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File Code: 1570/5150
Date: [illegible]

Mr. Jay Lininger
Center for Biological Diversity
P.O. Box 25686
Albuquerque, NM 87125

CERTIFIED MAIL – RETURN RECEIPT REQUESTED NUMBER: 98011242

Dear Mr. Lininger:

This is my decision on the appeal (#11-03-00-0027-A215) you filed on behalf of the Center for Biological Diversity and WildEarth Guardians, regarding the Decision Notice (DN), Environmental Assessment (EA), and Finding of No Significant Impact (FONSI) signed by Forest Supervisor Robert Trujillo for the Bonito Forest Restoration Project on the Smokey Bear Ranger District, Lincoln National Forest.

My review of your appeal was conducted pursuant to, and in accordance with, 36 CFR 215.18. My review focused on the project documentation and the issues raised in your appeal. I specifically incorporate in this decision the project record, the references and citations in the project record transmittal documentation, as well as the Appeal Reviewing Officer (ARO) analysis and documentation.

After considering your issues and the project documentation, the ARO recommends the Forest Supervisor's decision be reversed. The ARO found:

- The EA and project record did not disclose the effects analysis for proposed activities on soil with moderate and severe erosion hazard;
- The EA did not analyze old growth at three scales as required by the Forest Plan; and
- The EA did not analyze the canopy cover requirements of the Forest Plan.

A copy of the recommendation and the technical review of your appeal contentions are enclosed.

After a detailed review of the record and ARO recommendation, I reverse the Forest Supervisor's decision. I agree with the ARO's findings regarding the soils, old growth, and canopy cover analyses.

A new decision is needed for the Bonito Forest Restoration Project that addresses the effects of proposed activities on soil with moderate and severe erosion hazard. The Forest must also analyze old growth at three scales and canopy cover as required by the Forest Plan. The new decision must fully comply with public comment and appeal provisions of 36 CFR 215.

This decision constitutes the final administrative determination of the Department of Agriculture [36 CFR 215.18(c)]. A copy of this letter will be posted on the national appeals web page at http://www.fs.fed.us/appeals.

Sincerely,

Roberta Buskirk

ROBERTA BUSKIRK
Acting Deputy Regional Forester
Appeal Deciding Officer

Enclosures

cc: Robert G Trujillo

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File Code: 1570/5150 **Date:** October 18, 2011
Route To:

Subject: ARO, Appeal #11-03-00-0027-A215, Bonito Forest Restoration Project, Smokey Bear Ranger District, Lincoln National Forest

To: Regional Forester

Through: Roberta Buskirk, Acting Deputy Regional Forester, Appeal Deciding Officer

This is my recommendation on the disposition of the appeal filed regarding the Decision Notice (DN), Environmental Assessment (EA), and Finding of No Significant Impact (FONSI) on the above-referenced project.

BACKGROUND

Implementation of the Selected Alternative (Alternative 2, Proposed Action) provides for prescribed burning on up to 11,610 acres and thinning/harvest on up to 11,610 acres. In addition, the decision allows for up to four miles of road reconstruction of existing level one roads, along with decommissioning these four miles of roads after project completion.

The management activities in Alternative 2 include:

- reconstruction of approximately four miles of existing level one roads;
- thinning from below to meet reductions in tree densities, retaining the larger trees and a smaller representation of the smaller trees, in a variable-density, patchy pattern across the Project. Higher basal areas or more trees per acre will be left in mixed conifer stands to retain as much MSO nesting habitat as possible. Design features will be applied to minimize potential impacts to wildlife, water, soil, scenery, and other resources;
- move cut wood pieces 6 inches in diameter or larger to landings along access routes. Use haul trucks to remove woody material from landings for possible utilization; and
- pile, masticate, or cut and scatter all thinning generated slash (tops, limbs, and boles) in areas that do not have access via roads;
- use low to moderate intensity prescribed fire to reduce activity generated slash in all thinning units. Maintenance prescribed burns will be conducted periodically in the project area based on the return intervals of the vegetation types;
- after project completion, decommission all four miles of reconstructed roads through reseeding, water barring, and returning natural contours; and
- project monitoring (EA, Chapter 2) to ensure project objectives for resource protection measures identified in the Bonito EA are accomplished.

Forest Supervisor Robert Trujillo published the legal notice of his decision on July 20, 2011, for the Lincoln National Forest on the Bonito Forest Restoration Project. The Forest Supervisor is

identified as the Responsible Official, whose decision is subject to administrative review under the 36 CFR 215 appeal regulations. One appeal was filed as follows:

- Appeal #11-03-00-00027-A215 filed by Jay Lininger on behalf of the Center for Biological Diversity and Brian Bird of WildEarth Guardians.

Pursuant to 36 CFR 215.17, an attempt was made to seek informal resolution of the appeal. The record indicates that informal resolution was not reached.

Review and Findings

My review was conducted in accordance with 36 CFR 215.19 to ensure that the analysis and decision are in compliance with applicable laws, regulations, policies, and orders. The appeal record, including the appellant's issues and request for relief has been thoroughly reviewed. Although I may not have listed each specific issue, I have considered all the issues raised in the appeal and believe they are adequately addressed in the attached technical review and findings document. Having reviewed the EA, DN/FONSI, and the project record file, as required by 36 CFR 215.19(b), I conclude the following:

1) The decision clearly describes the actions to be taken in sufficient detail that the reader can easily understand what will occur as a result of the decision.

2) The selected alternative should accomplish the purpose and need established. The purpose and need stated in the EA reflect consistency with direction in the Forest Plan for the Lincoln National Forest.

3) The record reflects that the Responsible Official provided ample opportunity for public participation during the analysis and decision making process. The Responsible Official's efforts enabled interested publics the opportunity to comment and be involved in the site-specific proposal.

4) The decision is not consistent with policy, direction, and supporting evidence for the following reasons:
    - The EA and project record fail to disclose the effects analysis for proposed activities on soil with moderate and severe erosion hazard.
    - The forest failed to analyze old growth at three scales as required by the Forest Plan.
    - The project is not consistent with canopy cover requirements of the Forest Plan.

Recommendation

After considering the claims made by the appellant and reviewing the record, I recommend that the Responsible Official's decision relating to this appeal be reversed.

/s/ Kendall Clark
KENDALL CLARK
Forest Supervisor

cc: Margaret Van Gilder

Review and Findings

Center for Biological Diversity/WildEarth Guardians

Appeal #11-03-00-0027-A215

Bonito Forest Restoration Project

Smokey Bear Ranger District, Lincoln National Forest

ISSUE 1: The Forest Service failed to consider the reasonable alternative of large tree conservation in the Environmental Assessment (EA) in violation of the National Environmental Policy Act (NEPA).

Contention 1: The appellants contend that the Forest Service failed to consider and analyze an action alternative that meets the purpose and need for action while conserving trees larger than 16-inches diameter outside of a well-defined wildland-urban interface (WUI) zone. They claim that the only discussion of the alternative to conserve large trees occurs in response to public comment and that the Forest Service merely rationalizes its failure to consider the alternative contrary to the clear expectation of NEPA that such information be made available to the public and decision-maker before decisions are made. The appellants assert that the Forest Service interprets the purpose and need for the project more narrowly than it is actually written. They claim the agency frames its proposed action as the only "reasonable" alternative, and thus prevents informed consideration of other alternatives that would also meet the purpose and need. They conclude that the agency refused to take a hard look at unresolved conflicts regarding use of large trees in forest restoration, and dismissed alternatives with arbitrary and capricious reasoning (Appeal, p. 4-11).

Response: The Project Design Features section of the EA (Project Record (PR) 82, pp. 20-21) discloses that one of the primary objectives of the Bonito project is to retain as many large trees as possible.

- "For goshawk habitat, in all forest types: retain as much of overstory canopy cover and groups or clumps of the largest trees available in the mid- to old- age patches (VSS 4-6) to the extent possible.
- Design treatment prescriptions to maintain or move toward the desired distribution of vegetation structural stages (VSS) for ponderosa pine and mixed-conifer, which is: 10 percent grass/forb/shrub (VSS 1), 10 percent seedling/sapling (VSS 2), 20 percent young forest (VSS 3), 20 percent mid-aged forest (VSS 4), 20 percent mature forest (VSS 5), and 20 percent old forest (VSS 6). Use site quality to guide the distribution of VSS, tree density and tree age.
- Within goshawk PFA's, design prescriptions to move toward mature or old-age forest. Manage toward a non-uniform spacing of trees and clumpiness. Retain the 3 to 5 largest healthy green trees per acre in Ponderosa Pine habitat and the 6 largest trees live trees per

acre in Mixed Conifer. This may not occur if the Mistletoe rating is greater than .4. If the mistletoe rating is less than .4, they will be retained."

Retention of large trees has been one of the major objectives of this project since inception (Interdisciplinary Team (IDT) notes, PR 4, p. 4). It is clearly stated in the first ID team meeting notes that the one of the objectives of treatments for the Bonito project is to "focus on small diameter trees."

The Silvicultural Report describes the desired condition for the Bonito project: "Larger trees would dominate the landscape, although there would still be scattered groups of seedlings, saplings and pole-size trees (PR 77, p. 10).

A 16" diameter cap was suggested by appellant in their comments and in field visits (PR 83). In the response to comments, the Forest describes in detail why the alternative of a diameter cap would not be discussed in the EA (PR 83, pp. 34-36). The EA "documents the analysis of reasonable alternatives to the proposed action. An alternative should meet the purpose and need and address one or more relevant issues related to the proposed action. No specific number of alternatives is required or prescribed" (36 CFR 220.5(e)). The responsible official has the entire record under consideration when making a decision. Therefore, the consideration of the 16" as discussed in the comments and responses to comments section provides the responsible official with the rationale and information regarding the constraint of a 16" diameter cap as a potential alternative or piece of an alternative.

Finding: The Center's comments during scoping were taken into consideration. There are many references within the project record pointing toward retention of large trees within this project. Standards and guidelines within the Forest Plan are displayed and project design will move the forest toward desired condition. The analysis is adequate for retention of large trees.

ISSUE 2: The Forest Service is in violation of the National Forest Management Act (NFMA) and the National Environmental Policy Act (NEPA) through use of the *Implementation Guide, Region 3, Northern Goshawk Standards and Guidelines* which amended the Lincoln Forest Plan.

Contention: The appellants contend the decision violates the Lincoln National Forest Plan and NFMA because the EA admits that the project will not meet guidelines in the amended Forest Plan for northern goshawk habitat. They express concern regarding the Forest Service interpretation of standards and guidelines for northern goshawk described in a white paper titled "*Implementation Guide, Region 3, Northern Goshawk Standards and Guidelines*" (USDA 2007b). They contend that in addition to shifting implementation of the canopy cover requirement from stand to group scales, the *Implementation Guide* (USDA 2007b) also significantly changes how goshawk habitat will be managed with a new interpretation that "openings" should not be included within the VSS 1 classification. "Openings" would be considered separate from the entire VSS classification system, which would result in significantly more lands that are either open or outside of the VSS 4-6 (mid-aged to old forest) classifications than anticipated in the Forest Plan. The appellants conclude that the Forest Service is therefore violating NFMA by either (1) implementing a *de facto* amendment of the northern goshawk standards and guidelines for the Lincoln Forest Plan without compliance with the

NFMA procedures for Forest Plan amendments or (2) failing to properly amend the Forest Plan before implementing the New Goshawk Guidelines, without public notice, and in violation of NFMA (Appeal, pp. 12-14). The appellants contend that the New Goshawk Guidelines make significant changes to the standards and guidelines for managing and protecting northern goshawks across the region but the Forest Service failed to prepare either and EA or EIS for the Guidelines, in violation of NEPA. They assert that by significantly changing the way the Forest Service measures canopy cover and vegetation classes, the New Goshawk Guidelines may lead to a significant increase in harvest of trees across the Southwestern Region which may cause significant impacts to numerous wildlife species as well as result in adverse impacts to recreation and other uses (Appeal, pp. 11-14).

Response: Based upon the Project Record, there is no indication that the implementation guide was used to develop the vegetation report or analyze effects of the alternatives. All references to Standards and Guidelines are based upon the Lincoln National Forest Plan, as amended. This is documented in PR 51, in which the forest states that it will use the amended Lincoln Forest Plan, and GTR RM 217 (Management Recommendations for the Northern Goshawk in the Southwestern U.S.) which was incorporated into the Lincoln Forest Plan by reference via the 1996 Record of Decision for the Amendment of Forest Plans. Because the Implementation Guide was not used, there was no need to amend the Lincoln Forest Plan or to prepare an EIS for amendment of the Lincoln Forest Plan.

However, there are canopy requirements in the Lincoln Forest Plan. Although the EA (PR 82, pp. 57, 60-61) and Wildlife Specialist Report (PR 75, pp. 68, 72-73) state that the project area does not currently meet forest plan canopy cover requirements, this conclusion is unsupported by any documentation elsewhere in the project record.

Finding: The Implementation Guide was not used to develop the vegetation report or analyze effects of the alternatives; therefore there was no need to amend the Lincoln National Forest Plan or to prepare an EIS for amendment of the Plan. However, the project is not consistent with the canopy requirements of the Lincoln National Forest Plan, as amended.

ISSUE 3: The Forest Service failed to disclose scientific controversy regarding sensitive wildlife in violation of NEPA.

Contention: The appellants contend that implementation of Forest Plan standards and guidelines for northern goshawk is scientifically controversial as a means of ensuring population viability and cite research conducted by Beier and others. They claim that the EA contains no mention of this qualified scientific controversy, in violation of NEPA (Appeal, pp. 14-15)

Response: The Council on Environmental Quality (CEQ) regulations at 40 CFR 1508.27 require consideration of both context and intensity in determining significance. The regulations go on to discuss context and ten factors of intensity. One of the factors requires consideration of the "degree to which the effects on the quality of the human environment are likely to be highly controversial" (40 CFR 1508.27(b)(4)). The appellants contend that implementation of Forest Plan standards and guidelines for northern goshawk are scientifically controversial.

It is true the 2007 goshawk implementation guidelines are not referenced in the body of the EA, nor are they cited in the reference section (PR 82), or referred to in any of the documents included in the project record. There is no evidence that the 2007 goshawk implementation guidelines were used in preparation of the Bonito Forest Restoration Project. The CEQ Regulations (40 CFR 1508.27(4)) require discussion of issues where the effects are controversial. The Forest did not use the 2007 goshawk implementation guidelines. Therefore, the implication that the effects are controversial is moot.

Finding: The environmental document appropriately applied the NEPA process in regard to scientific controversy.

ISSUE 4: The Forest Service failed to disclose direct impacts to sensitive wildlife.

Contention: The appellants contend that the proposed road reconstruction in the Philadelphia and Iron Post-Fledging Areas (PFA) is not temporary, but permanent, and that it is a mistake to assume that disturbed sites will be re-vegetated to support forage or nesting habitat. They claim that the Forest Service does not forthrightly admit that goshawk nesting habitat will be removed (Appeal, p. 15).

Response: The Lincoln National Forest Plan does not prohibit road construction within Northern goshawk PFAs. The effects of the proposed road reconstruction were disclosed in the EA (PR 82, pp. 59 and 61) and in the Wildlife Specialist Report (PR 75, pp. 70 and 74). Removal of vegetation was disclosed. The appellants commented on this same subject and the forest replied to this comment (PR 83, p. 42).

Finding: Effects of road reconstruction within PFAs was analyzed and disclosed.

ISSUE 5: The Forest Service failed to meet requirements for management indicator species (MIS).

Contention 5a: The appellants contend that the Bonito EA contains no information that assures maintenance of a viable population of hairy woodpecker, even though mixed conifer and aspen habitats will be actively managed under the proposed action. They claim that the EA does not address the 1440 acreage threshold for minimum viable populations, nor does it ensure that mixed conifer habitat considered in the analysis meets Forest Plan criteria for aspen structure and composition (Appeal, pp. 15-16).

Response: The standard of analysis of MIS is to assess each MIS based on the presence of the indicator habitat, to provide quantitative population data for the MIS analyzed, and to assess the effects of the project on MIS population via the habitat treated. The Wildlife Specialist Report (PR 75, pp. 15-29) included an evaluation of the forest-wide habitat and population trends for MIS, as well as an evaluation of the effects to MIS populations as a result of habitat treatments. The hairy woodpecker is specifically addressed on pages 17-22, including a summary of population trends from the Lincoln National Forest MIS Assessment Update (not in record). The analysis of MIS was summarized in the EA (PR 82, pp. 69-79).

Finding: The MIS analysis was consistent with legal requirements. The Forest is instructed to include the Lincoln National Forest MIS Assessment Update in the project record.

Contention 5b: The appellants contend that even if the Bonito EA ensured hairy woodpecker population viability consistent with the Lincoln Forest Plan, it would not be a reliable proxy for ensuring viability of other obligate species because the EA does not establish presence of hairy woodpecker in the project area. They state, that it is not clear, based on the EA, how conifer removal in aspen habitat will support viable populations of species associated with mixed conifer or aspen habitat (Appeal, p. 16).

Response: The 10th Circuit Court of Appeals has ruled that MIS cannot be excluded from analysis unless there are surveys documenting the absence of the MIS from the project area. The forest analyzed all MIS based on the presence of indicator habitat, as documented in the Wildlife Specialist Report (PR 75, pp. 15-29) and summarized in the EA (PR 82, pp. 69-79).

Finding: The MIS analysis was consistent with legal requirements of the 10th Circuit Court of Appeals.

ISSUE 6: The Forest Service failed to avoid jeopardizing threatened Mexican spotted owl (MSO).

Contention: The appellants contend that the Forest Service failed to ensure that the Bonito project will comply with mandatory terms and conditions set forth in the 2005 biological opinion concerning the implementation of the Forest Plans in the Southwest Region, including mandatory monitoring requirements for the Mexican spotted owl (Appeal, pp. 16-18).

Response: The Biological Assessment (PR 78) documents compliance with the Reasonable and Prudent Measures from the 2005 Biological Opinion (p. 34; pp. 43-44).

Finding: The project complies with the 2005 Forest Plan consultation.

ISSUE 7: The Forest Service failed to obey forest plan standards for old growth forest.

Contention: The appellants contend that given the existing deficiency of old growth forest, any removal of old growth quality structure in the Bonito project would violate the Lincoln Forest Plan (Appeal, p. 18).

Response: Standards and guidelines for analysis of old growth are found on page 95 of the Record of Decision (ROD) for Amendment of Forest Plans in Arizona and New Mexico. The forest failed to analyze old growth at three scales as required by the Forest Plan.

Finding: The forest failed to obey forest plan standards for old growth in violation of the National Forest Management Act (NFMA).

ISSUE 8: The Forest Service failed to prepare an EIS on lost old growth forest recruitment in violation of NEPA.

Contention: The appellants contend that logging in the Bonito project may retard or preclude recruitment of old growth forest over time. They assert that lost recruitment potential of old growth forest due to removal of existing large trees and coarse woody structure presents a potentially significant cumulative effect that must be studied in an EIS (Appeal, p. 19).

Response: Treatments proposed for the Bonito area are designed to meet Northern goshawk and Mexican Spotted Owl habitat by creating uneven-age stands which include groups of old growth. The Wildlife Specialist Report states, "The lack of large trees over 18 inches in diameter is partly due to some large trees that were removed during historic logging operations during the mining era of the late 19th and early 20th centuries. Another reason is that the lack of surface fire regimes and high stand density results in trees unable to grow to their potential size and are therefore, dying prematurely. However, even with the general under-representation of VSS classes 5 and 6, at least some of the approximate 3,000 survey sites meet minimum structural attributes of old growth forest as defined in the forest plan" (PR 75, p. 67).

Thinning and removal of excess small diameter trees will increase diameter and height growth of trees left on the project area, these trees, over time, will develop into groups of old growth (PR 75, pp. 8-9). In the future, with management, old growth conditions will be achieved faster than if no management is performed. This will happen in part because trees will put on more diameter growth to reach minimum requirements for old growth sooner than if left in an overstocked condition. The EA states, "No stands within the project area meet the Forest Plan criteria for old growth. The treatments described in alternatives 2 and 3 would strive to develop old growth as previously described. Thinning across all diameter ranges to variable densities, while creating some canopy gaps has shown to be useful in accelerating development of late successional forest characteristics as a result of reduced competition for available resources (Harrington et al. 2005). The thinning and burning prescriptions applied to both alternatives are predicted to result in retention or enhancement old growth characteristics consistent with forest plan direction" (PR 82 pp. 36-37)

With regard to whether an EIS is required, the Decision Notice reviews the project relative to the context and intensity factors as stated in 40 CFR 1508.27. The responsible official has determined that a FONSI is appropriate based on his review of the record. This project does not fall within one of the classes of actions which would normally require an EIS.

Finding: The forest used the appropriate NEPA compliance document based on the analysis in the EA and conclusions in the FONSI.

ISSUE 9: The Forest Service failed to assess ecological benefits of dwarf mistletoe.

Contention 9a: The appellants contend that tree mortality caused by dwarf mistletoe infection creates natural openings and structural heterogeneity which are the conditions desired by the Forest Service, but the uneven aged management approach makes no provision for natural disturbances, such as pathogens or fire, as a driver of ecological structure, composition, and change (Appeal, pp. 19-20).

Response: There is a whole section in the EA, beginning on page 33, that discusses fire and subsequent effects to the forested landscape. This project is designed to reduce the likelihood of stand replacement fire and increase the benefits of both prescribed fire and low intensity fire to help maintain the diversity of tree sizes, species composition, and wildlife habitat as required by the Forest Plan.

The Forest describes their rationale for removal of large trees infected with dwarf mistletoe in the Response to Comments (PR 83, p. 36) and the Silviculturist Specialist Report (PR 77, pp. 13-17). The Bonito project limits the size of openings within mistletoe patches to meet the forest plan requirement of having openings no larger than four acres in areas outside of PFAs. In fact, the decision limits opening size to two acres and requires reserve trees to be left in accordance with the Forest Plan. Reserve trees will be left even if they are mistletoe infected to meet Forest Plan requirements.

All forest plans in Region 3 have been amended with the Record of Decision for Amendment of Forest Plans Arizona and New Mexico (ROD). The ROD contains specific direction for the Lincoln National Forest regarding areas that are, or become, infested by insects or diseases. The Forest Plan language reads in part, "The principles of integrated pest management (IPM) will be utilized to treat areas that are, or become, infested by insects or diseases, and to reduce susceptibility of host-types to future infestations" (ROD, p. 73). Reduction of mistletoe within the Bonito project area is mandated by the Forest Plan.

The ROD also goes on to state for northern goshawk management "manage for uneven-age stand conditions ..." (ROD p. 91); and for Mexican Spotted Owl management within restricted areas, it states "Emphasize uneven-aged management systems" (ROD, p. 89).

Management of dwarf mistletoe is required by the Lincoln National Forest Plan and this project is consistent with Forest Plan direction.

Finding: Uneven-age management is the preferred treatment for both northern goshawk and Mexican Spotted owl. Use of uneven-age silvicultural systems has been analyzed for the ROD and also in the Mexican Spotted Owl Recovery Plan. The Bonito project is consistent with these requirements. The Forest should include a copy of the ROD Amendment of Forest Plans in the project Record.

Contention 9b: The appellants contend that the EA fails to consider the importance of mistletoe as a food source to a number of sensitive and management indicator species in the project area and fails to assess how silvicultural emphasis on mistletoe sanitation will affect food availability or population viability of any species (Appeal, p. 20).

Response: As documented in the response to appellant's comments (PR 83, p. 46), there are no special status species requiring mistletoe as a primary food source. As explained in the response to the comment, sufficient dwarf mistletoe will remain in the project area for other wildlife species.

Finding: The effects of dwarf mistletoe sanitation on wildlife were disclosed in the project record in response to public comment.

ISSUE 10: The Forest Service failed to prepare an EIS on cumulative effects resulting from road construction.

Contention 10a: The appellants contend that the EA contains no information about factors that influence sediment movement and watershed function (road gradient, road design, road age, fill slope length, cut slope exposure, and vegetative cover) even though the Forest Service acknowledges their relevance to the analysis of environmental effects (Appeal, p. 21-22).

Response: The discussion regarding the factors which influence sediment movement and watershed function relative roads is contained in the EA (PR 82, p. 85) and the Hydrology and Soils Specialists Report (PR 53, pp. 2, 3, 4, 6 and 7). The primary factor of climate, and specifically the precipitation regime (*amount, rainfall intensity*) which contributes to runoff and erosion, is discussed in the specialist report (PR 53, p. 2). Additional factors which contribute to sediment movement and watershed function include: recreation use *close to* streams including road crossings, campgrounds and hiking trails; gravel and dirt roads *at stream crossings*; use of *native surface* materials for Class 1 and 2 roads; *roads locations* along streams channels; and *road density* by watershed and canyon. Furthermore, the *proximity* of sediment producing roads to adjacent stream channels is quantified (PR 53, p. 7).

These factors are also addressed in EA (PR 82, p. 15) which describes the decommissioning of roads which included re-seeding, water barring and reshaping of the contour; realignment to move the roads out of the drainage bottoms; grading to reduce rutting; and adding erosion control and drainage features.

Finding: The EA adequately analyzes and discloses the effects of the factors which influence sediment movement and watershed function.

Contention 10b: The appellants contend that it is not clear from the Bonito EA to what extent or at which locations road construction or ground-based logging systems may directly affect mapped soils with a "severe" or "moderate" erosion hazard rating (Appeal, p. 22).

Response: Erosion hazard rating are displayed in the EA (PR 82, Table 20, p. 86) and by ecological (soil) map unit and in the specialist report (PR 53, Table 6, p. 15); and in maps (PR 53, p. 89). The relationship between road construction, erosion hazard rating and ecological (soil) map unit is displayed in table 4 of the roads report (PR 26, pp. 6 and 8). The extent of construction for specific roads is listed in the EA (PR 82, p. 95).

The use of ground-based logging systems is limited to slopes of less than 40% (PR 82, p. 14) and within 1200 feet of the road. The EA failed to articulate the site specific effects of the ground-based logging systems in relationship to the ecological (soil) unit's erosion hazard rating.

Finding: The effects analysis adequately describes the extent and location of road construction activities for soils with moderate or severe erosion hazard ratings. However, the effects analysis

does not address the site specific effects of logging systems for soils with moderate or severe erosion hazard ratings.

Contention 10c: The appellants contend that the Forest Service does not indicate if it used site-specific information to validate range of road density values and conclusions drawn from the Bonito EA. They conclude that the agency did not apply site-specific information, and that its generic conclusions are uninformative about the potentially significant cumulative effects to watershed function posed by the existing road network in the project area (Appeal, p. 22, footnote 6).

Response: Road density is clearly described in the specialist's reports (PR 53, pp. 6-7). Roads are primarily run alongside near stream channels and in the east end of the project area. Roads (high and low roads) were analyzed by kind of soil and location by canyon (PR 53, p. 75). The cumulative effects for erosion by treatment and road location are displayed in Table 11 of the specialist's report (PR 53). Site specific information was collected through soil condition field monitoring (PR 53, p. 18). Although cumulative watershed effects are minimally addressed in the EA (PR 82, pp. 88 and 93) these effects are elaborated upon in the specialists report (PR 53, pp. 27-28, and the Watershed Condition Supplement).

Finding: The analysis in the project record supports the conclusion there are no significant cumulative effects.

ISSUE 11: The Forest Service failed to disclose uncertainty and controversy regarding the soil erosion model.

Contention 11a: The appellants contend that the EA indicates that some soils are considered "impaired" but does not relate this finding to any particular soil type or location in the planning area. Nor does the EA disclose where or to what extent proposed activities may directly affect "moderate" and "severe" erosion hazard soils (Appeal, p. 23).

Response: The location and cause for impaired soils (PR 82, p. 85; PR 53, p. 19) is related to localized heavy recreation use (compaction, loss of vegetation cover) primarily around water sources and along the Rio Bonito.

The site specific effects of the proposed activities on soils with moderate and severe erosion hazard are not disclosed in the EA or specialists report.

Finding: The location and cause for impaired soils is in the project record. However, the EA and project record fail to disclose the effects analysis for proposed activities on soil with moderate and severe erosion hazard.

Contention 11b: The appellants contend by relying on the Watershed Erosion Prediction Project (WEPP) model, the EA fails to ensure integrity in five ways:

1. It fails to demonstrate effective calibration of model inputs to site conditions.
2. It fails to authenticate validation assumptions with site-specific data.
3. It fails to express over-prediction and under-prediction tendencies of the model.

4. It fails to account for significant erosion processes that the models do not factor.
5. It fails to establish confidence limits and uncertainty bounds.

(Appeal, p. 24).

Response: The Water Erosion Prediction Project (WEPP) is explained in the EA (PR 82, p. 83). Specific references and a website are provided which contain background research and empirical data to support the use of the model on National Forest lands. Site specific data was collected for the Terrestrial Ecosystem Survey report and further verified with field visits during the evaluation of soil condition (PR 53, pp. 15-18). Soil erosion processes that are not accounted for in the WEPP model are identified in the soil condition rating process (PR 53, p. 78). Limitations of the model are also acknowledged in the EA (PR 82, p. 83). Model outputs are not considered absolutes but an index for the purposes of making comparison between alternatives.

Finding: The use of the WEPP model for this analysis is supported by the project record.

Contention 11c: The appellants contend that the EA fails to describe the Fuel Management Erosion Analysis (FuMe) interface or the input parameters used to simulate erosion rates in various scenarios (Appeal, p. 23, footnote7).

Response: The Fuel Management Erosion Analysis (FuMe) interface is explained in the EA (PR 82, p. 87) and the specialists report (PR 53, pp. 45-75). The input parameters for each treatment by geographic location and dominant soil texture are also in the specialists report. (PR 53, pp. 48-74).

Finding: The WEPP Fuel Management Erosion Analysis interface and input parameters are adequately documented in the project record.

ISSUE 12: The Forest Service failed to prepare an EIS on other significant cumulative effects.

Contention: The appellants are concerned about potentially significant cumulative effects from on-going and reasonably foreseeable actions such as livestock grazing, fire suppression, and noxious weed spread in combination with the proposed treatments, especially road reconstruction, use of mechanical logging systems, and prescribed firing activities that would physically disturb forest soils (Appeal, pp. 24-25).

Response: The EA addresses cumulative effects of the proposed action in combination with other known actions. Most of the resources listed in the appeal contention are addressed in the cumulative effects section beginning on page 84 and ending on page 86 of the EA (PR 82). Other cumulative effects, not mentioned in the contention, are addressed in the appropriate resource sections of the EA and specialist's reports. However, as discussed in the responses to contentions 10b and 11a, the EA fails to disclose the site-specific effects analysis, including cumulative effects, for proposed activities on soil with moderate and severe erosion hazard.

Finding: The EA appropriately considers cumulative effects on most resources and finds them not to have individually or cumulatively significant impacts on the human environment. However, the EA fails to disclose the cumulative effects for proposed activities on soil with moderate and severe erosion hazard.