual increases in soil erosion and sediment yield would be much lower. Soil protection measures taken from the Forest Plan standards and guidelines would help maintain critical soil parameters and nutrients, and ensure long-term soil productivity. By avoiding harvest on slopes over 35%, leaving slash on the soil to reduce erosion, avoiding riparian areas and streams, decommissioning or closing roads immediately after salvage operations, requiring designated skid trails and landings, and other BMPs, the probability of sediment yield increases that result from this project is very low. (Refer to the watershed analysis technical report, FEIS Section 4.3.1 and BMPs). Overall, the predicted effects are negligible and would not damage long-term soil productivity or water quality (FEIS, Sections 4.3.1 and 4.3.2). Beneficial uses would not be affected. Gradual post-fire recovery of fish habitat qualities should not be impeded by the results of the salvage and road management project. The road management actions should result in long-term reductions in sediment and turbidity, and improvement in water quality and fish habitat characteristics.

Direct, indirect, and cumulative impacts to soil and water resources are presented in Sections 4.3.1 and 4.3.2 of the FEIS. The level of detailed quantitative analysis is commensurate with the potential for significant adverse effects, best scientific information available, and decision to be made with respect to the FEIS. The FEIS is not intended to be an exhaustive study of potential environmental consequences. The FEIS specifically addresses compliance with the Federal Clean Water Act, New Mexico's Antidegradation Standard, and the Santa Fe National Forest Plan. In conclusion, the detailed analysis included in the FEIS (Section 4.3) and in Foster Wheeler Environmental Corporation (2001b), indicates that water quality is not expected to be significantly impacted and violations of the Clear Water Act are not expected, primarily due to the design of the alternatives, and expected implementation and effectiveness of BMPs.

39. COMMENTS: ROADS/WATER QUALITY

DEIS does not analyze the short-term adverse impacts of reopening 43 miles of closed roads. (comment 8; State of New Mexico, Dept. of Game and Fish, Conservation Services Division, Tod W. Stevenson, Chief)

Road openings and construction would have harmful effects on fish and riparian ecosystems. (comment 45; D. Americanhorse)

Watershed damage from road openings and construction are discounted in the DEIS. (comment 49; Herb Cohen)

Operating heavy trucks, opening roads, and creating skid trails will increase soil erosion. (comment 91; Sierra Club, Cliff Larsen)

The DEIS fails to disclose that increased traffic under the several alternatives will significantly increase sediment delivery. (comment 137; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS must credibly disclose the duration and magnitude of increased sediment delivery caused by increased truck traffic. (comment 230; Wild Watershed and Forest Guardians, Sam Hitt)

No attempt is made in the DEIS to quantify the soil compaction and sediment delivery resulting from reopening roads. (comment 159; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)



There is ample science demonstrating that road reconstruction will significantly increase soil erosion and sediment. (comment 162; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

39. RESPONSE

The 43 miles of closed roads that would be reopened under the action alternatives are closed to public use while remaining on the Forest road system for administrative and/or permittee use when necessary. Because field observations showed that most of these roads are very stable and fairly resistant to erosion, above 8,500 feet, and seasonally closed, there would be no substantial effect on soil or water resources from opening them temporarily to facilitate salvage activities. No new roads would be constructed for use with the salvage project, although some road segments would be constructed in association with road relocations or realignments that are not directly connected to the salvage operations. The goal of constructing those new road segments is primarily to remove certain road segments along FR 86 and 92 out of existing streams to reduce erosion and sedimentation. In addition, the implementation of the BMPs presented in Appendix A of the FEIS, would reduce the magnitude of short-duration increases in sediment delivery that is expected from the various road management activities.

40. COMMENTS: WATER QUALITY/SEDIMENT

The DEIS erroneously asserts that BMPs reduce sediment delivery to ecologically insignificant levels. These assertions are without any scientific basis. (comment 131; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS assessments of sediment delivery impacts are based on the incorrect and arbitrary assertions that BMPs will reduce sediment delivery to insignificant levels. (comment 229; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS assumes that water quality will be protected if BMPs and mitigation measures are implemented. (comment 247; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The agency cannot simply rely on BMPs and other reactive measures; rather it must begin to address the actions that cause the infestation such as road development and logging related vehicles. (comment 258; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

40. RESPONSE

The soil erosion analysis in the FEIS predicts that the soil erosion rate would increase a maximum of 11 percent for Alternative 2 in the absence of the BMPs (page 2-19). However, the BMPs are required measures for implementation of this project and are expected to be properly implemented and effective. Thus, the actual expected increase in soil erosion rate would be substantially less. Sediment delivery to the streams would be between 1 and 5 percent of the expected increase in soil erosion (Table 4-1, FEIS page 4-5).

In particular, stream buffers have been shown to be very effective in moderating cumulative watershed effects (Thomas et al, 1993), and harvesting would not occur on steep slopes or near streams. Other studies have evaluated the distances that sediment travels below roads, and provide support for designating the buffers as sediment traps. Swift (1986) measured sediment travel distances through forest litter on 47 percent slopes and the average distance was 65 feet. Burroughs

and King (1989) found that 90 percent of the sediment flows below fill slopes travel less than 88 feet.

41. COMMENT: STREAM BUFFERS

The DEIS is completely devoid of information regarding increasing buffer zone sizes on smaller streams because of their increased vulnerability to degradation as stated in USFS and USBLM (1997a). (comment 221; Wild Watershed and Forest Guardians, Sam Hitt)

A 200' streamside management zone is not enough to stop the flow of water caused by logging operations. (comment 40; D. Americanhorse)

41. RESPONSE

Stream densities in the proposed salvage areas are quite low (FEIS, page 3-3). Salvage equipment is limited to slopes less than 35 percent, which is low for headwater streams. Therefore, the 100-200-foot stream buffers proposed for this project are appropriate and fit relatively closely with Erman et al. (1996). The USFS and USBLM (1997, DEIS for the "Eastside" Planning Area, Walla Walla, Washington) reference used by the commenter is from an EIS in Washington State, which has a much different climate, forests, landscape, geology, and hydrology. The standard selected for the Viveash salvage was generated in an interdisciplinary setting based upon professional judgment and site specific observations rather than a standard from Washington State. The streamside management zones would be evaluated on the ground and monitored during implementation to determine and verify the most appropriate distance for each site-specific location.

42. COMMENT: RIPARIAN RESTORATION

Is there an existing plan for channel and riparian restoration and seeding? (comment 78; Albino C. Bustamante)

42. RESPONSE

The BAER report (USDA Forest Service 2000a) lists specific restoration plans that are being implemented by the Forest Service in this Project Area to accelerate post-fire recovery. These plans include channel and riparian restoration measures and reseeded where vegetative regeneration does not occur naturally.

Water Quantity

43. COMMENTS: WATER FLOWS/FLOODS

Major events (floods) will become more dangerous. (comment 60; Herb Cohen)

The DEIS does not adequately disclose the effect of existing conditions on peakflows and affected downstream resources; fails to adequately disclose the alternatives' effects on peakflows and affected downstream resources; does not disclose that logging will also elevate surface erosion via increased peakflow and runoff. (comment 130, 135, 223; Wild Watershed and Forest Guardians, Sam Hitt)

43. RESPONSE

The FEIS fully discloses that the Viveash Fire caused increased flooding throughout the Project Area (page 3-11). Elevated peakflows also caused flooding downstream of the Project Area. The



FEIS, Section 4.3.2.1 explains the scientific reasons that “the effect of any of the action alternatives would be no increase and potentially a decrease in water quantity or flooding”.

Comments addressing peakflows point out that removal of trees increases snowmelt because of shade removal. The existing burned trees in the Project Area are black, which attract and store more solar radiation than green trees or no trees. As a result, removing the burned black trees would decrease the rate of snowmelt and thereby reduce snowmelt peakflows. In addition, existing trees are devoid of leaves and needles, making them poor interceptors of snowfall. Removing them would not cause significant increases in snowpack or subsequent snowmelt, as explained in the FEIS. Most of the higher elevation roads that receive abundant snowfall are outsloped with rolling grades to disperse drainage and lessen the effect of flow increases to the channel network.

Soils and Site Productivity

44. COMMENT: TIMING OF OPERATIONS

Recommend that work be scheduled outside of the rainy season. (comment 3; State of New Mexico, Environment Dept., Peter Maggiore, Secretary)

Ground-disturbing activities should only occur in winter to minimize disturbance of recovering root systems and topsoil. (comment 96; Sangre de Cristo Audubon Society, Thomas Jervis)

44. RESPONSE

The FEIS describes mitigation measures common to all alternatives, stating that “Harvest activities are restricted to dry or frozen soils.” (page 2-15 in Section 2.5.1). Furthermore, mitigation measures such as BMP 41.11—Timing of Construction Activities addresses these concerns.

45. COMMENTS: REGENERATION/SOIL DAMAGE

Harvesting dead trees will slow forest regeneration by damaging soil, increasing erosion, and resulting in sediment flow. (comment 16; R. M. Lienau, Kerry and Larissa Lewis D. Americanhorse, Cole Americanhorse, Herb Cohen)

45. RESPONSE

The effects of the action alternatives on soil productivity and water quality are described in detail in the FEIS, Sections 4.3.1. and 4.3.2. Section 4.3.1 includes a description of the predicted soil compaction and erosion and potential sediment delivery to streams for each alternative. The FEIS and supporting documents show that there would not be a significant increase in soil damage, erosion, or sediment delivery to streams from the salvage or road management activities, due to the design of the project and associated BMPs that are included in all action alternatives. Because there would not be significant decreases in soil productivity, harvesting dead trees would not slow forest regeneration.

46. COMMENTS: SOIL PRODUCTIVITY

The DEIS fails to provide any estimate of the existing area with soil productivity losses and degree of soil productivity losses within these areas; fails to adequately disclose the amount of compaction and soil disruption caused under each alternative and the total amount of compacted soils throughout the Project Area and at the watershed scale likely under each alternative; fails to disclose that elevated erosion from logging will probably be greatest in areas with high severity burns, which will degrade

soil productivity; Does not adequately disclose alternatives' effects on soil productivity. (comment 128, 224, 132, 129; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS must disclose the area of long-term intense loss of soil productivity from landing and road construction and landing reuse for all alternatives on a watershed basis; must disclose the total area of soil productivity loss caused by cumulative effects of compaction, soil displacement, wood and vegetation removal and elevated soil erosion under each alternative over the Project Area and affected watersheds (comment 227, 228; Wild Watershed and Forest Guardians, Sam Hitt) (

The DEIS must be revised to disclose information regarding approaches to restore soil productivity, like restoring organic matter, etc. (comment 226, Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS distorts existing soil and soil productivity conditions by failing to use the best available science. (comment 129; Wild Watershed and Forest Guardians, Sam Hitt)

Use of logging equipment will break up the hydrophobic layer. (comment 72; Albino C. Bustamante)

46. RESPONSE

The FEIS provides an estimate of the existing conditions of the Project Area with respect to soil productivity. Section 3.1.2 describes that “The fire totally consumed ground litter in areas mapped as high-severity burns”, which are shown in Figure 1-2. The formation of hydrophobic layers in those high intensity burns is also described. As explained in this section, each of these factors contributed to the lowered soil productivity following the Viveash Fire. Soil productivity degradation is greatest in areas of high-intensity burn. Existing conditions were considered in the cumulative effects analysis for soils (FEIS, pages 4-6 and 4-7).

As explained in section 4.3.1.1, the evaluation criterion for assessing the effects of salvage alternatives on soil productivity is the change in soil loss. Predicted changes in soil erosion and sediment delivery were evaluated per subwatershed for each alternative. The analysis regarding soil productivity are fully disclosed in Table 4-1, 4-2 and 4-3 of the FEIS and in Foster Wheeler Environmental Corporation (2001b). The analysis considered soil erosion, compaction, changes in organic matter, and other soil condition factors.

Sections 4.3.1.1 and 4.3.1.2 of the FEIS fully disclose that soil productivity would decrease in the short-term, during and for several years after logging, because of topsoil disturbance during logging operations. Soil erosion would also contribute to a slight decrease in soil productivity during that time. Although the soils burned by the wildfire are more susceptible to erosion than unburned soils, the operation of machinery on soils burned in high intensity fires would help break up the water-repellent (hydrophobic) layer created during high intensity burns, thus increasing water infiltration and improving soil productivity. In addition, the small woody debris (slash) left from salvage operations would reduce soil erosion, increase organic matter, and help restore soil productivity. The WEPP computer model used to predict soil erosion takes into account the effects of salvage (including skid trails) on soils that were severely burned. The model results; however, do not account for the positive influences of the slash left on the ground or the other BMPs designed to reduce erosion and protect soil productivity. Therefore, the actual expected amount of soil re-deposition would be more than what is shown in the FEIS. Road densities were used as indicators of the impacts of roads on soil productivity in the subwatersheds.

The relatively small, localized areas disturbed by logging activities would be expected to recover maximum site productivity in the long-term (estimated to be within 10 years based on past experience with similar salvage projects). There would be no loss of long-term soil productivity. Short-duration loss of productivity would be most evident along skid trails; however, with



designated skid trails and rehabilitation of skid trails after harvest, the extent and magnitude of the temporary loss in productivity would be relatively small. Harvest equipment would be used over the entire 6,700 acres of salvage area included in the maximum harvest alternative (Alternative 2), but would be limited to designated skid trails. Landings would be primarily located along roads and road right-of-ways that are not part of the productive land base; therefore, there should be little or no loss of productivity from landings. The FEIS shows that the construction of a few new road segments (to replace old segments) would not add to the miles of Forest system roads in this area, and the post-harvest decommissioning and road reclamation work would allow several old roads to gradually regain their site productivity. No new roads would be constructed to implement the salvage operations.

The cumulative effects analysis in the FEIS discloses the past, present, and future actions. It describes how the effects of road decommissioning and reclamation work, combined with the minor and temporary losses of site productivity from logging operations, would have a net positive increase in the acreage of productive land in the Project Area. Planned and expected improvements in soil conditions and increases in long-term site productivity that result from the BAER activities, along with road management activities in the area, would greatly outweigh short-term losses expected from salvage logging.

The analysis of soil erosion that is related to productivity was completed using the WEPP model (Elliot et al. 2000). This model was developed specifically for evaluating the effects of logging and road building. The model developer was consulted to ensure the appropriate application of this analysis tool. Soil conditions analyzed in the EIS in Washington State, which the commenter refers to as the “best available science”, are likely different than those in New Mexico. The soils in the Viveash Fire area formed hydrophobic layers in large portions of the high intensity burn area. The effects of heavy rains and associated erosion removed substantial portions of the soil (page 3-7). Soil compaction and erosion associated with tree harvesting would have substantially smaller effects than the Viveash Fire had in this area in New Mexico. The soil and water analysis conducted by Foster Wheeler Environmental was also reviewed by highly qualified professional hydrologists and soil scientists from the Santa Fe National Forest, Forest Service Southwestern Regional Office, New Mexico Environment Department, and other agencies. There were no comments from these professionals regarding the use of the best available science in the FEIS.

47. COMMENTS: SOIL CLARIFICATION

Please explain the discrepancies on page 3-8 and Figure 3-2 and Table 3-4 regarding eroded soils and erodible soil types. (comment 90; Sierra Club, Cliff Larsen)

47. RESPONSE

The estimates of soil loss displayed in Table 3-4 and Figure 3-2 of the DEIS were based upon the BAER report. The large quantity of post-fire soil loss estimated for Elk Creek can be attributed to the large area affected by high intensity fire in this subwatershed. That statement on page 3-8 of the DEIS was amended in the FEIS to read, “These upper subwatersheds generally experienced less erosion per acre of high severity burn than soils that developed in granite would have experienced under those conditions.”

48. COMMENT: FIRELINES

The DEIS fails to disclose the amount and locations of bulldozed firelines and handlines within the Project Area that were constructed to fight the Viveash fire. (comment 125; Wild Watershed and Forest Guardians, Sam Hitt)

48. RESPONSE

Suppression crews rehabilitated firelines, both created by bulldozers and by hand, after the fire had been contained. The BAER report describes the areas where firelines were used. As part of the BAER rehabilitation activities, areas were revegetated and repaired to reduce erosion effects. The effects of these firelines and their rehabilitation were considered in the cumulative effects sections of several of the environmental effects analyses for the FEIS. All specialists reviewed the BAER report for relevant information; however, many considered the effects of the firelines to be minor in comparison with the effects of the Viveash Fire. In addition, the majority of the firelines are not located in the harvest areas.

49. COMMENT: WATERSHEDS/CUMULATIVE EFFECTS

The DEIS must be revised to disclose the total area of watersheds cumulatively impacted by all past, present and future activities (including logging, grazing, roads, road construction, landings, landing construction and firelines) for all the alternatives. (comment 133; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

49. RESPONSE

The Watershed Analysis Technical Report (Foster Wheeler Environmental 2001b) presents details on roads and the Viveash Fire. These two cumulative effects dominate the watersheds. Logging, grazing, landings, and firelines were considered in the cumulative effects analysis process to have relatively minor impacts compared to the past and on-going effects of the wildfire. In addition, the FEIS identifies the acres of salvage by subwatershed (page 3-9). A summarized version of the cumulative effects analysis for soil and water resources is documented on pages 4-7, 4-13, and 4-14 of the FEIS. Also, refer to other comments regarding soil and water resources.

50. COMMENT: SALVAGE LOGGING/ECOLOGY

The DEIS does not discuss Beschta et al. (1995). (comment 225, Wild Watershed and Forest Guardians, Sam Hitt)

Comment: Page: 28
Consolidate with other beschta comments.
See also Steve's comment

50. RESPONSE

The Beschta et al. (1995) paper submitted to the Pacific Northwest Regional Forester evaluates the ecological basis for salvage logging following wildfire. The paper remains unpublished and was not peer reviewed, and has received criticism from several scientists. Everett (1995), in fulfilling a request by the former Regional Forester to respond to the Beschta commentary, suggests that although postfire logging should be evaluated case by case, the custodial post-fire approach advocated by Beschta and others (1995) would be less desirable because of soil degradation in the absence of seeding and dangerous fuel accumulations in the absence of tree harvest. Everett (1995); however, concurs with Beschta and others (1995) in stating that there is little to no information available to support either the reburn hypothesis or the premise that post-fire logging results in no more environmental damage than typical green tree harvest.



Several of the concerns that Beschta et al. (1995) expresses have become part of the action alternatives. The proposed action alternative for Viveash salvage project addresses many of these concerns by limiting the harvest equipment to slopes that are less than 35 percent and within ¼ mile of existing roads. This excludes stream courses and riparian areas from harvest, requires designated skid roads to minimize the amount of ground disturbance, leave slash on site for erosion control and a supply of organic matter for future soil development, and other measures. However, the Beschta paper is otherwise irrelevant to this project because the purpose and need for the project is to recover wood value from some of the fire-killed trees while improving economic opportunities, rather than to reduce future wildfire risk or improve ecological conditions. Measures are incorporated into the project to adequately protect and conserve natural resources.

Soil Erosion

51. COMMENTS: SOIL/EROSION

Computer-generated predicted erosion calculation is very low. (comment 56, Herb Cohen)

The 1-5% predicted change in sediment is a significantly low estimate. (comment 161; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

No attempts have been made to quantify erosion and sedimentation or make scientific predictions for future increases or decreases. (comment 191; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

How much soil will be removed by erosion? (comment 66; William Montagne)

How much soil will be removed by taking out trees? (comment 67; Walter Matuska)

Challenges the DEIS statement that no additional damage to watershed is expected. (comment 61; Herb Cohen)

The DEIS does not adequately disclose the effects of the alternatives on erosion, sediment delivery and sedimentation. (comment 136; Wild Watershed and Forest Guardians, Sam Hitt)

A 25% slope rather than 35% is recommended to avoid erosion. (comment 93; Sierra Club, Cliff Larsen)

Slash from timber as well as the timber could be used to control and minimize erosion. (comment 73; Albino C. Bustamante, Sangre de Cristo Audubon Society, Thomas Jervis)

51. RESPONSE

The FEIS discloses predicted maximum increases in soil erosion rates for each alternative in section 4.2.1. These predicted changes in soil erosion rates reflect the best available science for the conditions in the Project Area. More detailed predictions requested by some comments are not possible with the current scientific understanding of the variables involved. The WEPP computer model used in the FEIS analysis represents the best available science. The 2 to 11 percent increases reflect potential maximum changes in soil movement from salvage logging activities. The soil erosion calculations were carefully reviewed and a revised estimate of 2-11 percent increase is the result. These estimates do not take into account slash left on site, recovery during the last two years, and the application of BMPs. The estimates have also been reduced by calculating soil lost to the system (sediment delivery ratio).

Predicted maximum increases in soil erosion for individual subwatersheds can be found in Table 4-1 in the FEIS and in Foster Wheeler Environmental Corporation (2001b), referenced throughout the



FEIS. Maximum predicted soil erosion increases would likely occur in the highly burned Elk Creek and Upper Bull subwatersheds under Alternative 2 (see Table 4-1). These subwatersheds have the lowest predicted sediment delivery to streams (see Table 4-1). Therefore, only a small portion of the predicted increases in soil erosion would be expected to reach stream systems and have the potential to decrease water quality.

Several comments refer to specific scientific studies that cite higher rates of soil erosion for timber harvest than predicted in the FEIS. Many of these soil erosion rates were measured in the Pacific Northwest and many represent soil erosion after harvesting green trees. For example, Beschta and others (1995) make general recommendations about timber salvage in burned areas based on abundant research from the Pacific Northwest (including references of studies in Oregon, Washington, northern California, Idaho, the Southern Canadian Rockies, and the Pacific Northwest.) They include one reference that is relevant to the Interior West – Runoff and soil loss following the 1988 Yellowstone fires (Marton and Haire 1990). That paper describes the effects of wildfire, not salvage, on soil erosion. The wet climate of the Pacific Northwest results in more available water to promote soil erosion than in the semi-arid region of New Mexico where the Project Area is located. Similarly, harvesting on unburned soils involves disturbing the protective duff layer. The Viveash fire completely removed that layer in areas of proposed salvage harvesting throughout the Project Area. For example, one comment compares the proposed alternatives to a paper by Swank and others (1989). The paper in which this reference is cited (McIver and Starr 2000) states that the referenced studies examined road building and use in green tree harvests and adds, "...we could find no studies that looked at the effects of postfire road building and use ...". The proposed alternatives would not include road building for salvage harvest.

As mentioned above, the soil erosion rates predicted for each alternative in the FEIS are based in the WEPP computer model. This model incorporates site-specific climate data, burned soil conditions (differentiating between high and low severity fires), soil textures, hillslope gradients and lengths, percent cover, vegetation type, and logging skid trails into all predictions. The soil erosion rates listed in the FEIS are more accurate for the Project Area and are much lower than those from studies of more humid systems or green tree harvests. The WEPP soil erosion estimates are also high because of the recovery of the soil in the last two years following the fire.

Rehabilitation efforts may include active reseeding and replanting in disturbed areas, if natural revegetation was deemed insufficient (FEIS, page 4-1). The resulting increases in vegetation would contribute to soil formation. Furthermore, existing dead trees lack bark, leaves, or needles, which are the primary components of the protective duff layer. The combination of removing some dead standing trees while leaving the smaller tops and limbs (slash), along with reseeding and replanting, would not significantly reduce the amount of organic matter in the system available for soil regeneration.



52. COMMENTS: LIVESTOCK/SOIL-WATER

The DEIS fails to disclose the impacts of livestock grazing on soils, watershed condition and aquatic species. (comment 115; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS never provides any estimate of the cumulative soil compaction within the Project Area caused by logging, grazing, firelines, landings and roads. (comment 127; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS fails to take a hard look at several critical contributors to soil compaction and sediment delivery (including livestock grazing). (comment 158; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

52. RESPONSE

Several comments point out that heavy livestock grazing can negatively impact soil and water resources. Livestock grazing utilization in the Project Area is low, as described in section 3.2.4 of the FEIS. In total, current livestock use in allotments that overlap into the Project Area includes 48 cows per 13,804 acres in the Bull Creek allotment, 11 cows per 6,301 acres in Cow Creek, 77 cows per 4,567 acres in Valle Osha, and 194 cows and 12 bulls per 16,831 acres in Rosilla. Based on these stocking numbers, pasture locations, topography, forage and water availability, pasture rest-rotation systems, and field observations, heavy concentrations of livestock grazing do not occur in the Project Area. Most cows are only in the pastures part of the year, and two of the four stocked allotments are under deferred rotation grazing systems. Because heavy concentrations of livestock grazing do not occur in the Project Area, and because salvage and road management activities would not be expected to have noticeable effects on livestock forage, water, or livestock management, grazing was not evaluated as a significant issue in the FEIS.

Livestock grazing was considered during the cumulative effects analysis process, in addition to the effects of watershed restoration activities being implemented under the BAER Plan. Rehabilitation actions have reduced the cumulative impacts related to the past wildfire suppression actions, and the cumulative effects of the salvage project activities, in addition to other past, present, and foreseeable future activities in the area, are described in the FEIS (Sections 4.3.1 and 4.3.2).

Wildlife

53. COMMENT: WILDLIFE/ESA

The FS is violating Section 9 of the Endangered Species Act by failing to comply with the terms and conditions of the 1996 Biological Opinions. (comment 114; Wild Watershed and Forest Guardians, Sam Hitt)

53. RESPONSE

Section 9 of the Endangered Species Act defines incidental take as causing direct loss or physical harm to listed species. As stated in previous comments and in the FEIS on page 2-15 in Section 2.5.1, any occupied PAC would not be logged. The determination of occupation of owls in this area is based on surveys for presence or absence (see Project Record for survey results). Therefore, if a PAC is considered unoccupied, then it is assumed that incidental take would not occur. Although the courts have found that habitat destruction that results in population reduction of a listed species constitutes harm, the project would not occur in suitable habitat for the Mexican spotted owl. The USFWS has been consulted throughout the planning of this project and concurred with the findings



in the Biological Assessment, that the project “may affect but is not likely to adversely affect” this species (refer to May 9, 2002 letter from USFWS in Project Record).

54. COMMENT

One important failure is the FS's illegal attempt to log trees over 24 inches dbh in restricted mixed-conifer habitat. (comment 193; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

54. RESPONSE

The Recovery Plan for the Mexican Spotted Owl (December 1995) requires that all trees over 24 inches dbh be retained in restricted habitat (e.g. mixed-conifer forest type). The USFS Regional Silviculturist and Regional Wildlife Biologists, who were involved in preparation of the Recovery Plan, stated that the intent of the Recovery Team was for that guideline to apply to live trees, not trees killed as a result of wildfire. As discussed in comments pages 37, 85, 87, 178, and 179, the salvage harvest areas are located in moderate to high severity areas where virtually all trees were killed, that rendered the habitat unsuitable for nesting or roosting of Mexican spotted owls. The Mexican Spotted Owl Recovery Plan is currently in the process of being amended to clarify this issue, based on conversations with personnel from the USFS Regional Office.

55. COMMENTS: OWLS/GOSHAWKS

The DEIS seems to write off the goshawk species by stating that the existing forest conditions provide unsuitable habitat for the goshawk. (comment 178; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The salvage of dead and dying trees, and road building, will affect goshawks by eliminating potential nest stands, degrading post-family fledging areas and foraging forests, etc. (comment 179; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

FR 86 re-alignment will affect hawk, goshawk and Mexican owl living and hunting areas. (comment 37; D. Americanhorse)

Support no logging in any spotted owl PAC areas. (comment 85; Carson Forest Watch, Joanie Berde)

Support no logging in any goshawk PFAs. (comment 87; Carson Forest Watch, Joanie Berde)

55. RESPONSE

Post-fledgling Areas (PFAs) for northern goshawks and Protected Activity Centers (PACs) for spotted owls occur within and near the Project Area. However, as stated in the FEIS, the areas proposed for salvage operations are not within, overlapping, or adjacent to any occupied goshawk PFAs or occupied Mexican spotted owl PACs. The unoccupied PFAs and PACs within the harvest area were rendered non-functional for spotted owls and goshawks as nesting or roosting habitat, due to the effects of the Viveash Fire. In general, salvage logging would be modifying already unsuitable or marginal habitat created by the wildfire. During the breeding season of 2001, a focused field survey identified a pair (breeding status unknown) of Mexican spotted owls in the Cow Creek/Lower Cow PAC, which is outside the Proposed Action area. Additionally, a Forest Service survey in 2002 documented a call response in the Creek/Upper Cow PAC. However, no roost sites or nests were located. No other individuals of this species were observed within the Project Area during these surveys. No logging activities are planned in the Cow Creek/Lower Cow and Cow Creek/Upper Cow Mexican spotted owl PACs, and activities within the ¼ mile PAC buffer would be conducted outside the breeding season, with limited operating periods (LOPs) from March 1

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through August 31. Further, no salvage logging will take place on any slopes greater than 35 percent (Mexican spotted owl habitat includes slopes greater than 40 percent in mixed conifer which has not been harvested in greater than 20 years). All PACs, with the exception of the Rosilla/Elk/Middle Cow PAC, will be surveyed during the 2002 breeding season, prior to project implementation. As stated earlier, surveys were conducted in all four affected PACs in 2001. In the event that Mexican spotted owls are located, all applicable mitigation measures will be implemented. This procedure is in compliance with the Mexican spotted owl Recovery Plan (U.S. Fish and Wildlife Service 1995) protocol, in that no more than one breeding season will have elapsed since the last survey and the Proposed Action.

There are four historic northern goshawk PFAs located within the boundaries of the Project Area (FEIS, Figure 5-1). Two of the northern goshawk PFAs (Tijeras and Torito) encountered severe fire-related damage, while the other two PFAs (Upper Bull and Manzanares) were only partially burned. Focused field surveys in the Project Area that were completed during the breeding season of 2001 resulted in an unconfirmed detection of northern goshawk in the Manzanares PFA. The Manzaneres PFA only partly overlaps the Project Area boundary.

No salvage logging activities are planned in any currently active northern goshawk PFAs within the Project Area. Buffer zones with limited operating periods around active northern goshawk sites would be implemented, if necessary. Behavioral disturbance to northern goshawk as a result of logging and other human activities would be minimized by limiting the operating periods near currently active northern goshawk activity centers. In addition, the realignment of FR 86 would not occur in any areas occupied by Mexican spotted owls or northern goshawks.

The analyses presented in the FEIS, BA/BE, and the Addendum to the BA state that the proposed project would not degrade potential breeding habitat or occupied habitat for the goshawk and owl. The US Fish and Wildlife Service concurred with the conclusions presented in the FEIS regarding Mexican spotted owl habitat. (refer to May 9, 2002 letter from USFWS in Project Record)



56. COMMENTS: OWLS/GOSHAWKS

Surveys were not done to confirm the assumption that the existing owls in the Project Area have abandoned their breeding territory following the Viveash fire. There is evidence that owls do not abandon breeding territory following a fire. (comment 111; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS fails to take a hard look at the impacts to an owl pair and habitat from salvage logging in the three unoccupied PACs and surrounding forests, nor has a USFWS Section 7 consultation taken place. (comment 177; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

As stated in the EIS, a pair of spotted owls was found. Doesn't this constitute that there is a suitable habitat? (comment 244; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Santa Fe National Forest has virtually abandoned its owl surveys, showing that the FS is failing in its duty to return owl population to viability (Comment 110; Wild Watershed and Forest Guardians, Sam Hitt, Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The Forest Service has failed to monitor the owl population. (Comment 113; Wild Watershed and Forest Guardians, Sam Hitt)

56. RESPONSE

As stated in the previous comment, surveys for both the goshawk and spotted owl have been conducted in the proposed salvage areas. The surveys were conducted to determine presence or absence of the goshawk or owl. The occupied habitats in which they were found would not be included in the salvage operations. See Project Record for details.

Impacts to the Mexican spotted owl for each alternative have been documented in the FEIS in Section 4.4.3. Furthermore, an analysis of the Mexican spotted owl has been considered and presented in the Biological Assessment and the Addendum to the BA (Project Record). This analysis was performed in accordance with the Endangered Species Act and NEPA. The USFWS has been consulted with regarding the Mexican spotted owl in the proposed Project Area and they concurred that the activities included in Alternative 2 were “may affect, not likely to adversely affect” the Mexican spotted owl or its habitat (refer to May 9, 2002 letter from USFWS in Project Record).

The exact location of the pair of Mexican spotted owls that were found during the survey could not be determined. The general location of the owls was determined to occur in the areas of the Cow Creek/Lower Cow PAC and the Creek/Upper Cow PAC that were not completely burned in the Viveash Fire. The owls appeared to occur in the unburned or low-severity burn areas, which is more consistent with suitable habitat for the owls. As stated in the FEIS, and in previous responses, the salvage operations would only remove fire-killed trees. Furthermore, the PACs that the owls were found in would be excluded from salvage operations.

Project-level surveys for owls are not related to population viability. The Forest has completed surveys and monitoring for Mexican spotted owls in recent years, and population viability determinations based on monitoring can be found in the Forest-wide Assessment for Management Indicator Species, because Mexican spotted owl is also a MIS. Several new PACs have been established by the Forest Service and USFWS since the owl was listed. In addition to Forest Service surveys, Johnson (1999) surveyed over 75% of known MSO territories during the 1998 – 99 time frame.



57. COMMENT: GOSHAWKS

There is no indication that the requisite number of nest sites have been designated for the goshawk, or that the nest sites are the proper size, or that the minimum acreage of nest sites per PFA has been met. (comment 195; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

57. RESPONSE

No salvage would occur in the occupied PFA, and salvage activities would not affect the number of nest sites or acreage of nest sites in the designated PFA. Refer to the FEIS and Biological Evaluation (BE) in the Project Record for more detail regarding effects to goshawk habitat.

58. COMMENT: SPECIES VIABILITY/DEAD SPRUCE

Project activities are likely to jeopardize the viability of species that find optimal habitat in forests with well-developed structures, and forests naturally disturbed by fire, disease, and insect pathogens. (comment 171; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Spruce mortality serves a critical role in the balance of this ecosystem including providing abundant habitat and food for cavity nesters and insectivores such as the three-toed woodpecker and Neotropical migratory bird species. Commercially removing this material stops this process and deprives many species of developing habitat and food sources. (comment 245; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The removal of dead and dying trees, etc, will have significant effects on the three-toed and hairy woodpecker in the planning area. (comment 180; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Reducing snag density and reducing food source of this species will have a significant effect on its viability. (comment 181; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

No quantitative information has been presented by the FS regarding the three-toed and hairy woodpeckers. (comment 182; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

At least 7-10 snags should be left on every acre of treated, burned ground for wildlife. (comment 97; Sangre de Cristo Audubon Society, Thomas Jervis)

58. RESPONSE

A BA/BE was completed for this project by qualified wildlife biologists that determined the salvage project would not jeopardize or adversely impact the species or suitable habitat for species listed as threatened, endangered, or FS-sensitive. There is no requirement for evaluating species viability at the project level, as that is a topic appropriate for analysis at a larger landscape scale.

As mentioned by the comments, the three-toed and hairy woodpecker are typical species that rely on fire-disturbed forests and snag habitat. The project activities are not anticipated to adversely affect the amount of habitat and food sources for these species. There would continue to be an abundance of available snags for habitat and food sources outside the salvage units and within the 29,000-acre Viveash Fire area. There would be over 23,000 acres that burned in the wildfire within this Project Area that are not included in the salvage Project Areas, which contain an abundance of snags and forest habitat “naturally disturbed by fire, disease, and insect pathogens”. The effects of the alternatives on terrestrial wildlife (Section 4.4.3 of the FEIS) determined that snag retention of four to six stems per acre would not adversely effect snag-dependent wildlife species. The Forest

Plan standard for snags is 2 to 3 per acre averaged over 100 acres; thus, snags retained following salvage would easily meet Forest Plan standards.

Furthermore, the hairy woodpecker is a Management Indicator Species (MIS) representing other snag dependent species. The effects of harvest on MIS are discussed in the FEIS on pages 4-30. The salvage harvest is unlikely to adversely impact woodpeckers or other cavity nesting species. A study of cavity dependent species was done following a wildfire in Idaho (Saab and Dudley 1998). This study analyzed the responses of 9 cavity-nesting birds following stand replacement fires in the ponderosa pine/Douglas-fir habitat type. It compared unlogged areas to a standard salvage treatment and a wildlife salvage treatment. This study assessed a number of woodpecker species including the hairy woodpecker. There was no statistical difference in the relative abundance of nests between the various treatment types. Quantitative information for the hairy woodpecker is available in the Forest-wide MIS Assessment (February 2002 update in the Project Record).

59. COMMENT: NEOTROPICAL MIGRATORY BIRDS

There is no analysis of effects on neotropical migratory birds. (comment 185; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

59. RESPONSE

The effects on neotropical migratory birds were analyzed and disclosed in the FEIS. The analysis included an evaluation of the New Mexico Partners in Flight Species of Highest Priority for each habitat type found in the Project Area. Effects on migratory birds from the proposed project are discussed in Section 4.3.3 of the FEIS and the complete assessment for migratory birds can be found in the Project Record.

60. COMMENT: MAMMALS OF CONCERN

DEIS does not mention the effects by alternative to pine marten and other mammals of concern. (comment 89; Carson Forest Watch, Joanie Berde)

60. RESPONSE

Section 3.2.3.1 of the FEIS states that species listed as federally proposed, threatened, or endangered; USFS sensitive species; state threatened and endangered species, and USFS management indicator species that may occur in the Santa Fe National Forest *and* potentially occur within the Project Area were analyzed. The pine marten is not a federally proposed, threatened, or endangered species; and is not a FS-sensitive species in Region 3. It is not known to occur within the Pecos/Las Vegas Ranger District or the Project Area. Therefore, the pine marten was not analyzed in the FEIS.



61. COMMENT: VIABLE POPULATIONS

Landscape level analysis is required to maintain viable population of native wildlife and dependent ecosystems. (comment 205; Forest Guardians, Lars Ortegren)

The FS runs afoul of viability and diversity requirements set forth in forest planning regulations. (comment 175; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The FS must determine the minimum number of reproductive individuals before implementing activities that might impact those individuals or populations. (comment 173; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The project fails to provide for the diversity of plant and animal communities in the planning area or insure the maintenance of viable wildlife populations as required by the National Forest Management Act (NFMA). (comment 108; Wild Watershed and Forest Guardians, Sam Hitt)

61. RESPONSE

As previously stated, there is no requirement that population viability needs to be determined at the project-level. The Forest Service uses a two-tier planning system. The National Forest Management Act (NFMA) applies to the development of Forest Plans. Viability and diversity assessments are Forest Plan level requirements, and the Santa Fe National Forest Plan was developed to meet those requirements, such as those found in the Forest Plan pp. 61-66, 72-78, and Appendix D. The Viveash salvage project activities would be consistent with the Forest Plan, as discussed in previous responses and described in the FEIS. Therefore, the project should not be in violation of any viability or diversity requirements set forth in forest planning regulations (reference 36 CFR 219.19). The FEIS, BA, and BE describe the effects of project activities on potentially affected species, consistent with federal regulations and agency directives. Furthermore, the removal of dead trees from areas containing primarily dead trees and little or no live ground vegetation in salvage areas would not affect the diversity or abundance of existing (live) plant and animal communities.

62. COMMENTS: SURVEYS/DATA

Population survey data needed to determine the maintenance of minimum viable populations of wildlife is not disclosed. The DEIS fails to state whether quantitative data has been obtained, and if so, what are trends for MIS species based on empirical survey data. (comment 202, 203; Forest Guardians, Lars Ortegren)

FS failed to obtain the necessary data for management indicator species in this case and instead assumes that enough habitat will remain to maintain viable populations. (comment 109; Wild Watershed and Forest Guardians, Sam Hitt)

The FS has failed to obtain the necessary data for management indicator species. (comment 172; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The FS has provided no population monitoring data or analysis of such data in the project record. The FEIS and project record are devoid of any substantive determinations one way or the other regarding viability for sensitive species. (comment 183, 184; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

It seems that the only species that were casually surveyed were the northern goshawk and Mexican spotted owl. (comment 174; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Any decision made without the above-described information would be considered arbitrary and capricious and constitute agency action unlawfully withheld or unreasonably delayed in violation of the

APA. (comment 176; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

62. RESPONSE

The only wildlife survey requirements for project-level planning involves surveys based on the identified issues, habitat present, and potential species involved. Surveys to determine population trends and viability are conducted at a larger scale (Forest-wide or larger). In this case, surveys for spotted owls and goshawks were completed because the presence or absence of these species directly influences the alternatives and mitigation measures that are incorporated into the project. As the analysis in the FEIS discloses, MIS are likely to occur or have habitat in the Project Area. However, the biologists on the planning team determined that there was no need to conduct additional project-level surveys in order to estimate the effects of the project activities on other species. For hunted game (MIS) species, such as elk, turkey and mourning dove, population numbers would be most influenced by the effects of hunting rather than by vegetation management or salvage sale activities. In addition, population surveys conducted at the project level would be meaningless for most species, because they move great distances on a regular basis and the Project Area is too small to allow for tracking those movements. The FEIS and BE (Project Record) also assesses effects on FS-sensitive species.

Refer to the Santa Fe National Forest's assessment of MIS on a forest-wide basis (USDA-FS 2002). The assessment addresses populations, status, trends, and habitat for each MIS and is available in the Project Record. The Forest also completes monitoring on an annual basis, as documented in the annual Forest Monitoring Report.

Fisheries

63. COMMENT: CUTTHROAT TROUT

Concerned with cutthroat trout recovery. (comment 7; State of New Mexico, Dept. of Game and Fish, Conservation Services Division, Tod W. Stevenson, Chief, William Montagne)

Is there a timetable for reintroduction of the Rio Grande cutthroat trout? (comment 76; Albino C. Bustamante)

63. RESPONSE

Rio Grande cutthroat trout recovery is an important issue for the USFS. Currently, there are no known populations of Rio Grande cutthroat trout in the Project Area. As briefly described in the "Ongoing or Foreseeable Future Actions" portion (Section 4.2.1.2) of the FEIS, reintroduction of the cutthroat trout in the Project Area will be conducted. Also stated is the intent of the USFS to work in conjunction with the New Mexico Department of Game and Fish to effectively re-establish the Rio Grande cutthroat trout in the proposed Project Area. At present, there is no timetable for reintroduction of the Rio Grande cutthroat trout.

Analysis of the alternatives on cold water fisheries in the FEIS (Section 4.4.1.3) describes that the action alternatives would have a low probability of generating noticeable or measurable changes in water quality. Further it states that road decommissioning would maintain the positive trend of fish recovery in the Project Area. The timeline of the recovery and reestablishment of Rio Grande cutthroat trout populations in the Project Area would not likely be affected by the action.



64. COMMENT: FISH HABITAT/BROWN TROUT

Did an inventory of fish distribution, habitat & opportunities (scheduled for summer 2001) occur? When, where, were there downstream considerations, was this done on private land? (comment 53; Herb Cohen, Albino C. Bustamante)

Have there been studies dealing with the brown trout in Cow Creek? (comment 52; Herb Cohen)

64. RESPONSE

Because the Rio Grande cutthroat trout is a sensitive and management indicator species, the focus of fish surveys have focused on this species. The brown trout is an introduced species and out-competes (causes elimination of) native Rio Grande cutthroat trout. An inventory for fish distribution has taken. Preliminary results show that there are brown trout in Cow Creek. These fish are from privately stocked ponds. The USFS will be working in conjunction with the USFWS and New Mexico Department of Game and Fish and these landowners to move toward stocking only the native Rio Grande cutthroat trout.

Noxious Weeds

65. COMMENTS: WEEDS

Proposed logging and road openings will create more areas suitable for the establishment of noxious weeds. (comment 42; D. Americanhorse)

Forest service should monitor the establishment of noxious weeds. (comment 81; Albino C. Bustamante)

The DEIS does not adequately treat the threat of noxious weeds nor the contribution of this sale to an acknowledged problem. (comment 197; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Comment regarding failure to address noxious weeds in a substantive matter was not responded to after scoping. (comment 256; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

65. RESPONSE

Roads, and movement along roads, associated with salvage logging can act as a vector for noxious weeds. The mitigation measure on page 2-16 of the FEIS, states "All... equipment entering the Project Area would be thoroughly cleaned and free of weed seeds." Only certified weed-free seed mixtures would be utilized in revegetation operations." Implementation of this mitigation measure would offset any potential increase establishment of noxious weeds. Section 4.2.1.3 discusses the USFS's plan to monitor and treat any area of noxious weeds in the burn area. In addition, Section 3.2.6 (FEIS, page 3-33) discusses the existing areas of known infestations, and the potential occurrence in the Project Area of the three New Mexico classes of noxious weeds.

The Carson and Santa Fe National Forests are completing an EIS for management of noxious weeds. The activities proposed in this EIS to control noxious weeds would be consistent with the management direction in the Draft and Final EIS.



66. COMMENT: WEEDS/PRIVATE LAND

Will noxious weeds be treated in private land? (Bustamante Ranch) (comment 77; Albino C. Bustamante)

66. RESPONSE

Private lands are not within the jurisdiction of the USFS; therefore, it is unlikely that weeds would be treated on private lands. Please refer to the discussion above for the handling of noxious weeds on National Forest System lands.

Forest Vegetation

67. COMMENT: FIRE RECOVERY/FUELS

The large majority of Viveash Fire Area will recover naturally without any significant intervention. Sites that were damaged before the fire from roads, timber harvest, grazing and other developments are most likely to require intervention to aid natural recovery (comment 234, 235; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Drought and other climatic factors are the primary causes of unnatural fuel conditions. Fire suppression, logging, and grazing are the primary causes of unnatural fuel conditions. (comment 241, 242; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

Stand replacing fires are a natural occurrence to which the forest is adapted with the exception of some lower elevation forest types. (comment 239; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

67. RESPONSE

Some of the comment letters referenced above cited McIver and Starr (2000) for scientific support. However, McIver and Starr (2000) concentrate exclusively on “the environmental effects of timber removal itself and not on the practice of rehabilitation (planting, seeding) that typically occurs shortly after harvest of trees”. They acknowledge that, rehabilitation is “clearly linked to postfire harvest in practice” but they do not take the beneficial effects of rehabilitation into account in their assessment of postfire salvage. As a result, their analysis of salvage logging is inappropriate for the Viveash area, where the proposed alternatives would include extensive BMPs and mitigation measures specifically designed to prevent the impacts McIver and Starr (2000) discuss.

Current scientific research supports post-fire rehabilitation efforts. Based on evaluation of 470 fires and 321 BAER projects, Robichaud and others (2000) concluded that several rehabilitation techniques produced noticeable watershed improvement. For example, “Of the available treatments, contour-felled logs show promise as an effective hillslope treatment because they provide some immediate watershed protection, especially during the first postfire year.” They add that, “Several reports from the first few years after the Foothills Fire (Boise National Forest) stated that no significant amounts of sediment were produced from any of several experimental watersheds treated with contour-felled logs, whether or not they were salvage-logged.” Furthermore, Robichaud and others (2000) explain that reseedling may be more effective after ground disturbance by salvage logging. “Cereal grains will germinate and grow the second year if the ground surface is disturbed by salvage logging or grazing.” Although they assume that rehabilitation efforts would cause small improvements in watershed conditions, they acknowledge the lack of data available to quantify post-fire rehabilitation effectiveness.



Although large-scale fires occur regardless of fuel conditions, the severity of the fire varies widely depending on fuel availability and structure. Watersheds respond differently to high intensity fires than to low intensity fires. For example, severe fires produce more intense soil degradation, including the formation of a hydrophobic soil layer. Although stand-replacing fires are part of the natural ecology of many forests, unnatural heavy fuel accumulation can lead to fires outside the range of natural behavior, such as the Viveash fire (USDA Forest Service 2000a). According to the Viveash BAER report, a high-intensity fire like Viveash “has the potential to impact soil beyond the limits of natural variability” (USDA Forest Service 2000a).

The salvage harvest and road management activities would not significantly change the fuel load or future fire risk in this area, and was not proposed for that purpose (FEIS, page 3-32). Rehabilitation of the Viveash Fire area is being implemented under the BAER Plan, and those activities would not be adversely affected by the salvage operations.

68. COMMENT: ASPEN REGENERATION

Suggest leaving several standing dead trees in potential aspen regeneration areas to protect sprouts from elk grazing, etc. (comment 101; Sangre de Cristo Audubon Society, Thomas Jervis)

68. RESPONSE

The same snag retention standards (FEIS, page 2-15) would apply to areas that have aspen regeneration. In addition, there is no scientific evidence to support the contention that aspen sprouts need the protection of standing dead trees as protection from elk grazing. Currently, since the fire, there are far more aspen regeneration areas within the Project Area than the resident elk can utilize.

69. COMMENTS: TREE MORTALITY/TREE SIZE

The EA does not address the issue of differing mortality level between small and large trees. (comment 201; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

69. RESPONSE

The FEIS states that only fire-killed trees would be salvaged; therefore, differing mortality between small and large trees is not important to the decision made for this proposal.

70. COMMENTS: PINE REGENERATION/FIRES

Even ponderosa pine forests have been found to have originated in stand replacing fire events. (comment 240; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

70. RESPONSE

The proposed action alternatives would not change forest succession (page 4-32).

71. COMMENTS: VEGETATIVE RECOVERY

Since the recovery of understory groundcover is the primary recovery mechanism for post fire recovery of erosion and runoff, and consequently downstream sediment-related effects, this indicates that post-fire logging seriously impedes recovery. (comment 250; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

71. RESPONSE

Grasses and extensive areas of aspen regeneration have become well-established in the Viveash Fire area. The salvage activities would destroy some of that groundcover and therefore would result in some increased erosion. However, mitigation measures and BMPs would minimize those increases. The analysis for soils and sediment yield (FEIS, Section 4.3.1) shows the predicted increases. Vegetative recovery is not expected to be reduced by the proposed project activities, and would continue to be promoted by the BAER plan activities.

Transportation/Roads

72. COMMENT

Vibratory effects of logging trucks on historic adobe buildings (Pigeon's Ranch and Kozlowski's Trading Post) along NM 50 and NM 63. (comment 10; National Park Service, Pecos National Historical Park, Dennis Ditmanson, Supt.)

Engine exhaust effects on interior wall plaster at Pigeon's Ranch Bldg. (comment 11; National Park Service, Pecos National Historical Park, Dennis Ditmanson, Supt.)

Noise effects on the quality of the visitor experience while touring bldgs. (comment 12; National Park Service, Pecos National Historical Park, Dennis Ditmanson, Supt.)

Safety concerns for staff and visitors while at these sites. (comment 13; National Park Service, Pecos National Historical Park, Dennis Ditmanson, Supt.)

Traffic and noise restrictions were set to protect the Village of Pecos, but not for residents in and visitors to the forest. (comment 43; Albino C. Bustamante)

Request that a table comparing maximum expected number of vehicles to pass each structure full and empty, their weight, and vehicle type be included in the next DEIS. (comment 14; National Park Service, Pecos National Historical Park, Dennis Ditmanson, Supt.)

Trucks will present a traffic hazard along the two-lane road. (comment 19; R. M. Lienau)

72. RESPONSE:

The state highway department estimates between 1.5 million and 2.0 million vehicles per year travel the routes of concern (NM State Highways 50 and 63). Hauling wood in conjunction with this salvage project would represent an insignificant fraction of the amount of overall traffic along these routes. The current haul route experiences numerous haul trucks daily, including trucks hauling wood from private lands and trucks hauling gravel and other materials. Thus, the effects of salvage-related traffic on interior plaster walls, noise, and visitor safety would not be significant in relation to the total number of heavy vehicles passing by these structures each day. All State speed limits and legal weight limits would be adhered to.

During peak timber operations under Alternative 2, a maximum of four loaded logging trucks per hour will travel over New Mexico Highway 50. Logging traffic from the Viveash area should



generally be less than 10 loaded trucks per day. This should not result in a substantially higher driving hazard than current traffic levels.

Mitigation measures to minimize the noise generated are typically applied to the areas of greatest concern, in this case where the largest number of people live. The noise and traffic effects would be short-term and transient through the days and year.

73. COMMENTS: ROAD IMPACTS

Improvement of roads and access is inappropriate. (comment 100; Sangre de Cristo Audubon Society, Thomas Jervis)

Nowhere in the DEIS are the impacts from road construction and reconstruction addressed. (comment 198; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

73. RESPONSE

A detailed roads analysis was completed as part of this project that followed the Roads Analysis Procedure guidelines (Foster Wheeler Environmental 2001a). That analysis identified several roads that should be closed or decommissioned, road segments that needed realigning, and other roads that needed improvements or upgrading. These were unrelated to the salvage sale, but were identified in the same Project Area. However, the road improvement work is intended and expected to improve currently inadequate drainage and improve the surfacing, which would reduce the potential sediment delivery to streams from those road sections. The road realignments would be a benefit to streams and roads because they move road segments out of floodplains. The effects of the road realignment and reconstruction are provided in several places in the FEIS but the technical area appears most prominently in soil and sediment yield (pages 4-4 through 4-9). The FEIS describes other environmental benefits of the road improvement work, in addition to the social benefit of improving road conditions and safety.

74. COMMENT: EXISTING ROADS

The DEIS fails to properly disclose the existing level of road impacts. (comment 122; Wild Watershed and Forest Guardians, Sam Hitt)

74. RESPONSE

A detailed roads analysis and Watershed Analysis Technical Report (Foster Wheeler Environmental 2001a,b) were completed as part of this project. Those analyses provide substantial detail regarding existing road locations and impacts. The Watershed Analysis Technical Report provides existing stream road crossings by subwatershed for the Project Area as well as the amount of roads on moderate to severe erosion hazard (Foster Wheeler Environmental 2001b). Those documents were also summarized and incorporated by reference in the FEIS.

75. COMMENTS: NM HIGHWAY 50

No mention was made in the DEIS of the overall economic effect to NM Highway 50. Many trucks of high tare weight will damage the highway. Taxpayers will have to pay for repairs to the road. (comment 17; R. M. Lienau)

75. RESPONSE

NM Highway 50 is a public road designed and maintained for all properly licensed and registered vehicles meeting axle load limitations. All logging-associated trucks and equipment operated on the state highway system would be properly licensed and operated. Logging trucks pay state fuel taxes and fees, which are directed to maintenance and construction.

Since NM Highway 50 is a public road, its operation and maintenance is conducted according to a highway department program of work and financed through fuel taxes and other fees paid to the State by vehicle operators.

76. COMMENTS: FOREST ROAD 86

Why can't existing roads (particularly Forest Road 86) be improved and made safe, logging or not? Who is financially and legally responsible for this road? (comment 24; Kerry and Larissa Lewis)

FR 86 is not safe for logging traffic, especially large trucks. (comment 25; Kerry and Larissa Lewis, D. Americanhorse, William Montagne)

FR 86 is an un-maintained joint responsibility of San Miguel County and the Forest Service. There are many hazards during log haul. (comment 260)

FR 86 being abandoned due to analysis and cost. (comment 65; William Montagne)

76. RESPONSE

First, FR 86 would be realigned to move a section of the road out of the floodplain. The road would not be abandoned. Second, Forest Road 86 is a public road; a San Miguel County road from Lower Colonias intersection to the intersection with FR 92 at Cow Creek, and a National Forest Road beyond that intersection. Because FR 86 occurs in two different jurisdictions, obtaining adequate money for construction and improvements is very difficult. Since traffic volumes are particularly low in the Viveash area, only roadway and roadside traffic hazards are routinely addressed.

Traffic safety on FR 86 is a responsibility of San Miguel County within their jurisdiction. The county may require physical improvement to their road during substantial log haul. Under the timber sale contract, the Forest Service can require reconstruction, enforce dust abatement, radio communications between drivers, and truck spacing within their jurisdiction. The road between Pecos and Cow Creek is adequate for logging trucks, but has shortcomings (width, surface, sight distance and pull-offs) for mixed traffic. The road is presently difficult to maintain because of exposed bedrock and lost aggregate surfacing.

Some monies will be made available for post-fire road rehabilitation. Timber sale operators, if required in their contract with governmental agencies, must improve and maintain timber haul routes for traffic safety and to reduce environmental affects.



77. COMMENTS: ROADS/STREAM

The DEIS fails to describe the number of miles of roads and the number of stream crossings, in the Project Area and by watershed, that will be subjected to increased traffic from log haul. (comment 118; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS must be revised to disclose total stream crossings within the Project Area and on a watershed basis. (comment 220; Wild Watershed and Forest Guardians, Sam Hitt)

The DEIS fails to disclose the amount of road in areas with soils with moderate to severe high erosion hazard. The miles of roads in such areas should be disclosed for both the Project Area and at the watershed scale. (comment 124; Wild Watershed and Forest Guardians, Sam Hitt)

77. RESPONSE

Table 3-2 in the FEIS presents the miles of road and the number of stream crossings present in the Project Area and also by watershed. There would be 21 stream crossings by roads in Alternative 2.

Subwatersheds were ranked in response to the key issues of soil erosion, water quality, and fish habitat. The resulting landtype sensitivity ranks depend on several factors, including soil loss, slope, soil depth, and geology sensitivity of each subwatershed in the Project Area (Foster Wheeler Environmental 2001b). They represent the relative sensitivity to soil erosion and sedimentation in each subwatershed. The total miles of roads in moderately sensitive subwatersheds and the total miles of roads in sensitive subwatersheds are presented in the Watershed Analysis (Foster Wheeler Environmental 2001b).

78. COMMENTS: FR 86 RECONSTRUCTION

The proposed construction of FR86 would affect a 60-foot base and up to 150 feet either side of centerline. DEIS was vague as to whether the 150' on either side of the road would apply to all roads (comment 36; D. Americanhorse)

The reroute is on the north slope, will be too steep, with extensive drainage structures proposed for year-round access. Why can't drainage be accomplished with rolling grade, insloping and outsloping, spreading ditches, etc. (comment 38; D. Americanhorse)

78. RESPONSE

The proposed FR 86 construction is not a full bench, which would be a greater impact than the proposed construction. The two lane road would be designed with an inside ditch constructed across a 40% side slope. A maximum clearing of 120 feet wide (total) with a 30 foot vertical projection of its back slope. Most of the roadway would involve a 40-foot cleared width.

The FEIS, on page 2-9, states that the proposed areas would not exceed 150 feet on either side of the roads. Only dead trees would be removed with this distance. All green trees would remain. The roads that roadside salvage applies to are identified on the alternatives maps in Chapter 2.

The propose road reconstruction/relocation is suitable for low clearance vehicles. To accomplish this, the construction standard would require surfacing, inside ditches, cross culverts, energy dissipaters, and other improvements.

79. COMMENTS: ROADS/SAFETY

The DEIS states that access to the Project Area will continue to be at the traveler's peril, rough roads, . . . This was never an issue before the fire, when the roads were subject to the same issues. (comment 214; D. Americanhorse)

79. RESPONSE

The Santa Fe National Forest recognizes the problems inherent in the Viveash Fire area before and after the fire. Since traffic volumes are particularly low in the Project Area, only roadway and roadside traffic hazards are routinely addressed. The proposed road maintenance upgrades, three new bridges, and new culverts would help improve the roads for better traveler safety.

Some monies will be made available for post-fire road rehabilitation based on the alternative selected. In addition, timber sale operators, if required in their contract with governmental agencies, must improve and maintain timber haul routes for traffic safety and to reduce environmental affects.

80. COMMENTS: ROAD INVENTORY

It also appears that DEIS only provides information on inventoried roads. Surveys often indicate that uninventoried roads typically comprise more than 25-50% of the inventoried road network.

The DEIS fails to include uninventoried roads in its disclosure of road miles and road density within the Project Area and the watershed scale. (comment 123; Wild Watershed and Forest Guardians, Sam Hitt)

80. RESPONSE

An extensive reconnaissance of the entire area was conducted for the roads analysis (Foster Wheeler Environmental 2001a). The inventory accurately reflects the number of roads on the ground.

81. COMMENTS

Relocation of FR 86 involves traversing the Bustamante property. There's been no proposal from the FS to do this. Not all ROWs have been acquired. (comment 71; Albino C. Bustamante)

81. RESPONSE

It is accurate that not all road ROWs have been acquired in order to implement this project, as recognized in the FEIS on page 2-9). Forest Road 86 relocation would not occur until all necessary easements are obtained.

Air Quality

82. COMMENT

Contractors supplying asphalt or concrete for the project must have a current air quality permit (comment 6; State of New Mexico, Environment Dept., Peter Maggiore, Secretary)

82. RESPONSE

No asphalt or concrete would be used by the US Forest Service for this project. Some road repair may be required outside of the Project Area; however, those repairs would be the responsibility of either the New Mexico Department of Transportation or San Miguel County.



83. COMMENTS: DUST/AIR QUALITY

Road construction and operation and timber sale activity may produce fugitive dust and cause erosion. They may also affect visibility in the Pecos Wilderness, a Class I area. Dust control measures must be taken. (comment 5; State of New Mexico, Environment Dept., Peter Maggiore, Secretary, D. Americanhorse, Cole Americanhorse, Albino C. Bustamante)

DEIS Alternatives 2, 3, or 4 would affect air quality with the logging trucks and heavy equipment emissions and the dust that they would produce. (comment 259)

Off-Road-Vehicle's speed causes dust problems on FR92. (comment 261)

83. RESPONSE

The Pecos Wilderness, which is north of the Project Area, is a Class I airshed that requires air quality to remain essentially unchanged. However, background levels of particulates have not been determined. Most of the logging related dust would occur on the main haul roads. Airborne dust causes visibility problems in the vicinity of moving equipment, and reduces the quality of the viewed vista from the road. The amount of total suspended particulates is dependent upon the percent of silt in the material on the road, or in the logging area. The FEIS describes the significant roadway and surface improvements proposed on Forest Roads 86 and 92, which should reduce dust production. The nearest logging activity to the Pecos Wilderness would be a couple of hundred yards to the southeast, as salvage along Elk Mountain Rd. The effects of logging in the Viveash Project Area would be short term at a particular site, but would continue over a five-year period.

The use of water or dust palliatives would be evaluated and used on roads as necessary during periods of higher log hauling. Emission by the logging trucks and heavy equipment are not anticipated to cause impacts to the airsheds in the Project Area. As stated in the FEIS on page 3-14 the airsheds in the Project Area are designated Class II, which allows them to experience increases in air pollution above baseline levels.

Scenic Resources

84. COMMENT: SCENERY

The DEIS ignores all impacts on scenic resources resulting from road construction, reconstruction, and the deforestation of those travel routes, (specifically FR 86 realignment). (comment 199; Forest Conservation Council (FCC) and National Forest Protection Alliance (NFPA), Bryan Bird)

The rerouting of FR86 east of Cow Creek will cut through unburned old timber affecting the view from Cow Creek. (comment 35; D. Americanhorse, Cole Americanhorse)

84. RESPONSE

The FEIS lists specific mitigation measures designed to minimize the visual effects of the proposed activities (page 2-14).

REFERENCES

Beschta, Robert L.; Frissell, Christopher A.; Gresswell, Robert; Hauer, Richard; Karr, James R.; Minshall, G. Wayne; Perry, Dave A.; Rhodes, Jonathan J. 1995. Wildfire and salvage logging:

- recommendations for ecologically sound post-fire salvage management and other post-fire treatments on federal lands in the West. Eugene, Oregon: The Pacific Rivers Council: 1-16.
- Everett, R. 1995. Review of Beschta document. Letter dated August 16 to John Lowe. On file with: U.S. Forest Service, Pacific Northwest Research Station, Wenatchee, WA.
- Foster Wheeler Environmental Corporation. 2001b. Viveash Fire Salvage EIS Watershed Analysis Technical Report. Technical Report for Viveash Fire Salvage EIS. September 2001.
- Johnson, Terrell H. 1999. Status of the Spotted Owl in the Jemez Mountains- 1998-99. US Geological Survey PO 98CRSA1406 9 p.
- McIver, James D.; Starr, Lynn. 2000. Environmental effects of postfire logging: literature review and annotated bibliography. USDA Forest Service, Pacific Northwest Research Station: Portland, Oregon. General Technical Report PNW-GTR-486: 1-72.
- Robichaud, Peter R.; Beyers, Jan L.; Neary, Daniel G. 2000. Evaluating the effectiveness of postfire rehabilitation treatments. Gen. Tech. Rep. RMRS-GTR-63. Fort Collins: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 85 p.
- Saab, Victoria A.; Jonathan G. Dudley. 1998. Responses of Cavity-Nesting Birds to Stand-Replacement Fire and Salvage Logging in Ponderosa Pine/Douglas-Fir Forests of Southwestern Idaho. Research Paper RMRS RP-11. U.S. Department of Agriculture; Forest Service. Rocky Mountain Research Station. 17p.
- Thomas, J.W., M.G. Raphael, R.G. Anthony, E.D. Forsman, A.G. Gunderson, R.S. Holtausen, B.G. Marcot, G.H. Reeves, J.R. Sedell and D.M. Solis. 1993. Viability Assessments and Management Considerations for Species Associated with Late-successional and Old-growth Forests of the Pacific Northwest. Pacific Salmon Workgroup. March 1993.
- USDA Forest Service. 2000a. Viveash Fire Burned Area Emergency Rehabilitation Report (BAER). U.S. Forest Service, Santa Fe National Forest, Pecos/Las Vegas Ranger District, Pecos, NM. June 2000.
- U.S. Fish and Wildlife Service. 1995. Recovery Plan for the Mexican Spotted Owl. Vol. I. Albuquerque, NM.

