BEFORE THE REGIONAL FORESTER,
SOUTHWESTERN REGION OF THE UNITED STATES FOREST SERVICE

In Re:	)	
Objection of Tajique Watershed	)	
Restoration Project	)	
Environmental Impact Statement	)	
Cibola National Forest	)	
Mountainair Ranger District	)	
	)	**NOTICE OF OBJECTION**
	)	**OBJECTORS INTERESTS**
	)	**STATEMENT OF REASONS**
	)	**REQUEST FOR RELIEF**
Paul and M.J. Davis	)	
P.O. Box 1736	)	
Tijeras, NM 87059	)	
505-286-9096	)	
	)	
Bud Latven and Caroline Orcutt	)	
43 Troncon Negro Rd	)	
Tajique, NM 87016	)	
505-384-2208	)	
	)	
Jo and Jan Moore	)	
P.O. Box 40	)	
Torreon, NM 87061	)	
505-384-2209	)	
	)	
Elaine Sanchez and John Falvey	)	
6653 Hillwood Lane	)	
Dallas TX 75248	)	
972-788-0704	)	
	)	
Michael Mansur and Kathi Cox	)	
P.O. Box 53091	)	
Albuquerque, NM 87153-3091	)	
	)	
Ed and Colette Herrera	)	
5600 Greenly Ave. NE	)	
Albuquerque, NM 87111	)	
505-292-1615	)	
	)	
Stefa Zawerucha and David Fritz	)	
50 Troncon Negro Rd.	)	
Tajique, NM 87016	)	

718-852-5860)
)
Paul Chenoweth)
349 W Jamison Cr # 8)
Littleton, CO 80120)
720-203-3705)
)
Tom Chancey)
10 Forest Valley Rd.)
Tajique, NM 87016)
505-384-5380)
)
Tom Lucid)
30 FR 322)
Tajique, NM 87016)
505-281-4634)
)
Peter Neils)
62 Monticello Dr. NE)
Albuquerque, NM 87123)
505-243-2546)
)
Mike Sweeney)
5701 Edgedale Drive)
Raleigh NC 27612)
(919) 676-4682)
)
Barbara Falvey)
11018 Snowheights Blvd NE)
Albuquerque NM 87112)
505 239-9080)
)
Patrick & Lisa Falvey)
11012 Savannah Ct.)
Austin, TX 78739)
512-413-2201)
)
Claudia DeLorenzo Black
2810 Campbell Rd NW)
Albuquerque, NM 87104)
505 345-6710)
)
Jess Alford)
34 Easy Street)
Tijeras, NM 87059)
505-286-0802)

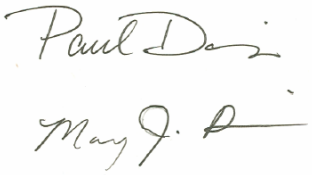
Forest Guardians, Lead Objector
Bryan Bird, Forest Program Coordinator
312 Montezuma
Santa Fe, NM 87501
505.988.9126 x 157

DATED this ____ day of November, 2005

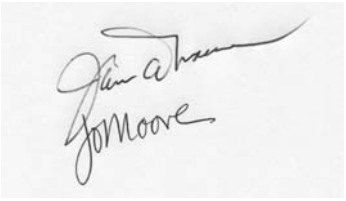
To:

Regional Forester, Objection Reviewing Officer
Forest Service, Region 3
333 Broadway SE
Albuquerque, NM 87102

From:



Paul and MJ Davis



Jo and Jan Moore

Bud Latven

Bryan Bird, Forest Program Coordinator
Forest Guardians, Lead Objector

Caroline Orcutt

Introduction

NOTICE IS HEREBY GIVEN that Forest Guardians et al. object pursuant to 36 CFR § 218.7 to the Regional Forester, Southwestern Region of the United States Forest Service from the Final Environmental Impact Assessment (FEIS or EIS) prepared for the Tajique Watershed Restoration Project (Tajique Project), that is located on the Mountainair Ranger District of the Cibola National Forest (CNF). Cibola National Forest Supervisor Nancy Rose is the Responsible Official for this project. Legal Notice in the Newspaper of Record that states this FEIS is subject to Healthy Forests Restoration Act (HFRA) predecisional objection procedures (36 CFR § 218.4), and is not subject to Forest Service Appeal procedures was published in the Newspaper of Record on October 17, 2005.

Forest Guardians is a non-profit corporation with its principal office in Santa Fe, New Mexico. Forest Guardians has approximately 2,000 members, most of whom reside in New Mexico, Utah, and Arizona. Members of Forest Guardians frequently use and enjoy forest lands throughout the southwestern United States, including southern New Mexico, for recreational, aesthetic, and scientific activities. In pursuit of these activities, Forest Guardians members regularly observe and enjoy wildlife in its natural habitat. Forest Guardians and its members are committed to the protection of intact forest ecosystems throughout the Southwest. To achieve this protection, Forest Guardians works through administrative appeals, litigation, and otherwise to assure that all federal agencies fully comply with the provisions federal environmental laws, including NFMA, HFRA, and NEPA. Forest Guardians, its staff, and its members have a substantial interest in continuing to use the area where the Tajique project is planned and are adversely affected and aggrieved by the USFS's failure to protect the land and comply with the law.

Paul Davis, M.J. Davis, Bud Latven, Caroline Orcutt, Jo Moore, Jan Moore, Ed and Colette Herrera, Elaine Sanchez, John Falvey, Michael Mansur, Kathi Cox, David B. Fritz, Stefa Fritz, Paul Chenoweth, Claudia DeLorenzo Black, Patrick & Lisa Falvey, Barbara Falvey, and Tom Lucid are all property owners in the Tajique planning area whose property values will be affected by the proposed logging, thinning, and prescribed burning. The enjoyment of their properties and the surrounding national forest lands will be severely harmed by impacts from the proposed activities on scenic values, aesthetic values, wildlife populations, water quality, as well as noise and traffic hazards. Each filed timely comments on the Tajique Project during the 45-day comment period on the DEIS.

Peter Neils, Mike Sweeney, Jess Alford are interested citizens and regularly spend time on the Cibola National Forest and the Tajique planning area. Their use and enjoyment of the planning area will be severely harmed by the proposed activities and their impacts on recreation, water quality, wildlife populations, as well as the noise and traffic hazards. Each filed timely comments on the Tajique Project during the 45-day comment period on the DEIS.

Objectors have participated in the comment process associated with this Tajique project. Objectors hereby incorporate all earlier comments that have been submitted in relation to this proposal.

It is not clear how the Tajique project NEPA process differed in any respect from the traditional NEPA process. The HFRA requires a new "brand" of collaboration with stakeholders. The Webster's definition of collaborate is to "work jointly with others especially in an intellectual endeavor." However, there was nothing unusual about the way the CNF worked with the public on the Tajique project: there were public meetings, the CNF met with stakeholders, comment was taken on a proposal, and in the end the CNF produced a project that was almost entirely its own creation, very few concerns or requests of the Objectors were honored or incorporated into the FEIS. It is not clear that the CNF complied with the collaboration provisions of the HFRA.

Objectors are objecting to this project on the grounds the decision is legally indefensible. Objectors contend that with this project, Forest Supervisor Nancy Rose and the CNF violate the National Environmental Policy Act (NEPA), the Appeals Reform Act (ARA), the Healthy Forests Restoration Act (HFRA) the Migratory Bird Treaty Act (MBTA), E.O. 13186, the National Forest Management Act (NFMA), its Forest Plan, as well as the Administrative Procedures Act (APA).

The Objectors desire and will request relief in the form of:

- Systematically and legally evaluate the HFRA suitability criteria for Wildland Urban Interface as it applies to this project. If the legal criteria cannot be met, conduct a standard NEPA process outside the HFRA.

- Facilitate and participate in the creation of a CWPP and prepare an alternative that reflects the final CWPP prior to a decision.

- Re-issue the FEIS with full consideration of the Citizen's Alternative

- Re-issue the FEIS using an accurate characterization of the No-Action Alternative and re-run all of its models using site-specific information;

- Gather MIS population trend data and actually analyze the impacts of the range of alternatives to the actual population trends before approving this project.

- Use the most up-to-date science on forest self-thinning to give an accurate representation of the no-action alternative and its effects on forest conditions.

Statement of Facts

The Forest Supervisor of the CNF proposes to implement the Preferred Alternative which would treat a total of 13,690 acres including 8,983 acres logged for timber, biomass, and commercial firewood as well as 4,177 acres of "timber stand improvement" thinning, 470 acres of clearcut, 1,100 acres of fuelbreaks constructed, 1,270 acres of prescribed burning of National Forest lands to ostensibly reduce fuels, enhance fire-tolerant vegetation and provide fuel breaks. The preferred alternative would remove from the forest 46,127 CCF of biomass, 6.4 MMBF of sawlogs, and 12,628 cords of firewood and require 5 miles of road re-location. The stated purpose of the fuels treatments is to "reduce fuel loads and restore structure and composition across the landscape." The net cost of the preferred alternative is $365 an acre or an estimated total cost of $5 million.

Objectors provided substantive, written comments on March 21, 2005 in response to a draft EIS and letter requesting public comment.

36 CFR§218.7(c) states that incorporation of documents by reference in predecisional objections is not allowed. In light of the fact that this objection references multiple documents including the CNF Land and Resource Management Plan (CNF Plan or Forest Plan), the Tajique FEIS, emails, memos, and reports, these documents are all incorporated into this objection by reference. Documents not in the Tajique project record or easily obtainable by the USFS are included on the attached CD-ROM. (See CD-ROM included with this objection). The CNF Plan, FEIS and supporting documents referenced and relied upon in this objection are located on the CNF website or in the administrative record.

Arguments

The ensuing arguments will demonstrate the Tajique FEIS and/or associated determinations and decisions have (in some cases) and will (with signing of a ROD) violate the National Environmental Policy Act (NEPA), the Appeals Reform Act (ARA), the Healthy Forests Restoration Act (HFRA), the Freedom of Information Act, the Migratory Bird Treaty Act (MBTA), E.O. 13186, the National Forest Management Act (NFMA), its Forest Plan, the U.S Constitution, as well as the Administrative Procedures Act (APA).

I. The Cibola National Forest (CNF) is Acting in Violation of the Healthy Forests Restoration Act (HFRA)

The Healthy Forest Restoration Act (HFRA; Pub. L. 108–148, § 2, Dec. 3, 2003, 117 Stat. 1888) provides the authority for the Tajique project and is binding as a U.S. statute. Several of the provisions of the HFRA will be violated if the project is to proceed as described in the EA.

A. *Annual Program of Work*

There is no Annual Program of Work contained in or even referenced in the FEIS as was requested by Objectors in scoping comments. The CNF has not prepared an applicable Annual Program of Work (APW), as mandated by the HFRA. HFRA Section 103(a) explains that the annual program of work is where the National Forests will list and describe the projects they intend to accomplish under the HFRA annually and give priority to protection of at-risk communities or watersheds, or projects that implement community wildfire protection plans. The CNF Schedule of Proposed Actions (SOPA) does not satisfy this requirement as it list the entire universe of activities that might be undertaken by any one forest rather than a specific and strategic accounting of the fuels reduction and forest restoration projects to be undertaken in any single year. Because this has not been done, the project is not consistent with section 103(a) of the HFRA.

B. *Suitable Lands*

Both terms, "WUI" and Condition Class 3" are legally defined terms.[1] The existence of certain facts must be alleged to support the assertion that these terms apply to certain lands. Therefore, the applicability of these terms to particular lands must be held to be a "legal conclusion" that proceeds from the existence of certain facts. In reference to legal issues, a reviewing court will give less deference to an agency decision than in the case of an issue of fact.

[1] See HFRA Sections 101(16) and 101(5) respectively.

Lands on which hazardous fuel reduction projects may occur under the HFRA are limited to:

I. The wildland-urban interface areas of at-risk communities;[2]

II. All condition class 3 lands, as well as condition class 2 lands within fire regimes I, II or III, that are in such proximity to a municipal watershed or its feeder streams that a significant risk exists that a wildfire event will have adverse effects on the water quality of the municipal water supply or the maintenance of the system;[3]

III. Where windthrow or blowdown or the existence of an epidemic of disease or insects significantly threatens ecosystems or resources;[4]

IV. Areas that have threatened and endangered species habitat, where the natural fire regimes are important for (or where wildfire poses a threat to) the species or their habitat and the fuel reduction project will enhance protection from catastrophic wildfire (and complies with applicable guidelines in management or recovery plans).[5]

The EIS fails entirely to provide documentation supporting the suitability under HFRA or as defined in the Federal Register for each acre proposed for treatments in the Tajique area as was requested by Objectors in DEIS comments.[6] The FEIS makes the statement in its opening summary that the project meets the intent of the HFRA "by reducing hazardous fuels within the watershed, reducing the threat of wildfire to the communities of Tajique, Torreon, Sherwood Forest and Forest Valley, and protecting wildlife habitat for federally listed species." (FEIS at iii). Not one of these reasons can be justified in the face of reasoned logic or the HFRA itself.

First, as will be elaborated on below, the planning area is not a municipal "watershed" in the sense of the HFRA. Rather all of settlements in the area derive their water from underground. The Tajique project as proposed would only have negative effects on surface water; the FEIS as well as other USFS documents acknowledge that vegetation management cannot be considered in any way to affect groundwater. (Thunderbird EA at 23-24, attached on CD-ROM).

---

[2] HFRA Section 102(a)(1).

[3] HFRA Sections 102(a)(2) and (3*).* HFRA defines "municipal water supply system" as "the reservoirs, canals, ditches, flumes, laterals, pipes, pipelines, and other surface facilities and systems constructed or installed for the collection, impoundment, storage, transportation, or distribution of drinking water." (Section 101).

[4] HFRA Section 102(a)(4).

[5] HFRA Section 102(a)(5).

[6] HFRA, Section 101, (1) (A) (i) and 66 Fed. Reg. 753.

Second, the sparsely populated inholdings of Sherwood Forest and Forest Valley in no way meet the governments definition of WUI or at-risk community and nowhere has the CNF attempted to define them as such. The communities of Tajique and Torreon have been identified but are over 2 miles from the CNF boundary and in no way can they be "protected" by manipulating vegetation that far away.

Finally, the Tajique FEIS discloses that there are only two federally listed species that might occupy the planning area, but do not presently, according to the CNF's own surveys. It cannot possibly be argued that this project will protect the habitat of these two species.

The FEIS summary goes on to state that more than half the project area falls within the WUI interface zone. But, anyway you cut it; the planning area does not meet the official government definition of WUI interface. The summary also states the project area meets the fire condition class 3, but a hard look at the analysis disproves even this.

The Department of Agriculture defines three categories of WUI areas: interface, intermix and occluded. These are found in the Federal Register as referenced in the HFRA, Sec.101 (1)(A)(i).[7] A WUI *interface* area is defined as a community with "3 or more structures per acre (structure is defined as a residence or business) with shared municipal services." An alternative definition of an *interface* area is "250 or more people per square mile" (p.753). An *intermix* area is defined as an area with "structures very close together to one structure per 40 acres". An alternative definition has a "population density of between 28-250 people per square mile" (p. 753). An *occluded* area is not relevant to the project area.

The Tajique FEIS identifies three main WUI areas within the project area. (FEIS at 186). These are: "Forest Valley (that) has approximately 35 lots with 10 year-round or part-time residents"…"Sherwood Forest (that) has approximately 35 lots with 10 year-round or part-time residents" …and "Inlow Youth Camp (that) can serve up to 350 people at any given time."

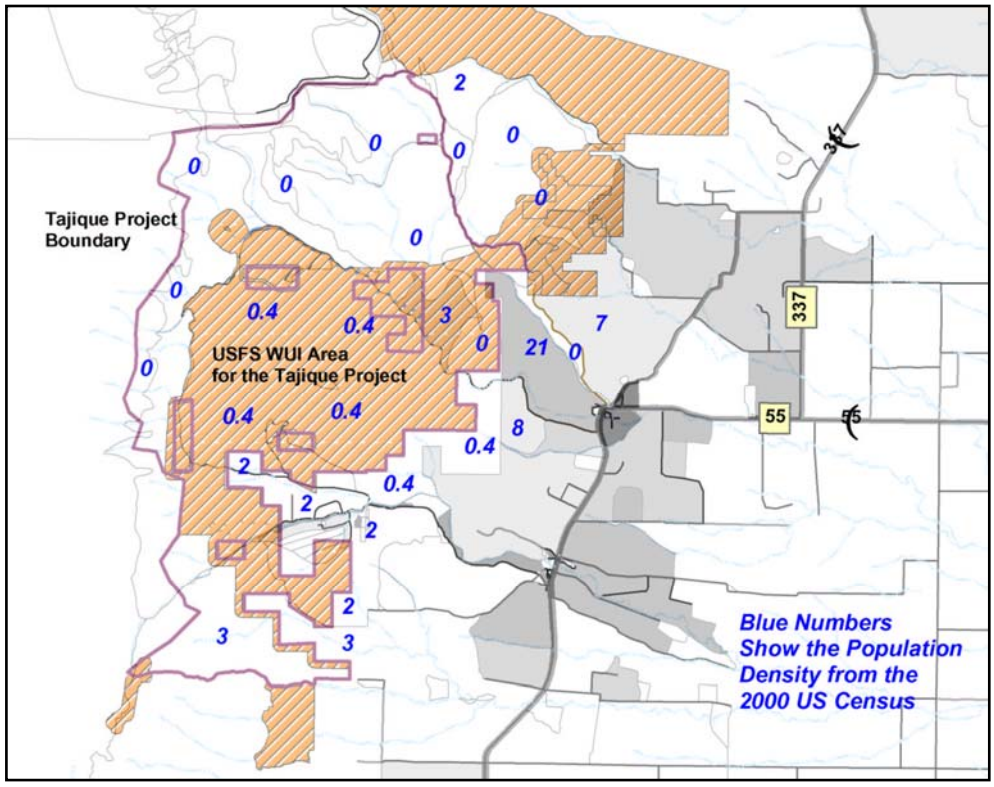
Because Forest Valley and Sherwood Forest subdivisions have approximately 10 residences (structures) in the 640 acres, this is only one structure per 64 acres. There are only a dozen residents in each of these subdivisions. This does not meet the structure or population density requirements of either the interface or intermix definitions of a wildland-urban interface area. Youth camps are not defined in the Federal Register as WUI areas and the villages of Tajique and Torreon are well outside of the project area and were not considered as WUI candidates by the FEIS.

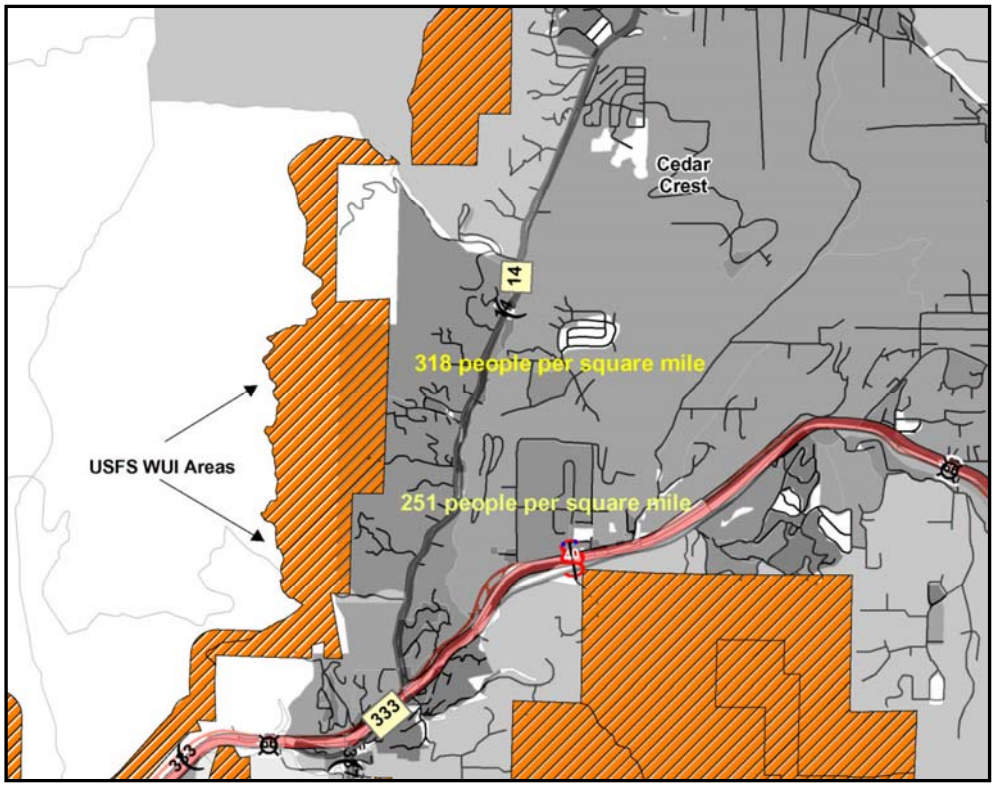
The 2000 census indicates that there are no more than 63 residents in the entire project area covering 36.67 square miles. This area includes some extended private land adjacent to but outside of the project area which inflates the population number. Even with this

[7] 66 Fed. Reg. 751-777.

inflation, there are only 1.72 residents per square mile. This does not comply with the minimum requirements of Section 101 (1) (A) (i) of the HFRA.

	HFRA interface minimum requirement	HFRA intermix minimum requirement	FEIS (p.186)	2000 Census
People/square mi	250	28	10	1.72





Map showing USFS-defined WUI areas and population densities from the US 2000 Census

The Federal Register indicates a "preliminary criteria for risk evaluation and risk management that will be used by the Secretaries to rank and prioritize communities..."[8] The Federal Register addresses this criteria through levels of risk assessment but does not actually rank communities at risk.[9] If the Tajique project area doesn't even qualify as a WUI area by definition, it is difficult to understand how it can be considered a priority area at all.

The Federal Register notice also provides direction on refining the initial list of communities: "the Federal Agencies will work with Tribes, State, local governments, and other interested parties to refine and narrow the initial list of communities provided in this notice, focusing on those that are at highest risk, as determined through the application of appropriate criteria."[10] (Emphasis added).

A later grouping of communities was identified by New Mexico State Forestry, supplanting the Federal Register list and was provided by the Forest Service in defense of its designation of the Tajique planning area as WUI. However, in the NM State Forestry document, Sandia/Manzano Mountains is listed as a group with specific communities identified. These communities include Tajique, Torreon, Mountainair, but do not include Sherwood Forest or Forest Valley.[11]

The Federal Register also provides the "Preliminary Criteria for Project Selection."[12] This section indicates that "among other factors that may be considered for project selection...will be the degree to which the community actively supports and invests in hazardous fuel reduction activities and programs….Private landowners may help reduce this (fire) risk by creating defensible space around their homes and businesses, and by using fire-resistant materials in building those structures. *Without such precautionary measures, fuel reduction on Federal land in the vicinity may be ineffective in significantly reducing community risk*."[13] Subdivisions should implement fuel reduction on private lands *before* a Federal plan can be effective.

In response to this objection issue, the Forest Service will argue that the WUI was identified in the Federal Register list of "at risk communities." However, this list of at risk communities is only an initial evaluation of potential projects. The Federal Register includes the "Manzano Mountains." However, the New Mexico list is the only state list that included such generic locations. Every other state did what the HFRA requires. (See

[8] 66 Fed. Reg. 752.

[9] 66 Fed. Reg. 753.

[10] 66 Fed. Reg. 751-777.

[11] 2005 New Mexico Communities at Risk Assessment Plan, New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division.

[12] 66 Fed. Reg. 753 -754.

[13] 66 Fed. Reg. 752.

Managing the Impact of Wildfires on Communities and the Environment, A Report to the President In Response to the Wildfires of 2000, September 8, 2000).

Each state is required to provide a list of town or communities, no exception. All of the at risk communities identified in New Mexico are actually communities. For example, Jemez Pueblo is listed but not the Jemez Mountains. This is consistent with the HFRA and its basis document, the National Fire Plan (NFP). Listing the Manzano Mountains is not.

The "Manzano Mountains" as a general category does not alone make it a WUI. For example, the Manzano Mountains Wilderness area is in the Manzano Mountains but cannot be thinned under the HFRA and the private/public interface along the west side of the Manzano Mountains has neither trees nor people. Therefore, it cannot qualify as a WUI.

Finally, the list provided in the Federal Register is only a starting place. Based on this list, the USFS is supposed to apply the WUI criteria thus prioritize HFRA project sites.

In other words, the simple fact that the "Manzano Mountains" shows up in the federal register alone does not make it a site that meets the criteria needed for consideration under the HFRA and even if it did it wouldn't have a high priority compared to other sites.

The USFS will next argue that it calculated site-specific fire regime current condition classes (FRCC) for the area that qualify it for HFRA authorization. First, the national FRCC rating system was not developed for localized use. The authors of the coarse-scale mapping of FRCCs stated specifically that they were meant to provide land managers with "national-level" data and for the methodology to be applied at finer scales, land managers would require "finer input data."[14] The FRCC analysis in the project record is seriously flawed for a couple of reasons. The most glaring reason is that the worksheets completed for the analysis state boldly that they are for "training purposes only." See project record.

Second, the reference fire frequency, particularly for piñon-juniper forests is wrong.[15] The fire history of the east side of the Manzano Mountains is sparse and incomplete at best.[16] The Sandia/Manzano Fire History Report states the "fire record for the (Canon de Turrieta) site lacks sufficient data prior to 1785 to reliably interpret changes in fire frequency and spatial patterns." In addition, the report notes that the "topography and current fore structure on the east face of the Sandia Mountains suggests this area is prone to large, high-intensity stand-replacement fires." Though not identical, the east side of the Sandias is certainly similar to the east side of the Manzanos. Lastly, a similar report on

[14] Schmidt, K.M., J.P. Menakis, C.C. Hardy, W.J. Hann, and D.L. Bunnell. 2002. *Development of coarse-scale spatial data for wildland fire and fuel treatment*. RMRS-GTR-87. Ft. Collins, CO. 41 pp.

[15] Baker, W.L. and D.J. Shinneman. 2004. Also see discussion of fire and fuels modeling below.

[16] Baisan and Swetnam 1995. Attached on CD-ROM.

fire history in the central Rio Grande Valley by the same authors (Baisan and Swetnam 1997) indicates that fire suppression under moderate conditions can result in exclusion, but under severe conditions fire control becomes impossible.[17] Thus it is not clear 1. that the FRCC is in a class 3 and 2. that fuel reduction activities would even change fire behavior or fire fighting conditions under severe weather conditions.

Nowhere in the FEIS is the methodology or rationale for defining the planning area as suitable under the HFRA identified or explained. Failure to document and analyze suitability in the FEIS is inconsistent with the above HFRA direction. All of the above clearly eliminates the Tajique project as a WUI fire protection project. It does not comply with the Sec.102 (A) - Authorized Projects as specified in the HFRA. Also, because sources of information and methodologies used by the Forest Service were not identified, the decision will violate the APA's prohibitions on making decisions that are arbitrary, capricious, and unreasonable.[18]

C. *Proposed Actions are Contrary to HFRA*

The action as proposed will <u>increase</u> fire danger, not decrease it. This directly contradicts the intent of the HFRA, whose stated purpose is to "…reduce wildfire risk to communities, municipal water supplies, and other at-risk Federal land."

For convenience, expediency, or cost-savings, the Forest Service has decided to leave slash on the ground in the thinned areas. The photos below are of slash piles remaining at the Thunderbird Restoration Project, just ten miles from the Tajique Project area. The slash is 3 to 5 feet thick throughout the Thunderbird area, creating an extreme fire danger that did not exist prior to thinning. These same conditions will exist at the Tajique thinning area following thinning. In addition, the Tajique proposed action will create new means of access for illegal woodcutters, poachers, off-road vehicles, all presenting new potential fire risks.

[17] Baisan and Swetnam 1997. Attached on CD-ROM.

[18] 5 U.S.C. § 706.

Activity fuels (slash) in Thunderbird project area. Photo 2005.

Activity fuels (slash) in Thunderbird project area. Photo 2005.

Second, the action as proposed will increase insect infestation, not decrease it. The legislative history of the HFRA clearly indicates that the Act is intended to address not only threats from wildfire, but also threats from insect infestations.[19] Until now the Tajique Watershed, and, in fact, the Manzano Mountains have escaped the infestation of bark beetles which have plagued areas as close as the adjoining Manzanitas. The FEIS relates that a thinning effort by Isleta Pueblo, sharing a boundary with the Cibola National Forest lands in the Manzanos, resulted in a significant bark beetle infestation. The FEIS also notes that bark beetles preferred nesting grounds are pine slash. (FEIS at 63 – 64). Remarkably, the Forest Service' plan to leave slash on thousands of acres in the Tajique thinning area will not only increase fire danger, but will provide prime breeding grounds for the bark beetle.

D. *Collaborative Wildfire Protection Plan*

The HFRA, through its mandate to comply with NEPA, and by its express language, requires the Forest Service to promote encourage, and facilitate the formation of a Collaborative Wildfire Protection Plan (CWPP) by the local planning area community early in the planning process, before "key planning decisions" are made. The failure of the Forest Service to do so in the instant case must be remedied and an opportunity given for the creation of a CWPP that is allowed time to prepare an alternative to the proposed project or to contribute other forms of input that it deems appropriate.

The cornerstone of NEPA and the HFRA is a Congressional mandate for agency collaboration with local governments and organizations and public involvement in decision-making and implementation. In relation to the HFRA, this is borne out by its legislative history which includes the Comprehensive Strategy and 10 Year Plan. The main vehicle for satisfying this mandate within the Act is the involvement of CWPPs in the decision-making and implementation process. This fact is evident from several sections in the act itself specifically providing for and encouraging the involvement of CWPPs.

NEPA requires full disclosure of pertinent information to the public and public involvement on all projects as early as possible and to the fullest extent possible. Thus, In order to comply with the spirit and intent of the HFRA and NEPA, the HFRA must be read to require the FS, to the fullest extent possible, to make interested parties aware of the importance of the CWPPs to the planning process and to give the community sufficient time to form one and to propose its own plan for forest restoration.

There is no mention in the FEIS of any attempt by the FS to disseminate information relating to CWPPs to the public, or to encourage their formation. The FEIS summarizes efforts to solicit public input from various groups, but does not mention CWPPs at all. (FEIS at 12-15). Soliciting public input in any form is commendable, but Congress had a specific form in mind when it created the HFRA. Collaboration being a key element of the HFRA, community collaboration is a key element of a CWPP. It is one thing for the FS to assume the role of collecting individual statements of public input from various

[19] Senate Report 108-121, healthy Forests Restoration Act of 2003.

citizens or groups, but quite another for the community to get together to form its own recommendations for alternative action and present them to the Forest Service.

Since CWPPs are such a significant part of the HFRA's compliance with Congress' mandate to involve the public and collaborate with local agencies, the community must be informed and given an opportunity to create a CWPP at the earliest stages of the planning process. And, HFRA sec. 104(f) and the Implementation Plan must be read to require that the Forest Service "facilitate" this process. The failure to promote the formation of, and to actively integrate the involvement of a local CWPP by the Forest Service renders this project fatally flawed at present according to both the NEPA and HFRA. This can only be remedied by requiring the FS to disseminate information on the formation of a CWPP to the local community, giving the community an opportunity to create its own CWPP, and by allowing that CWPP its statutorily mandated input into the project's planning process before "key planning decisions" are made.

See further discussion of legal standards and authorities in Appendix A.

E. *Large Trees*

The HFRA requires that covered projects outside of old growth focus "largely on small diameter trees, thinning, strategic fuel breaks, and prescribed fire to modify fire behavior, as measured by the projected reduction of uncharacteristically severe wildfire effects for the forest type;" and, maximize "the retention of large trees, as appropriate for the forest type, to the extent that the large trees promote fire-resilient stands."[20]

Less than 3% of the trees on Forest Service lands in Arizona and New Mexico is larger than 16 inches in diameter; less than 2% is larger than 18 inches in diameter and only 0.12% is larger than 29 inches.[21] Therefore, if thinning is required, the largest and oldest trees should be preserved while addressing the preponderance of small trees.

All 9" dbh plus treatments in the proposed action are in direct conflict with this HFRA requirement to retain large trees as is the proposal to take trees up to and in some cases over 24". The CNF has stand information (RMRIS database) that could be used to statistically determine the number of large trees, grater than 9" dbh, that exist in the planning area. Objectors requested that such an analysis be undertaken so that the CNF could determine whether or not the Tajique logging and thinning prescriptions meet the requirements for large tree retention found in the HFRA.

[20] HFRA Section 102(f).

[21] From U.S. Forest Service Forest Inventory and Analysis (FIA) data collected in 1999 under the Resource Planning Act. Complied and reported by the Southwest Forest Alliance. http://www.swfa.org/pr_2004/Big_Tree_paper.pdf.

II. **The Disclosure of Information in the Tajique FEIS is Inadequate Under the National Environmental Policy Act (NEPA)**

Public scrutiny of agency decision-making is key to helping public officials fulfill NEPA's purpose.[22] Thus "federal agencies shall to the fullest extent possible encourage and facilitate public involvement in decisions which affect the quality of the human environment" (emphasis added).[23] The phrase "to the fullest extent possible" is the broadest possible mandate, limited only by applicable law that "expressly prohibits or makes compliance impossible."[24]

> "NEPA procedures must insure that environmental information is available to public officials **and citizens** before decisions are made and before actions are taken."[25]…"NEPA requires consideration of the potential impact of an action before the action takes place."[26]

NEPA mandates that when "there is incomplete or unavailable information, the agency shall always make clear that such information is lacking" (emphasis added).[27]

The Tajique FEIS fails entirely to provide adequate site specific information and instead relies on generic narratives and in some places makes major assumptions that are critical in model outputs that contradict fact. The most glaring example and one that will be elaborated upon below is the characterization of the "no action" alternative or Alternative 1. The FEIS go to great lengths to describe the no action alternative as inevitable and all-out, catastrophic fire across the entire planning area. Nothing could be further from the truth and this flawed, arbitrary and capricious characterization is the ruin of the entire document.

The Forest Service is required to use the best available information and consider even contrary information in its NEPA documentation which it has failed so clearly to do in the Tajique EA.

All site-specific activities must comply with the governing forest plan. National Forest Management Act, 16 U.S.C. § 1604(i) (governing FS management of national forest lands); Federal Land Policy & Management Act, 43 U.S.C. § 1732(a) & 43 C.F.R. § 1610.5-3(a) (governing BLM lands). NEPA requires disclosure of information necessary

---

[22] 40 C.F.R. § 1500.1(c).

[23] 40 C.F.R. § 1500.2(d).

[24] 40 C.F.R. § 1500.6.

[25] 40 C.F.R. 1500.1(b).

[26] City of Tenakee Springs v. Clough, 915 F.2d 1308, 1313.

[27] 40 C.F.R. § 1502.22.

to determine compliance with legal requirements such as the Endangered Species Act, Clean Water Act, National Forest Management Act, and applicable Forest Plan Standards & Guidelines. [28]

The Office of General Counsel agrees that project level analysis must document "Project Compliance with Other Laws." In addition to consistency with the LRMP each project must be in compliance with NEPA, CWA, CAA and other laws. Simply being consistent with the LRMP does not fulfill the site-specific requirements of Federal law. Project level analysis is to "determine findings for NFMA, to ensure compliance with NEPA, and to meet other appropriate laws and regulations."[29]

The Forest Service NEPA Handbook also requires that Decision Notices explain complete[ly] and comprehensive[ly] "how the NEPA decision complies with applicable legal requirements including the LRMP land allocations and Standards & Guidelines. FSH 1909.15 Chapter 40, 43.21 - Format and Content.

A. *The FEIS Fails to Disclose the Fact that the Project is Related to a Regional Biomass Initiative in Violation of NEPA*

The fact that the Tajique project is an essential part of an economic development program rather than a watershed restoration project is not disclosed anywhere in the FEIS. Several news articles and Forest Service documents confirm the fact that the Tajique Project is part of a larger, regional biomass energy and forest product initiative.

The NEPA requires connected actions to be considered:

(a) Actions (other than unconnected single actions) which may be:

(1) Connected actions, which means that they are closely related and therefore should be discussed in the same impact statement. Actions are connected if they:

(i) Automatically trigger other actions which may require environmental impact statements.

(ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.

---

[28] See 40 CFR 15087.27(b)(10) and NW Indian Cemetery Protective Association v. Peterson, 795 F2d 688 (9th Circ 1986). In this G-O Road case, the NEPA document described water quality changes resulting from a road project in terms of 7-day average changes, whereas the applicable WQ standard was defined by daily peak changes. The court found this to be a NEPA violation.

[29] Forest Service Land and Resource Management Planning, FSM 1920 and Forest Service Handbook 1909.12, 5.31. 53 Fed. Reg. 26807, 26836 (July 15, 1988). OGC, Forest Plan and Project Level Decisionmaking. Overview of Forest Planning and Project Level Decisionmaking.
http://www.fs.fed.us/forum/nepa/decisionm/p4.html#14
http://www.fs.fed.us/emc/nfma/includes/overview.pdf

(iii) Are interdependent parts of a larger action and depend on the larger action for their justification.[30]

The Economic consequences of the FEIS directly states that the Tajique project action alternatives are connected stating, "by providing more biomass on the market and in close proximity to some of the *new businesses that have recently started* up, the opportunities for jobs could significantly increase compared to current job availability." (FEIS at 194). In addition, a USDA *Fact Sheet* describing the Tajique Project is published on the World Wide Web that discloses the fact that the "Mountainair Ranger District is working with P&M Signs to establish biomass areas in the project and could use the stewardship authorities for this work."[31] The *Fact Sheet* goes on to state:

> "Title II, biomass utilization, applies to the Tajique project in that local industry (P&M Signs) has been working with the Forest Products Lab in Madison, Wisconsin, to develop new technologies for developing a plastic/wood product that is strong and durable as a replacement to solid wood products (signs, shingles, siding, decking, etc.). This local industry employs a small number of local people, but has the potential to expand and employ many more. The type of product that is currently needed for this enterprise is juniper, however, ***as the industry expands to include a co-generation plant*** and as the technology advances, several other types of tree species will be used in the production process."[32]

The FEIS fails to disclose and adequately analyze this critical relationship between the regional biomass initiatives and the Tajique project and the degree to which the economic development of these initiatives is actually part of the purpose and need of this project. Please see further discussion of this issue in the Cumulative Effects section below.

B. *The Purpose and Need Statement cannot be met with the Proposed Action*

1. The proposed thinning activities are not proven effective

It is ecologically impossible to fireproof fire-adapted forests. (Agee 1997; Kauffman 2004). The principles of forest restoration require ceasing all activities that impair the ecosystem's ability to self-heal (DellaSala et al. 2003), designing treatments that conserve slow growing trees as a form of biological capital (Allen et al. 2002:1429) and practicing innovation, like using low-impact contour felling in new ways and reintroducing beaver to protect water quality. Site-specific accountability is accomplished by understanding a stand's fire history and historic stand structure before proposing treatment (Allen et al. 2002:1424; Brown et al. 2004:906).

---

[30] 40 CFR 1508.25(a)(1).

[31] http://www.healthyforests.gov/projects/state_projects/02-nm-cibola-nf.pdf. Accessed November 7, 2005.

[32] Id.

Simply stated, there is a lack of empirical evidence supporting the proposal that mechanical fuels reduction – either thinning dense stands or a combination of thinning and fire – will reduce the severity of wildfire (Carey and Schumann 2003; Graham et al. 2004:23). Much of the evidence of fuels treatment efficacy is restricted to anecdotal observations and computer simulations (Omi and Martinson 2002:1; Graham et al. 2004). The single empirical study on the effects of thinning showed that fire severity was reduced on only one out of several study sites (Pollet and Omi 2002). This lack of information extends to restoration thinning, also called understory thinning, thinning from below or low thinning (Brown et al. 2004:905). The proposal that commercial logging can reduce the incidence of canopy fire is completely untested in the scientific literature probably because commercial logging focuses on large diameter trees which do not significantly contribute to fire risk (Carey and Schumann 2003:15). Numerous credible investigators have consistently recommended retention of all large trees in restoration projects (Allen et al. 2002; DellaSala et al. 2004; Dombeck et al. 2004; Omi and Martinson 2004).

It may be that factors other than tree density such as distance from the ground to the base of the tree crown (Graves and Neuenschwander 1999), fuel moisture (Pollet and Omi 2002), understory vegetation fuel characteristics (Odion et al. 2004:934) and lower surface fuel temperatures in shaded conditions (Countryman 1955; Schroeder and Buck 1977) play an important role in modifying fire behavior. However, there is not a clear scientific consensus and lack of credible data on the relative effectiveness of any specific treatment that would influence these variables at this time (Carey and Schumann 2003).

Omi and Martinson (2004:31) suggest that fuels reduction treatments are most effectively used in forests that historically burned frequently. It is widely assumed that frequent surface fires predominated in southwestern ponderosa pine and some mixed conifer forests prior to Euro-American settlement (Allen 2002). However, Baker and Ehle (2003:329) find this assumption to be misleading or in error because, among other reasons, it relies on only a few fire-scarred trees to determine fire history and lacks a landscape-scale assessment. To more accurately determine fire history, Baker and Ehle (2001:1223) suggest the following: 1) randomly choose stands for sampling to insure unbiased statistic validity; 2) determine if the sampled stand was subject to a crown fire, surface or both; 3) take a large enough sample of fire-scarred trees in a contiguous area to be statistically valid and; 4) state the interval between fires as a range that includes the time from the tree's origin to the first fire scar. The CRP proposed that this methodology be used to determine where fires historically burned most frequently in the watershed.

Ignored by managers because it can't be controlled is the critical role that severe weather and steep topography play in determining fire behavior (Bessie and Johnson 1995; Carey and Schumann 2003:3). Weather conditions conducive to wildfire (e.g., low humidity, high winds) create fire behavior that burns through or breaches most fuel treatments (van Wagtendonk, 1996; Martinson et al., 2003; Graham et al., 2004). Evidence from the large Hayman fire in Colorado indicates that during extreme weather a variety of relatively recent fuel reduction treatments did not significantly alter burn severity (Martinson et al. 2003). Also ignored are changes in fire susceptibility brought about by climate. Evidence

suggests that western pine forests have alternated between surface and crown fires in response to climatic shifts from wet to dry for millennia (Pierce et al. 2004; Whitlock 2004).

As forests mature, vegetation that is relatively receptive to combustion develops into vegetation that is not (Bond and van Wilgen 1996; Odion et al. 2004). This complex and rarely acknowledged self-regulation of ecosystems characterized by mixed-severity fire regimes may explain why recent large wildland fires have been dominated by low fire severity (Dombeck et al 2004:886). Large fires burn with varying severities for many weeks (Reider 1988) creating a patchy landscape structure important for maintaining species diversity (Baker 1992, Baker and Ehle 2003, Kotliar et al. 2003).

Lack of empirical data, severe weather and topography, large-scale climate change, forest self-regulation and non-density related influences to fire behavior must all be considered when designing a credible ecological restoration strategy for the watershed. There are also the undesirable tradeoffs of mechanical treatments such as increased tree regeneration (Perry et al. 2004:924) and increased surface wind speed and drying of surface fuels (Countryman 1955) that will increase future fire risk. The integration of these factors is complex and there will always be significant uncertainty.

2. Unless the proposed action addresses grazing it will be ineffective in restoring natural vegetation patterns and historic fire regimes

Livestock grazing in the planning are is resulting in a significant impact on vegetation structural stage distribution as well as fire regime and behavior for three main reasons:

a. Livestock grazing reduces grasses which previously fueled frequent, low-intensity surface fires. Cattle select only palatable grasses and forbs, leaving flammable shrubs and saplings to grow unchecked. This reduction in fire frequency allowed fuel loads to accumulate such that high-intensity wildfires are becoming more frequent.

b. Reduction of fire frequency from livestock grazing pre-dated the onset of systematic, effective fire suppression in some areas. These areas may thus be further outside their Historic Range of Variability.

c. The reluctance of land managers to remove livestock restricts opportunities for landscape-scale prescribed burning. Removal of livestock is necessary for a successful prescribed burning program, both to avoid mortality of livestock and to permit growth of sufficient grass cover to fuel prescribed fires.

It is well documented that grazing adversely affects soils, riparian vegetation, water quality, fish habitat and trout populations (e.g., Platts, 1991; Rhodes et al., 1994; Fleischner, 1994; Belsky et al., 1999; USFS, 2000a). The Forest Service's own assessments acknowledge these impacts (USFS and USBLM, 1997a; b; c). USFS and USBLM (1997c) noted that grazing elimination would have greater benefits for aquatic

resources than any other grazing management change. Grazing significantly increases soil erosion and sediment delivery via several mechanisms (Platts, 1991; Rhodes et al., 1994). These increases in erosion and sediment delivery contribute to elevated turbidity and downstream sedimentation. Increases in downstream sedimentation contribute to loss of pool volume and frequency (Lisle and Hilton, 1992; McIntosh, 2000). Grazing also greatly affects soil productivity (USFS and USBLM, 1997a), which strongly affects the rate and success of reforestation efforts. Grazing also strongly impacts riparian vegetation, channel banks, stream shading, and sediment delivery. Grazing elevates water temperatures by decreasing stream shading and widening channels (Platts, 1991). Grazing contributes to pool loss via increased sediment delivery and loss of bank stability (McIntosh, 2000). Elevated sedimentation also increases channel width-depth ratio (Richards, 1982). Grazing strongly affects these channel attributes (Platts, 1991; Fleischner, 1994; Rhodes et al., 1994; Belsky et al., 2000). In addition, livestock grazing is the primary cause of overly dense stands of trees. Ponderosa pine forests and piñon-juniper woodlands were in a more open and park-like condition before intense grazing pressure because livestock grazing removes abundant grasses that once fueled frequent low-intensity ground fires and competed with tree seedlings (Belsky and Blumenthal, 1997).

The FEIS discloses that "grazing has contributed to a reduction in the amount of fine fuels available to carry surface fire, thus leading to the currently unnaturally high concentrations of fuel sources" in the planning area. (FEIS at 138). Currently, range condition is characterized as "poor" or "very poor" on 84% of the project area. (FEIS at 195). The Rangeland Specialist Report goes to extreme lengths to describe reductions in livestock use in the three open grazing allotments in the planning area but also notes that long-term overgrazing has resulted in such poor range condition. (See project record).

Records obtained by Forest Guardians indicate that the Tajique allotment was not monitored in either 2002 or 2004 and a NEPA analysis of this allotment is not scheduled until 2005. The Torreon allotment was not monitored in 2004. However, monitoring of this allotment in 2002 found violations in forage use. The Encino allotment was also scheduled for NEPA analysis in 2004 and monitoring in this allotment resulted in violations of forage use in both 2001 and 2002, it was not monitored in 2003.

Simply stated, the purpose and need cannot be met with the proposed activities, rather the priority should be eliminating the activities that are causing the problem in the first place, grazing and fire suppression.

3. Homesite protection is a proven and effective means of reducing the risk of private property loss

Home ignitability is the principle cause of home loss during wildland fires (Cohen, 1999). Intensive thinning far removed from homes and communities will have little effect on home ignitability and consequently will not significantly reduce home fire loses (Cohen, 1995). Both research and experience show that homes with low ignitability can survive high-intensity crown fires (Cohen, 1999).

Home ignitions depend on home design and materials and flammable vegetation within approximate 130 feet of the structure's flammable materials (Cohen and Butler, 1998). Actions to reduce home ignitability include using fire resistant construction materials (especially roofs), removing flammable materials like firewood from around the house, cleaning flammable debris from roofs and gutters, pruning the lower branches of trees, raking needles and leaves and mowing grass adjacent to the house and thinning dense groups of trees. Homes will not survive even low-intensity ground fires if the above firewise precautions have not been taken. For example, many of the homes lost in Los Alamos during the 2000 Cerro Grande fire were consumed by surface fires that spread through pine needles, dry vegetation and wood piles in contact with wood siding or other flammable parts of the structure (Cohen, 2000b).

Highly ignitable homes can suffer fire loss when firebrands are lofted downwind from distant wildfires and collect on and ignite wood shake or asphalt shingle roofs, adjacent vegetation or other flammable home materials. Experience has shown that such homes are threatened by firebrands only if homeowners have not taken the above firewise precautions (Cohen, 2000a). For example, a high percentage of homes with nonflammable roofs and as little as 33 feet of vegetation clearance survived the Bel Aire and Painted Cave fires in California where firebrands caused many ignitions (Howard et al., 1973; Foote and Gilless, 1996).

Complete elimination of firebrands is not a reasonable goal (Cohen, 2000a). High intensity, stand replacing fires and the firebrands they produce are normal for spruce-fir and higher elevation mixed conifer forests. Crown fires also occurred historically in ponderosa pine forests (Whitlock 2004; Pierce et al. 2004; Moir et al., 1997). Thus firebrands are part of the ecology and evolutionary history of southwestern forests. Given these conditions, reducing home ignitability is a far more effective strategy than an expensive and ecologically disruptive program designed to eliminate firebrands (Cohen, 1995).

C. *The Fire Risk and Hazard Information and Modeling are Flawed*

1. Fire Risk and Hazard are Inaccurately Depicted in the FEIS

The Tajique Project as proposed by the CNF is justified by the government for two reasons that are confused: one is to reduce fire risk and the other to restore ecological health to the forests across the planning area. The problem with this conflicted purpose statement is that the CNF has grossly overstated fire risk in the planning area and the forest must first prioritize safeguarding, to the extent possible, the homes and structures in the planning area before it undertakes the massive effort required to restore ecological health to the larger landscape. Further, the information presented in the FEIS is not of high quality nor does it disclose important information.

a) Fire risk associated with natural causes (lightning)

The FEIS and project record give seriously conflicting information about the actual number of fires associated with lightning thereby making it impossible to determine the actual fire risk associated with natural causes. Without accurate information, decisions regarding fuelbreaks, stand thinning and access roads for fire fighting cannot be properly determined. Objectors recommend the fire risk associated by natural causes be accurately determined, analyzed and incorporated into decision making process prior to project approval.

Here are some of the sentences showing conflicting data in the FEIS:

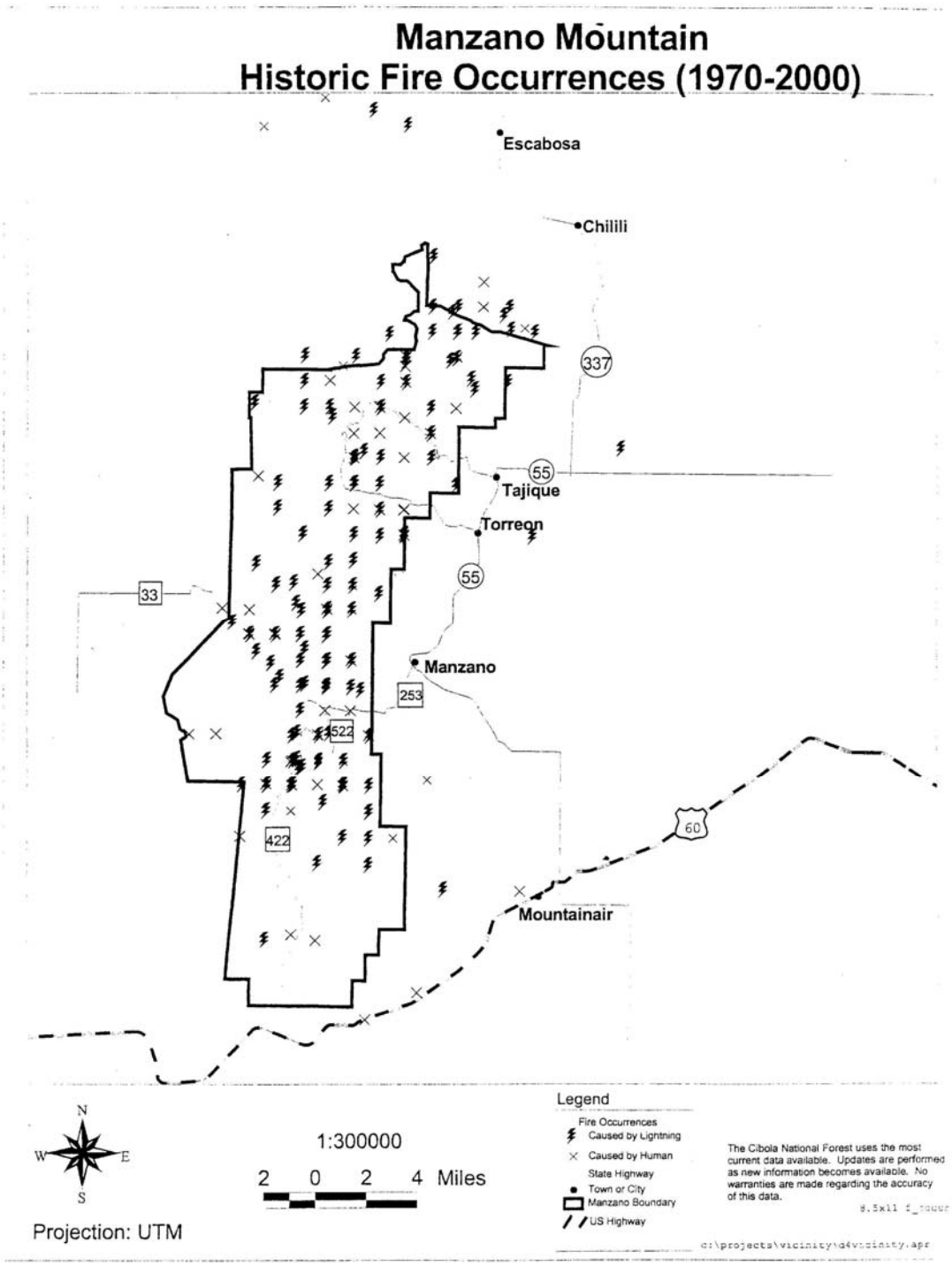
- "Based on historic fire data, this area has an average of five lightning caused fires a year." (FEIS at 81).

- "Approximately 50 lightning caused fires occurred between 1970 and 2004." (FEIS at 50).

This is equal to 1.47 fires per year. The map on page 88 shows 23 lightning strikes between 1970 and 2000 (FEIS p.87, 88). This is equal to 0.77 fires per year. This shows a variation between five fires per year and less than one fire per year.

	FEIS (page 81)	FEIS (page 5)	FEIS (p.87, 88)
Lightning fires per year within project area	5	1.47	0.77

Curiously, the period of 1970 to 2000 noted on page 87 of the FEIS was not shown on the map on page 88 and the number of fires on the map was also not indicated. It required an actual physical counting of the fire starts on the map on page 88 and then cross-referencing to the period on page 87 in order to determine the actual fires per year by this presentation.


Manzano Mountain
Historic Fire Occurrences (1970-2000)
Escabosa
Chilili
337
55
Tajique
Torreon
55
33
Manzano
253
522
422
60
Mountainair
N
W
E
S
1:300000
2 0 2 4 Miles
Projection: UTM
Legend
Fire Occurrences
Caused by Lightning
Caused by Human
State Highway
Town or City
Manzano Boundary
US Highway
The Cibola National Forest uses the most current data available. Updates are performed as new information becomes available. No warranties are made regarding the accuracy of this data.

Current GIS data shows a total of 16 fires in the project area from 1986 to 1996; 62.5% (10 of 16) of these fires were lightning caused.[33] This is equal to 0.91 fires per year (10 fires per 11 years). This number corroborates the 0.77 fires per year for the thirty year period noted above. This is nowhere near the 5 fires per year stated in the FEIS.

	UNIQUE#	FIRE #	FIRENAME	YEAR	ACRES	CAUSE	LONGITUDE	LATITUDE
1	587202718	202718		1987	2.50	2	-106.39000	34.81300
2	588202768	202768	Tajique Fire	1988	941.00	2	-106.35600	34.81300
3	594290409	290409		1994	0.10	1	-106.37300	34.79600
4	593279541	279541		1993	2.00	2	-106.39000	34.77900
5	590202895	202895		1990	0.50	1	-106.39000	34.76300
6	595302634	302634		1995	1.00	1	-106.37300	34.76300
7	590202898	202898		1990	0.10	1	-106.37300	34.76300
8	595302638	302638		1995	0.50	2	-106.35600	34.76300
9	594290415	290415		1994	0.10	1	-106.32200	34.76300
10	596311792	311792		1996	0.10	1	-106.39000	34.74600
11	596311793	311793		1996	0.10	1	-106.37300	34.72900
12	592259471	259471		1992	0.10	2	-106.37300	34.72900
13	596311499	311499		1996	0.50	2	-106.35600	34.72900
14	596311502	311502		1996	0.10	1	-106.35600	34.72900
15	28600022	22		1986	0.10	1	-106.38333	34.80000
16	28600021	21		1986	0.10	1	-106.36667	34.80000

Column F: 1 = lightning caused, 2 = human caused

One can also see from the above data that only 29% (2 of 7) of the fires greater that 0.10 acre are lightning caused indicating that human caused fires may be much more of a problem than lightning caused fire.

b) Fire Risk associated with human-causes

The FEIS fails to adequately analyze the current and future fire risk associated with human-caused fires. The FEIS contains no data at all relating to human caused fires, yet this information is readily available on the same GIS documents that the lightning caused fires were drawn from on page 88.

The GIS documents noted above indicate that 37.5% (6 of 16) of all fires between 1986 and 1996 in the project area were human caused. Indeed, 71% (5 of 7) of all fires in the project area greater than 0.10 acre between 1986 and 1996 were human-caused, yet the FEIS states "there is no data to support that the probability (of fire) will increase with the increase presence by either contractors or public." (FEIS at 326).

The CNF has been continually downplaying the importance of human-caused fires noting that there were only a "handful of human-caused fires…within the 30-year period dating

[33] *Course-scale Spatial Data for Wildland Fire and Fuel Management* [Online] (1999, November). Prescribed Fire and Fire Effects Research Work Unit, Rocky Mountain Research Station (producer). Available: www.fs.fed.us/fire/fuelman [1999, December].

from 1970-2000."[34] The USFS document "Manzano Mountain Historic Fire Occurrences 1970 to 2000" used for the map on page 88 of the FEIS shows that almost one-third (31.2%, 43 of 138) of fires during the 30 year period were human caused. This is not a "handful of human-caused fires."

Further, the FEIS discusses the Hayman Fire of 2002 and the Rodeo-Chediski Fire of 2002. (FEIS at 81). Both of these large fires were human-caused but this fact was not discussed in the FEIS. In addition, the only major crown fire in the project area in recent history was the Tajique Fire of 1988 which was started when a USFS prescribed burn escaped containment and burned 941 acres for two days before being contained. None of the above information was analyzed and incorporated into the decision making process.

This project will provide much greater public access for recreational activities by opening up otherwise inaccessible areas for hunting, fuelwood gathering and general off-road vehicle activity. Lightning caused fires are often extinguished by rainfall but since recreational activities can occur at any time of the year, these fires can be a lot more difficult to manage as can be see by the data above.

The Tajique project also proposes to maintain the 33 miles of fuelbreaks with prescribed burns. These will also add an additional increase in fire risk associated with human causes as evidenced by the Tajique Fire of 1988. Every mile of the fuelbreaks will need to be re-burned on a periodic basis in order to maintain the effectiveness of the fuelbreaks. Additional prescribed burns are also planned to remove fuel loads and slash piles during the project. All of these human-caused fires will increase the fire risk associated with human-causes yet there is no consideration of this in the FEIS.

The FEIS needs to seriously analyze all of these human-caused fires and provide a comparative analysis between natural and human-caused fires. Without incorporating this information into the overall project, design criteria for fuelbreak concentrations and locations, thinning locations and a fire exit strategy will be based on incomplete information.

c) Fire Risk is confused with fire hazard

Unacceptable fire risk is the stated reason that monies are available to the USFS under the Healthy Forest Restoration Act (HFRA) for thinning 17,000 acres and installing 28 miles of new roads. However, the USFS never quantifies the risk posed by forest fires. Instead they confuse the concept of hazard with the concept of risk leading to an extreme exaggeration of the problem and leading many people to believe that 'something must be done.'

First we need to define what is meant by 'risk.' In the risk profession, the common definition comes from a friend of mine John Garrick, the past president of the Society of Risk Assessment. In what risk professionals call a 'classic paper' – Kaplan and Garrick (1981) defined risk as the combination of:

[34] Mountainair Ranger District, Summary Meeting Notes, Forest Valley Subdivision, November 23, 2002, page 2. Attached on CD-ROM.

1) what can happen (the hazard)
2) what are the consequences of it happening
3) what is the probability of it happening

In our current discussion, the USFS talks about hazard (fire) as if they were speaking of risk. But risk must also incorporate probability and consequence.

The difference is far beyond semantic. Consider a decision to fly across the country and visit friends or relatives. In this case, risk is: 1) what can happen – a plane crash; 2) the consequences – you die; and 3) the probability that the plane will crash. If we only considered the hazard or the consequences, no one would ever fly – period. We get on airplanes for one reason and one reason only. The probability of a crash is very low. Does the fact that the probability of a crash is very low mean the plane you get on will not crash? No. However, a rational decision combining consequences lets you board the plane.

This is such a critical point, we give another example. Many objectors' homes are insured against fire because of the likelihood that they will not burn down. That is, if the insurance companies only looked at the hazard (fire) and the consequences (they would have to pay to rebuild private homes), they would never insure anyone in the entire world against fire. Instead the probability that objectors houses will burn down is directly in their decision to insure homes and their decision on how much is paid for insurance. In fact, all rational decisions are based on assessing the hazard and combining probability with consequences – whether it is driving a car or climbing on the roof to fix the rain gutter. If we only considered the hazards of every action we took we would be paralyzed as individuals or as a society. However, this is exactly what the USFS is asking us to do – think only of the hazard and not consider the consequence and the probability.

Now since the USFS and, more specifically, the so-called Healthy Forest Restoration Act (HFRA) state that they are protecting personal property by thinning the forest we can state risk as:

1) what can happen – a forest fire
2) what are the consequences - personal property will be destroyed
3) what is the probability – this is the key unanswered question

In other words the goal is not to prevent or stop every forest fire but to prevent or stop only those that would damage personal property. The probability we care about is then the probability that: 1) a fire will occur; and 2) that that fire will destroy personal property. In recent emails you both present data that relates to the first issue – the probability that a fire will start based on historical data (lightening strikes, human-induced fires, and the one the USFS left out of the data – 'controlled' burns).

So what is the combined probability that a fire will start and one or more homes in the planning area will burn down?

According to the data the USFS provided, the risk of a forest fire occurring within the proposed thinning area is either 0.71 per year (24 fires in 34 years) or 0.47 (14 fires in 30years). However, none of these fires affected any homes or private property. So what is the probability that a fire will affect private land and homes – less than 0.0033 per year or less than 1 chance in 300 years? How do we arrive at that number? First the Manzano Mountains were clear cut about 100 years ago. New trees grew which now occupy private land. Since the early 1900s there have been no catastrophic fires on any of the private land. If there had of been a catastrophic fire, these trees of this age would not exist. That's 100 years without a catastrophic fire. Now if you happen to have looked at the stumps of the old growth that predate our current forest (there are many around my home) you can count the tree rings and find these trees were at least 200-300 years old. Therefore there has not been a catastrophic fire on these properties for the past 300 to 400 years (200 to 300 years before the year 1900). Therefore the risk is less than 1 chance in 300 years and probably much lower since there is no evidence that a catastrophic fire ever occurred on the private property.

Certainly a fair question is whether or not the past data are representative of current and future fire risk. To address the possibility that the current or future risk is larger than the risk derived from historical data consider that factors that affect fire:

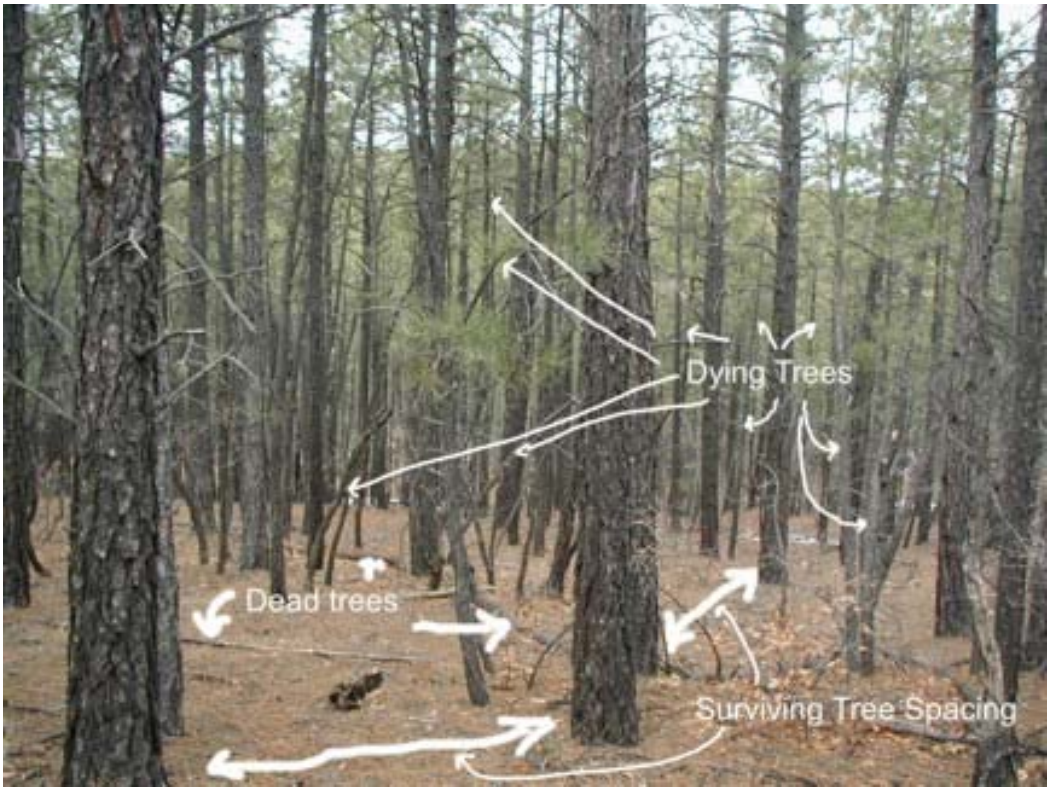
1) initiating events (lightning, campfires, controlled burns that get out of control)
2) forest conditions that are conducive to fire ignition and/or spreading (drought, tree spacing and health, and ladder fuels)
3) response to fires (fire fighting, restrictions on forest use, lookouts)

So which of these has or will change and how do these changes affect the probability of fire?

1) The USFS is claiming that the forest health is declining which leads to an increased probability of fire. However, the reverse is true. Following the clear cut of the early 1900s many more trees sprouted that could eventually survive. Continued growth led to over crowded conditions (at least from a human, fire-only point of view). However, over crowding is now killing trees at a faster and faster rate. Everywhere forest canopies have grown together weaker trees have died and/or are dying. This is has been happening for at least 10 years even though the USFS says it is not happening and will not happen within "geologic time" (as stated by the USFS NEPA specialist). The spacing of the remaining healthy trees is exactly the same spacing as that of the old growth stumps (we have measured both and they range from 16 to 20 feet apart everywhere you measure). In other words, the forest is healing and will find its own optimum conditions if left alone. And as we know from the very existence of these old growth forests, their spacing was very resistant to fire propagation/damage.

Photograph showing the spacing of old growth trees.

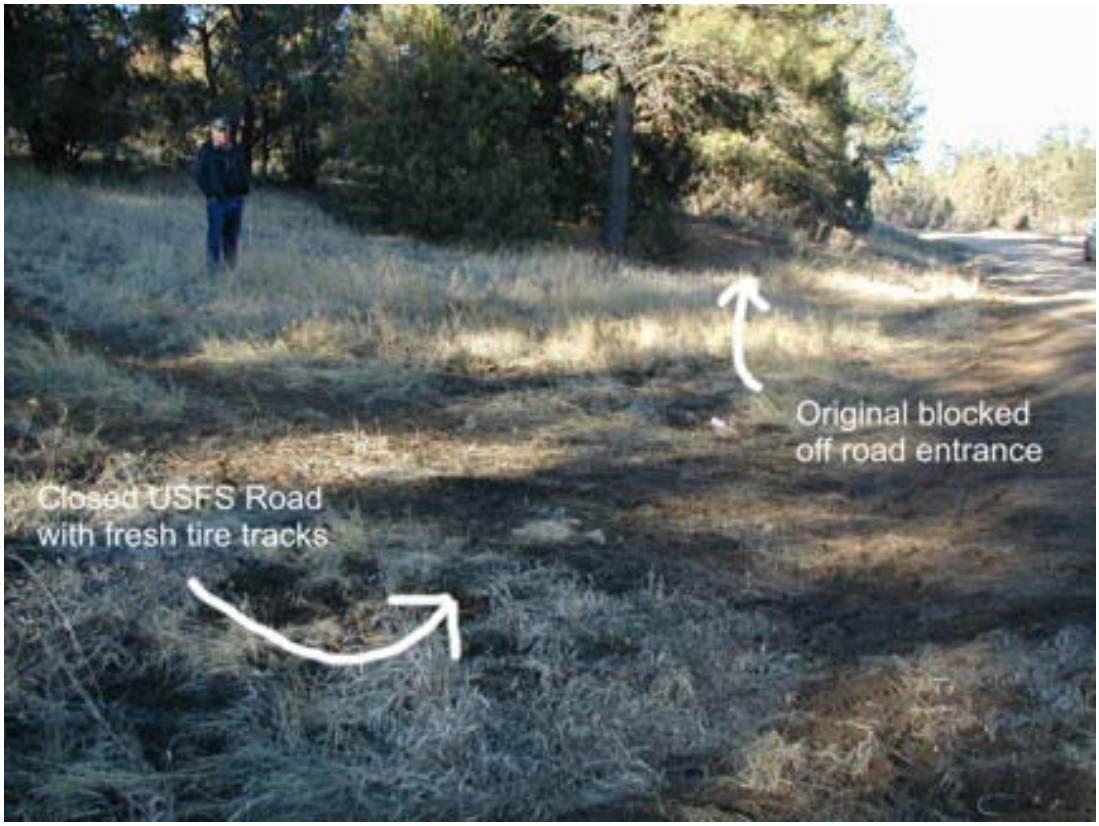
Photograph of old growth treed spacing



Photograph of tree spacing that will result from natural thinning.

2) Planned thinning will increase tree spacing and initially reduce the probability of fire.
3) Ladder fuels will increase as a result of thinning, increasing the probability of fire. USFS states this will happen and they have to use controlled burns to address this problem which leads to the next change.
4) Increased controlled burns leading to an increase in the probability of fire.
5) Increased human caused fires due to thinning activities. First, workers with chain saws, campfires, cigarettes, etc. will increase the probability of fire. Second many miles of new roads will provide access to previously isolated areas increasing the probability of human-induced fire. Although the USFS is stating these roads will be 'closed' following thinning that turns out to not be physically possible. The Mountainair District performed road closures under District Ranger Susan Grey. This was a commendable effort but ultimately it did not work. These 'closed' roads are used now on a frequent basis by trucks, four wheelers, and motorcycles (see photographs below).


Closed USFS Road
with fresh tire tracks


Original blocked
off road entrance
Closed USFS Road
with fresh tire tracks

Also, whenever a path is cleared in the forest, those who have a desire to go will get there. In addition, once a path is cut in the forest it is there for a very long time (see the following photographs).

Photograph of 100 year old road in the Tajique watershed.

Photograph of erosion along a 100 year old road in the Tajique watershed.

6) Decreased health of the forest floor will increase the risk of fire. As the USFS has published, soil moisture plays an important role in the health of the forest and therefore in fire (initiating conditions and water available for trees which decreases the spreading of fire). The reason that the soil moisture will decrease is that the USFS is planning to remove the biomass that they cut in additional to the thinning activities themselves which harm and compact soils. In addition, runoff and soil erosion will increase until other vegetation takes hold. However the decrease in soil cover will hamper subsequent plant growth. Under the Citizen's Alternative, much less land is disturbed and, for the thinned areas, the biomass is left on the forest floor. In addition, thinned trees would be lain perpendicular to hill slopes thereby minimizing the erosive effects of surface water runoff.

Things that will remain the same or are already represented in the historical data include:

1) Drought. While we did recently have a period of relative drought, historically drought is not rare in duration or magnitude. The current forest and the past old growth forest endured many droughts, not the least of which was the severe drought of the early 1950s. Recently climatologists have been stating that drier conditions are the norm (maybe not this year). This does not mean the probability of fire is increasing. It means the forest has survived these droughts and that the probability of fire (less than 1 chance in 300 years) already includes these dry conditions.
2) Grazing. The USFS research has documented that cattle grazing increases the danger of forest fires by keeping grasses low and encouraging the growth of ladder fuels. Without grazing, fires would stay low to the ground, burning through the grasses. With grazing, the probability of catastrophic fires increases due to the dominance of ladder fuels. Eliminating grazing could reduce the probability of fire as suggested in our Citizen's Alternative. However, grazing occurs now and will continue after thinning. Therefore the probability of fire is unaffected.
3) Responses to fire danger. To no avail, we have continuously pointed out that additional restrictions on forest access during droughts, more lookouts, and patrols, would reduce the probability of fire. However, none of the Alternatives in the USFS FEIS chooses to address fire risk in this manner. Therefore, the calculated probability of fire is unaffected.

Now, the question could be asked as to how risk-based decision analysis would analyze the alternatives before the USFS. In most cases, the problem is cast in terms of cost-benefit. However, the combination of probability and costs are combined into something called expected costs. The choice of alternatives is then based on the expected costs. The notion is simple. How does an insurance company decide how much to charge you for fire-risk insurance? Consider the simple case of no profit and overhead costs for the insurance company (we wish this were true, but this is just an example). They use the expected cost of probability times cost of rebuilding. For example, if the cost of the home were $100,000 and here is 1 chance in 100 years that your house will burn down they would charge you $1,000 per year. What are they saying? Simple – over 100 years you

will pay them enough to rebuild the house and for 99 of those years you pay, they don't and on the 100th year you pay and they pay for rebuilding the house. Now they actually do their statistics on the whole population of homes and they include overhead, and profit but the basic approach is the same – they can only insure you if they consider the likelihood that a fire will burn down your home, not just the consequence of your home burning down.

In our case, houses may burn whether or not we thin. Probability is then the term that describes which is more likely and by how much. Therefore, to decide if it is worth it to do the thinning (this is after all our tax money), we must consider how likely it is that our houses will burn down in addition to the value of what is burned and the cost of 'protecting' us.

So what are the costs of thinning? The FEIS fails to disclose this information. However, from their plans it is clear that the USFS is planning to spend an infinite amount of money to reduce the risk of fire by one half. Where is this from? First, the project has an initial contracted amount of $5.9M (from the FEIS). This does not include USFS personnel costs of implementing the project (also your tax dollars). Assuming that the costs of the USFS are of the same magnitude gives a total cost of $11.8M. However, more important, the USFS has stated that continuous thinning, controlled burns, and maintenance are necessary to meet their objectives – continuous being forever. The cost per year doesn't matter, the number of years are infinite therefore the cost is infinite. For sake of discussion, we will assume the total cost of maintenance (post thinning) is $250,000 per year for 20 years (or about 2 USFS employee's full-time costs (not salary)) or another $5M for a total cost of $16.8M. Now where does the one half come from? In previous discussions with the USFS, it appears that the best results (reduction in fires) they have achieved was on an area in Colorado where thinning and fire breaks reduced the frequency of catastrophic fires by one half.

It is interesting to try to understand the financial benefit stated in the FEIS. They state that $11.5M will be saved by implementing Alternative 1. That figure includes $9.5M dollars for all joint properties plus fire suppression of $2.0M. It would be nice if, in the real world, these properties were worth $9.5M. However, if a fire starting on USFS property destroys private property, the USFS would not pay a dime to property owners. Unless they caused the fire, private citizens would pay to rebuild homes. And then, why would they include the cost of fire suppression for a fire that they, by definition, did not suppress? It is assumed to have destroyed $9.5M worth of property.

Of much more importance, in all of the alternatives analyses, the CNF assumes with absolute certainty (an impossible probability of 1.0) that catastrophic fire will occur and that fire will be so large it destroys all private properties. In other words they followed the irrational thinking of focusing only on potential hazard and ignoring the likelihood that such a fire would ever occur.

From a cost-benefit perspective, we can use their hypothetical numbers to highlight a rational decision making process.

First, their costs of the thinning exceed the benefits of protecting homes so there is no value in any of their actions even if a catastrophic fire is absolutely certain to occur. In other words they are spending $16.8M to save $11.5M. However, for sake of discussion we will work the problem backwards. What cost should we pay to reduce the probability by one half?

There are two alternative courses – either we live with the current low risk (1 chance in 300 years) and pay to have homes rebuilt in the event of a fire or we pay some amount of money to reduce the risk by one half (1 chance in 600 years) and still pay to rebuild homes in the less likely event that a fire occurs. In both cases, if a fire occurs we have to pay to rebuild private homes, so you can see that the decision to spend money to reduce the risk must incorporate the probability that a fire will occur. How is that done?

First we calculate the expected cost assuming no risk reduction (current conditions). That expected cost is:

The cost of rebuilding and fire suppression according to the USFS:	$11.5M
times the probability that a fire will occur	* 1/300
	= $38,333/yr
	+
plus the cost of no fire occurring (no one's house burns):	$0
times the probability of no fire occurring:	*299/300
	= $0
For a total expected cost of:	$38,333/year

Next we calculate the expected cost assuming some money has been spent to reduce the probability of fire by one half.

If a fire occurs the cost of rebuilding and fire suppression is the same:	$11.5M
however the probability is now lower:	
*1/600	
	=$19,166/yr
	+
plus the cost of no fire occurring:	$0
times the probability that no fire occurs:	
*599/600	
	=$0
For a total expected cost of:	$19,166/yr

The results makes sense – if the probability of fire was reduced by one half, the expected cost is reduced by one half and the amount we should rationally spend to reduce the risk is $19,166/yr or $383,320 over 20 years not $16.5M. Or put another way, the USFS could

justify spending $383,320 over 20 years to do the thinning they propose if we accepted all of their assumptions and adverse environmental impacts.

In summary, this very simple analysis highlights the critical issues with respect to the decision to thin the forests for fire protection. First, no rational decision can be made without explicitly quantifying the probability that a forest fire will burn down objector's homes and incorporating that probability into all decisions. Second, the probability of fire will increase as a result of thinning, not decrease. And third, there is no possible justification for the amount of spending on thinning in light of the likelihood that a fire will ever occur and the potential cost averted (the costs if a fire occurs).

2. The No Action Alternative is Mischaracterized

A fundamental flaw of the Tajique FEIS is its mischaracterization of the No Action Alternative and use of factually flawed assumptions in running fire and watershed models that compare alternatives. The FEIS makes the untenable and factually inaccurate assumption that if no action is taken a catastrophic fire with 100% high burn severity will result. The site-specific facts contradict this assumption: 1. regional data indicates that on average only 24% of fire in the southwest is characterized as high intensity[35] and 2. the Forest Service's own documents from the 2004 Lookout Fire in the nearby Gallinas Mountains indicate that a fire in similar vegetation and extreme meteorological conditions resulted in only 55% high burn severity, just 10% of the burned area was characterized with high soil erosion hazard rating and only 35% resulted in water repellent soils.[36] Further, as will be discussed below, it is statistically indefensible to characterize the No Action Alternative as catastrophic, stand-replacing fire.

By characterizing the no action alternative as 100% stand replacing fire for the planning area the FEIS is in violation of the NEPA and the APA. The FEIS must be based on defensible site-specific information. If that were the case, the FEIS would have characterized the no action alternative realistically.

D. *The Water and Soils Resources Information and Modeling are Flawed*

The Water and Soils Resources section information and modeling used in the FEIS are deeply flawed. Therefore the FEIS cannot make any defensible determination about environmental consequences of the proposed activities on water and soil resources. The CNF does not have reliable information to conduct it modeling and analysis of impacts.

The FEIS discloses tat upland watershed conditions are in a "declining trend" due to heavy, persistent grazing as well as a network of non-system roads with "no erosion

[35] The Forest Service in the Southwestern Region (AZ and NM) reports that only 24% of wildfires from 1986 to 2002 were characterized as high intensity. (USDA Forest Service. 2004). This portion is not necessarily significant and even less so considering this number is likely overstated. (Kotliar et al. 2003).

[36] Lookout Fire Burned Area Report. Attached on CD-ROM.

control measures with over half the planning area described as having moderate to severe erosion rates and 71% with unsatisfactory soil condition. (See Tajique Watershed Specialist Report, project record).

Despite these numbers provided in the FEIS, the Tajique Creek Stream Health Assessment (May 8, 2002) referenced in the Tajique Watershed Assessment (attached on CD-ROM), "a soil condition assessment has not been conducted for the watershed therefore; its absence represents a data gap in this analysis' and the "absence of recent water quality data for physical, chemical and biological parameters and long-term stream flow data represent gaps in this analysis."[37]

The FEIS makes vague assertions throughout that the project may somehow improve water yield. (FEIS at 145, 330 and 332). However, the FEIS itself contradicts these assertions and discloses that 20-30% of a watershed must be harvested before any significant changes in waterflow can be detected. (FEIS At 148). Thus is it arbitrary and capricious to represent to the public in the FEIS as well as public statements in the media that the project will benefit downstream water users.

The FEIS uses several models to determine effects on erosion, sedimentation and disturbed areas. (FEIS at 142-150). However, the models (WEPP and EDA) have serious shortcomings that are not disclosed in the FEIS or project records and even more egregious, the assumptions fed into the models result in extremely inaccurate and misleading results. In particular, the models are run using high severity fire across the landscape as the input for Alternative 2 (no action). This is arbitrary and capricious and a violation of NEPA because we know from regional and site specific information that fires do not behave this way.

The site-specific facts contradict this assumption and render the modeling seriously inaccurate: 1. regional data indicates that on average only 24% of fire in the southwest is characterized as high intensity[38] and 2. the Forest Service's own documents from the 2004 Lookout Fire in the nearby Gallinas Mountains indicate that a fire in similar vegetation and extreme meteorological conditions resulted in only 55% high burn severity, just 10% of the burned area was characterized with high soil erosion hazard rating and only 35% resulted in water repellent soils.[39] Further, as will be discussed below, it is statistically indefensible to characterize the No Action Alternative as catastrophic, stand-replacing fire.

---

[37] USDA Forest Service 2004. Tajique Watershed Assessment, Mountainair Ranger District, Cibola National Forest. Attached on CD-ROM.

[38] The Forest Service in the Southwestern Region (AZ and NM) reports that only 24% of wildfires from 1986 to 2002 were characterized as high intensity. (USDA Forest Service. 2004). This portion is not necessarily significant and even less so considering this number is likely overstated. (Kotliar et al. 2003).

[39] Lookout Fire Burned Area Report. Attached on CD-ROM.

The FEIS even uses the Lookout Fire as its example of what can happen in the event of a fire, but as the Burned Area Report reveals that fire had mixed results. The effect of using this flawed information is that the WEPP model displays drastically reduced sedimentation rates for the action alternatives COMPARED TO THE NO ACTION ALTERNATIVE (or the impossible high severity fire across the entire planning area).

If the model were alternatively run with a realistic scenario of fire severity distributions, the no action alternative would likely prove superior in terms of sediment production. In fact, the project record supports this position, by stating that watershed left undisturbed after natural events, can and do recover rapidly and ultimately provide conditions that fully support all beneficial uses within a relatively short period of time. (Tajique Watershed Specialist Report at 10).

In addition, there is absolutely no quantified analysis of the effects on soil compaction form the proposed activities although the FEIS admits that this could be a problem. (FEIS at 146). The FEIS quickly asserts the detrimental effects of compaction would be reduced with mitigation measures and BMP. However, there is no evidence of effectiveness for BMPs and mitigation measures offered anywhere in the FEIS or project record (See full discussion of this issue below).

Using flawed models and not disclosing their weaknesses has been found to be illegal in recent court decisions. For example, the Lands Council court found:

> The Forest Service's heavy reliance on the WATSED model in this case does not meet the regulatory requirements because there was inadequate disclosure that the model's consideration of relevant variables is incomplete. Moreover, the Forest Service knew that WATSED had shortcomings, and yet did not disclose these shortcomings until the agency's decision was challenged on the administrative appeal. n16 We hold that this withholding of information violated NEPA, which requires up-front disclosures of relevant shortcomings in the data or models. See 40 C.F.R. § 1502.22; Lands Council v. Vaught, 198 F. Supp. 2d 1211, 1239 (E.D. Wash. 2002) (finding the same WATSED shortcomings and holding that the Environmental Impact Statement failed to disclose such shortcomings).[40]

See further discussion of this issue in Appendix B.

E. *The FEIS Fails to Take the Required Hard Look at the Impacts of the Tajique Project on Increased Human Access.*

The FEIS states that "firewood removal and timber projects may result in the creation of 2-track roads and provide access to areas previously inaccessible prior to treatment." (FEIS at 136). It also states that "firewood removal and timber projects may result in the creation of 2-track roads and provide access to areas previously inaccessible prior to treatment." (FEIS at 136). However, the FEIS fails to take a "hard look" at the very

[40] *Id*.

serious issue of increased access and its effects on poaching of wildlife and legacy trees as well as the potential for increased human fire ignitions. Wildfire frequency and seasonality are related to road density; Noss (1995) cites several studies demonstrating that 78% of human-caused fires occur within 265 feet of a road.

Poaching of both wildlife and legacy trees, in particular alligator juniper, is a very serious issue in the planning area and the larger Mountainair Ranger District. A recent Albuquerque Journal article demonstrates the degree to which "rampant poaching, fighting-rooster raising, jerky making and widespread – and apparently illegal-commercial woodcutting," have become a problem in the area.[41] The article notes that officer discovered two "big-rig trailers" loaded with dozens of cords of cut firewood as well as three other empty trailers. This is not an isolate event, local citizens and residents have witnessed poaching of wildlife and wood in the Tajique planning area.

The phenomenon of well-intended Forest Service forest restoration projects resulting in such unintended consequences is not recent and in fact, has been documented on the Mountainair Ranger District. In a recent trip to the Thunderbird forest restoration project area, citizens documented poaching of ancient and irreplaceable alligator junipers. (See photo.)

[41] *Elk Racks, Roosters, Firewood Seized: N.M. 'Strike Force" Arrests 4 Near Mountainair*. Albuquerque Journal March 9, 2005. Attached on CD-ROM.

Evidence of Poaching of Alligator Juniper in Thunderbird Project Area. Photo 2005.

Increased access resulting from the proposed activities also results in increased noxious weed infestations. The FEIS states that "past fuel reduction treatments and old wildfires in the project area have provided an opportunity for weed introduction" and that "the action alternatives would open up stands that could be accessed by the public." FEIS at 204. The FEIS cannot ignore such a significant and documented problem and to do so is a clear violation of NEPA.

F. The *FEIS Fails to use Accurate and High Quality Science*

The FEIS relies on a litany of statements and claims that are: 1) Not Supported by Factual Evidence and Conjectural; 2) based on bias selections of data or scientific literature; and 3) are not based on best available science. The FEIS and potential ROD are thus is violation of the APA because that decision would be arbitrary, capricious, or otherwise not in accordance with the law.

See full discussion of this issue in Appendix D.

III. **The Tajique FEIS does not analyze mitigation measures in detail and explain how effective these measures would be, and the mitigation measures are not supported by any analytical data.**

An EIS is not complete unless it contains "a reasonably complete discussion of possible mitigation measures."[42] That requirement is implicit in NEPA's demand that an EIS must discuss " 'any adverse environmental effects which cannot be avoided should the proposal be implemented.' "[43]

A "mitigated FONSI" is upheld when the mitigation measures significantly compensate for a proposed action's adverse environmental impacts.[44] However, although mitigation measures need not completely compensate for adverse environmental impacts, the agency must analyze mitigation measures in detail and explain how effective the measures would be.[45] "A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA."[46] Instead, mitigation measures should be supported by analytical data, even if that data is not based on the best scientific methodology available.[47] The general invocation of the term "Best Management Practices" does not satisfy the NEPA requirement that the analysis discuss measures to mitigate the proposed action's adverse environmental impacts.[48]

In other words, the applicable regulations require that an FEIS discuss means to mitigate adverse environmental impacts of the proposed action. Those mitigation measures must be analyzed in detail and must explain, in detail, how effective they will be in mitigating any adverse environmental impacts. Without analytical data to support the proposed mitigation measures, these amount to nothing more than a "mere listing" of good

---

[42] Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 352, 109 S.Ct. 1835, 104 L.Ed.2d 351 (1989). ("…omission of a reasonably complete discussion of possible mitigation measures would undermine the "action-forcing" function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects.").

[43] *Id.* at 351-52, 109 S.Ct. 1835 (quoting NEPA, 42 U.S.C. § 4332(C)(ii)); *see also* 40 C.F.R. § 1502.16(h) (stating that an EIS must contain "[m]eans to mitigate adverse environmental impacts").

[44] Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 987 (9th Cir.1985); Greenpeace Action, 14 F.3d at 1332-33. *See also* City of Auburn, 154 F.3d at 1033 (agency may condition its decision not to prepare a full EIS on adoption of mitigation measures).

[45] Friends of the Payette v. Horseshoe Bend Hydroelectric Co., 988 F.2d 989, 993 (9th Cir.1993). Northwest Indian Cemetery Protective Ass'n v. Peterson, 795 F.2d 688, 697 (9th Cir.1986), *rev'd on other grounds,* Lyng v. Northwest Indian Cemetery Protective Ass'n, 485 U.S. 439, 108 S.Ct. 1319, 99 L.Ed.2d 534 (1988).

[46] Id.

[47] Idaho Sporting Congress v. Thomas, 137 F.3d 1146, 1151 (9th Cir.1998). Greenpeace Action, 14 F.3d at 1333.

[48] Northwest Indian Cemetery Protective Ass'n v. Peterson, 565 F.Supp. *586 (D.C.Cal.,1983)*.

management practices. A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA. And simply pointing out that Best Management Practices ("BMPs") will be followed is not an adequate discussion of means to mitigate adverse environmental impacts.

Surface erosion in Thunderbird project area. Photo 2005

The Tajique project FEIS merely discusses mitigation measures in a general sense, but does not analyze any mitigation measures in detail or explain how effective these measures would be. The Tajique FEIS invokes BMPs as a response to concerns regarding soil erosion and water quality. The FEIS states emphatically that BMPs

> "have been shown to be effective on numerous other projects within this area. The Thunderbird project is a similar type of treatment in that it involves thinning and prescribed fire. BMPs were applied as measures to reduce erosion and maintain water quality in that project since implementation began 2 years ago." (FEIS at 333).

This could hardly qualify as a detailed analysis. The FEIS is devoid of any information that would corroborate such vital assertions. In fact, the Objectors have an outstanding FOIA request for the effectiveness monitoring information from the Thunderbird project that might provide clarity on this issue. That FOIA request is overdue with no response date indicated by the CNF.

A detailed analysis would provide for specific criteria of where stream crossings should be located based on conditions in the project area, including soils, slope, and other watershed conditions where stream crossings are planned. It would specifically describe measures that would be used mitigate the effect of siltation. An explanation of the effectiveness of these general measures is entirely lacking here.

The FEIS fails to adequately analyze other mitigation measures. It merely lists BMPs, Forest Plan Standards and Guidelines, and Mitigation Measures that apply to Alternatives 1 & 3. (FEIS at Appendix C). A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA. These failures renders the FEIS deficient under NEPA.

For the foregoing reasons, the FEIS does not adequate analyze mitigation measures in detail and lacks an explanation of how these measures would be effective for this particular project. The mitigation measures are not supported by any site-specific analytical data. Therefore the FEIS and ROD will violate NEPA.

IV. **The Response to Comments is not Substantive and Inadequate in Violation of NEPA**

NEPA implementing regulations at § 1503.4 require all federal agencies to respond in writing to public comments submitted on a given project. This requirement forces agencies to consider public sentiment and knowledge with respect to the proposed action, and to respond to such comments or, if necessary, develop new alternatives or modify the proposed actions.

V. **The Cumulative Effects Analysis in the FEIS is Inadequate under NEPA**

NEPA mandates that FEISs adequately disclose and provide an adequate analysis of the direct, indirect, and cumulative effects of the proposed action and alternatives. Objector argues here that the CNF failed to adequately disclose and analyze the direct and indirect effects of important aspects of the proposed action. Of particular concern is the fact that the direct and indirect effects of these aspects of proposed action on TES, MIS, protected migratory birds, fire risk, soils, watershed, and aquatic habitat were not disclosed or analyzed in a meaningful way. Similarly, there is also a failure to account for the cumulative effects of these components of the proposed action combined with other past, present, and reasonably foreseeable actions.

> "Cumulative impact" is defined in NEPA as, "the impact on the environment which results from the incremental impact of the action when added to other past, present,

and reasonably foreseeable future action regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."[49]

The Courts are clear on what they expect from agencies when preparing a legally sufficient cumulative effects analysis. A "meaningful" analysis of cumulative effects, "should identify (1) the area in which effects of the proposed project will be felt; (2) the impacts that are expected in the area from the proposed project; (3) other actions- past, proposed, and reasonably foreseeable – that have had or are expected to have impacts on the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate."[50]

"Significance" is defined by NEPA as an action that includes: "impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial,"[51] "Unique characteristics of the geographic area such as proximity to……ecologically critical areas,"[52] "The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks,"[53] "Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment."[54] "Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment."[55]

This project lacks a meaningful analysis of the cumulative impacts by failing to disclose, list and describe how the effects of each past present and reasonably foreseeable project may or may not contribute to the current degree of effects that, cumulatively, may be significant. It also fails to adequately analyze whether the cumulative effects of aspects of the proposed action could threaten violation of Federal law and regulation.

Furthermore, in Lands Council V. Powell the Court found that when the cumulative effects analysis:

---

[49] 40 CFR 1508.7

[50] City of Carmel-By-The-Sea v. U.S. Department of Transportation, 95 F. 2d 892, 902 (9th Cir. 1996).

[51] 40 C.F.R. §1508.27(b)(1).

[52] 40 C.F.R. §1508.27(b)(3) .

[53] 40 C.F.R. §1508.27(b)(5) .

[54] 40 C.F.R. §1508.27(b)(7).

[55] 40 C.F.R. §1508.27(b)(10).

> "[C]ontains only vague discussion of the general impact of prior timber harvesting, and no discussion of the environmental impact from past projects on an individual basis, which might have informed analysis about alternatives presented for the current project" it is, "inadequate" because the cumulative effects analysis, "Must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment.
>
> ...Although the agency acknowledged broad environmental harms from prior harvesting, the data disclosed would not aid the public in assessing whether one form or another of harvest would assist the planned forest restoration with minimal environmental harm. For the public and agency personnel to adequately evaluate the cumulative effects of past timber harvests, the Final Environmental Impact Statement should have provided adequate data of the time, type, place, and scale of past timber harvests and should have explained in sufficient detail how different project plans and harvest methods affected the environment. The Forest Service did not do this, and NEPA requires otherwise."[56]

Objectors argue that this FEIS suffers these very same fatal flaws the courts have been clear in striking down. The FEIS does offer a list of some past, present and reasonably foreseeable impacts, but miserably fails to describe and evaluate the cumulative effects of each of these other activities in a meaningful way such that NEPA is satisfied and a ROD would be adequately supported. These inadequate cumulative effects analyses can be found on pages 77 (forested vegetation), 87 (fire and fuel resources), 86 (transportation systems), 136 (wildlife and plant species of special interest), 147 (water and soil resources), 159 (heritage resources), 170 (scenic resources), 176 (recreation), 184 (air quality), 191 (social), 194 (economic), 199 (range), and 204 (noxious/invasive plants).

Not one of these cumulative effects sections in the FEIS could arguably be considered quantitative or analytical. Rather they are nothing more than anecdotal narratives assuring the reader that there will be no cumulative effects.

VI. **The Cibola National Forest will Violate the Migratory Bird Treaty Act (MBTA) and E.O. 13186 with the Proposed Action**

The CNF is responsible under the Migratory Bird Treaty Act (MBTA) and Executive Order 13186 to protect all migratory birds. The MBTA prohibits the take, possession… [of] any migratory bird, their eggs, and nests, except as authorized under a valid permit.[57] 'Take' is defined in 50 CFR 10.12, and includes both "intentional" and "unintentional" take. "Unintentional take" means take that results from, but is not the purpose or, the activity in question. The Forest Service is directed "to support the conservation intent of the migratory bird conventions by integrating bird conservation principles, measures, and

[56] Lands Council V. Powell (No. 03-35640 C.C. No. CV-02-00517-EJL, 9th Cir, 2004).

[57] 50 CFR 21.11.

practices into agency activities and by avoiding or minimizing, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions."[58]

The FEIS admits that the proposed activities will result in the "direct loss" (take) of NTMBs. (FEIS at 131). This knowing taking will constitute a failure to meet the requirements established in EO 13186 and the MBTA, "to support the conservation intent of the migratory bird conventions by integrating bird conservation principles, measures, and practices into agency activities and by avoiding or minimizing, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions."[59]

Finally, the CNF is not in compliance with the EO 13186 because it has not developed and entered into the Memorandum of Understanding (MOU) mandated by EO 13186. ("In coordination with affected Federal agencies, the Service shall develop a schedule for completion of the MOUs within 180 days of the date of this Order. The schedule shall give priority to completing the MOUs with agencies having the most substantive impacts on migratory birds.") Failure to ensure that such an MOU has actually been entered into so many years after the deadline established by EO 13186 constitutes violation of EO 13186 and the MBTA that would be ripe with the signing of a ROD for the proposed action.

VII. **The Cibola National Forest (will) violate the NFMA and the Forest Plan Requirements to Monitor the Populations of MIS and Maintain Viable Populations of those MIS**

The regulations implementing NFMA and the Forest Plan were or will be violated by the Forest's failure to gather quantitative Management Indicator Species (MIS) population trend data and establish relationships to habitat changes from management activities implementing the Forest Plan. The CNF plan clearly requires that population data be collected for MIS prior to project implementation.[60]

The requirement to collect population data has again been affirmed this summer in the 10th circuit in Utah Envtl. Cong. v. Bosworth, No. 03-4251, 2005 U.S. App. LEXIS 17619, at *1 (10th Cir. Aug. 19, 2005). The CNF has not amended its forest plan to relieve it of the duty to collect population data for MIS. The UEC v. Bosworth court found the interpretive rule and transitional rule for planning issued by the Department of Agriculture to be non-binding legally. Thus the CNF is still bound to collect population data for its MIS before embarking on projects that might impact the viability of those species in the planning area and on the forest.

---

[58] E.O. 13186 §3(e).

[59] *Id*.

[60] Cibola National Forest Plan at 168.

In another recent 10th Circuit ruling in Utah Environmental Congress v. Dale Bosworth, this Circuit Court ruled that the NFMA regulations at 36 CFR§219.19 and §219.26 apply to forest management activities implementing the Forest Plan, and that actual use of hard quantitative MIS population trend data is mandated in the analysis:

> "In keeping with the reasoning of the Eleventh Circuit and the district courts of this circuit, we conclude that § 219.19 requires the Forest Service to use actual, quantitative population data to effectuate its MIS monitoring obligations. Section 219.19 mandates that as part of forest planning, "[f]ish and wildlife habitat shall be managed to maintain viable populations of existing native and desired nonnative vertebrate species." Further, forest management "[p]lanning alternatives shall be stated and evaluated in terms of both amount and quality of habitat and of animal population trends of the management indicator species," § 219.19(a)(2); similarly, "[p]opulation trends of the management indicator species will be monitored and relationships to habitat changes determined," §219.19(a)(6). Plainly the regulations require that the Forest Service monitor population trends of the MIS in order to evaluate the effects of forest management activities on the MIS and the viability of desired fish and wildlife populations in the forest more generally."
>
> "Our reading of the requirements of § 219.19 is strengthened by § 219.26, which provides that to ensure diversity of plant and animals in forest planning inventories which "include quantitative data making possible the evaluation of diversity in terms of its prior and present condition" shall be taken. We agree with the Eleventh Circuit in Martin that these two sections of regulation 219 "are harmonious when read together."[61]
>
> Because,
>
> > "MIS are proxies used to measure the effects of management strategies on Forest diversity . . . [and because §] 219.26 requires the Forest Service to use quantitative inventory data to assess the Forest Plan's effects on diversity. . . . then, taken together, the two regulations require the Forest Service to gather quantitative data on MIS and use it to measure the impact of habitat changes on the Forest's diversity."[62]
>
> "Similarly, the court in Forest Guardians reasoned that the language of § 219.19 required the Forest Service **"**to acquire and analyze hard population data of its selected management indicator species" before approving a timber sale, because these regulations clearly preclude reliance "solely on habitat trend data as a proxy for population data or to extrapolate population trends."[63]

[61] Martin, 168 F.3d at 7.

[62] *Id*

[63] 180 F. Supp. 2d at 1281.

> Likewise, we agree that a reading of § 219.19 as requiring only habitat analysis is "inconsistent with the regulation's plain meaning," Yuetter, 994 F.2d at 738. Accordingly, we conclude that in order to effectuate its MIS monitoring duties under the language of its regulations, the Forest Service must gather quantitative data on actual MIS populations that allows it to estimate the effects of any forest management activities on the animal population trends, and determine the relationship between management activities and population trend changes."[64]

The Tajique management indicator species report and FEIS identifies 10 MIS as present in the planning area: elk, mule deer, black bear, Merriam's turkey, house wren, juniper titmouse, pygmy nuthatch, and hairy woodpecker. (See project record). However, the CNF readily admits that it does not have any population trend information for several of these MIS. What the CNF does offer is Breeding Bird Survey Route (BBS) information which is widely understood to be inappropriate for use in quantifying population trend data at any level: state, forest, or analysis area.[65] The MIS 2005 Update for the CNF, the FEIS, and the project record fail to indicate how many BBS routes are actually in the project area, forest or are statewide. Additionally, the forest admits that it has no information on population trends at the project or forest level for four of the 10 MIS: elk, mule deer, black bear, and Merriam's turkey.[66] Rather, the CNF offers "trends" based solely on habitat distribution and change.[67]

The FEIS state that there "are no specific population estimates" for the mule deer in the Manzano Mountains and the game management data from NM Department of Game and Fish (NMDG&F) ends abruptly in 1998. (Id.). The FEIS notes for black bear that the NMDG&F has only *statewide estimates of populations* and that the CNF *has not updated harvest data*. (Emphasis added, Ibid.).

The FEIS concludes that NMDG&F hunting data for Merriam's turkey ends abruptly in 1995 and that only statewide population estimates are available. (See Management Indicator Species Report, Supplement – October 24, 2005). Again, the FEIS discloses that the hunting information for the elk abruptly ends in 1998. (Id.). Not only does the CNF lack any current population trend data for these MIS at the project or forest-level, but the outdated information it does have is based entirely on NMDG&F hunter success rates or other unreliable data.

---

[64] Utah Environmental Congress v. Bosworth, 2004 U.S. App. LEXIS 12441 (10th Cir. 2004). (Emphasis added).

[65] "The Breeding Bird Survey is a roadside survey . . . trends from the BBS may therefore reflect only populations along roads rather than regional bird population changes." See http://www.mbr-pwrc.usgs.gov/bbs/introbbs.html.

[66] See Management Indicator Species Report, Supplement – October 24, 2005.

[67] Id.

The CNF has failed to meet its mandate under NFMA to collect required quantitative population trend data and determine relationships between management activities or habitat changes and population trend changes.

NFMA imparts on the Forest Service a substantive duty to provide for the diversity of plant and animal communities on national forests.[68] (Emphasis added). To achieve this goal, the regulations implementing NFMA specify that the agency will provide ecological conditions needed to support ecosystem diversity.[69]

Abert's squirrel (*Sciurus aberti*) is an obligate species of ponderosa pine forests such as occur in the project area. Squirrels play a key role in supporting the sustainability and diversity of the ponderosa pine ecosystem by facilitating essential symbiotic interactions of mycorrhizal fungi with ponderosa pine through consumption of fruiting bodies and dispersal of spores (States and Gaud 1997, States and Wettstein 1998). Recent population surveys on the Carson National Forest found only one squirrel per 500 acres (Frey, 2004), one of the lowest densities ever recorded and far below the 6 to 16 squirrels per acre (USDA Forest Service, 1984: H-3) needed to support the sustainability and diversity of the ponderosa pine ecosystem.

Intensive mechanical treatments associated with forest restoration and fuels reduction that reduce canopy closure, tree density, diversity and patchiness are similar to even-aged logging practices that have been shown to be detrimental to Abert's squirrel (Dodd et al., 2003). These intensive treatments alter microhabitats where hypogenous fungi grow, reducing fungi production (States and Gaud, 1997) and potentially disrupting the relationship between fungi, pines and squirrels (States 1985, Pederson et al. 1987, States et al 1988).

To ensure ecological condition are present to maintain squirrel populations, Dodd et al. (1998) recommends that surveys be done before treatment to identify and preserve high quality source areas and maintain the larger VSS 4 and 5 trees throughout the project area. In treated areas Dodd et al. (1998) recommends that a minimum of 9 patches per acre of clumps of five or more interlocking canopy trees greater than 6 inches in diameter with canopies less than 5 feet apart be retained. These measures will ensure that a sufficient number of interlocking canopy trees are preserved for squirrel recruitment. Failure to incorporate these reasonable recommendations into the project's design will contribute to declines in the Abert's squirrel population, threatening the sustainability of the ponderosa pine ecosystem and violating NFMA's diversity mandate.

[68] 16 U.S.C. § 1604(g)(3).

[69] 36 C.F.R. 219.10(b).

VIII. **The Cibola National Forest FEIS Action Alternatives Would Violate NEPA, its Forest Plan and NFMA by Failing to Ensure Soils will not be Irreversibly Damaged**

The National Forest Management Act (NFMA) prohibits the Forest Service from carrying out management activities that cause permanent impairment of the soil.[70] The NFMA is most relevant to timber harvest planning and dictates that the Forest Service perform inventories, plan in accordance with the National Environmental Policy Act (NEPA), consider the physical and economic suitability of the lands, provide for diversity of plant and animal communities and follow certain harvesting guidelines and practices.[71]

The NFMA requires the Forest Service to:

> "insure that timber will be harvested from National Forest System lands only where—soil, slope, or other watershed conditions will not be irreversibly damaged." 16 U.S.C. 1604(g)(3)(E)(i). The NFMA directs that timber will be harvested only where "protection is provided for streams, stream-banks, shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat."[72]

The statute's implementing regulations require that "[all] vegetative manipulation [must] [a]void permanent impairment of site productivity and ensure conservation of soil and water resources.[73] Also that "[a]ll management prescriptions shall… Conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land."[74]

In order to meet these substantive obligations, the Forest Service is required to analyze the effects of its land and resource management activities on soil and watershed conditions, incorporate mitigation measures into project design, and monitor the effectiveness of these mitigation measures to insure that they provide the requisite level of protection for soil and water resources.[75]

---

[70] National Forest Management Act of 1976, 16 U.S.C. §§ 472a, 512b, 1600, 1611-1614 (1194) (amending Forest and Rangelands Renewable Resources Planning Act of 1974, Pub. L. No. 93-178, 88 Stat. 476).

[71] Lacy, Peter M. (2001). Our sedimentation boxes runneth over: Public lands soil law as the missing link in holistic natural resource protection. 31 Envtl. L. 433 (2001).

[72] 16 U.S.C. 1604(g)(3)(E)(iii).

[73] 36 C.F.R. § 219.27(b)(5) (2000).

[74] 36 C.F.R. §219.27(a)(1) (2000).

[75] See generally, FSH 2509.18; FSM 2550.

As with any other resource, the Forest Service is required to take a "hard look" at the impacts of its management activities on soil and watershed condition. To this end, the Forest Service Manual (FSM) and Forest Service Handbook (FSH) identify a range of soil properties that must be considered. National direction requires detailed consideration of soil compaction, soil puddling, soil displacement, extent of severely burned soil, and surface erosion.[76] In analyzing these factors, it is important to "[q]uantify information to provide a means of evaluating attainment of land management activities."[77]

To determine whether or not management activities cause significant changes in site productivity, the Forest Service must establish (a) threshold values of soil properties or conditions and, (b) allowable areal extent of detrimental soil disturbance.[78] As a rough constraint on "b," project planners are required to "use the estimated 15 percent reduction in soil productivity potential as a guideline for determining when the change becomes detrimental or significant." Id.

In addition to this detailed analysis, the Forest Service must document that the mitigation measures it has proposed are effective. In order to do so, the Forest Service is required to "[g]ather data to detect changes in chemical, biological, and physical soil properties resulting from management activities" and then "use results from effectiveness monitoring" so that land managers can make better decisions on how to maintain or improve long term site productivity.[79]

Judged by these standards, it is quite obvious that the Forest Service has failed to take a hard look at the potential impacts of the Tajique project on soil and watershed conditions. The EA does not make reference to quantitative measure and fails to qualitatively discuss the vast majority of factors enumerated by the Forest Service Manual and Handbook. Instead, the EA simply reiterates a list of mitigation measures that will be implemented, and includes some purely conjectural statements justifying use of these measures.

Without a detailed analysis of soil and watershed impacts informed by past effectiveness monitoring data, the Forest Service simply cannot insure that soil and watershed conditions in the Tajique project area will not be significantly and permanently impaired.

IX. **The Tajique FEIS violates the Clean Water Act (CWA)**

Under §313 of the CWA, federal agencies are responsible for compliance with all State requirements for water pollution control, including a State's antidegradation policies: "Each department, agency, or instrumentality of the executive, legislative, and judicial branches of the Federal Government…shall be subject to, and comply with, all Federal,

[76] FSM 2509.18 2.05.

[77] FSM 2554.1.

[78] FSH 2509.18 2.2.

[79] FSM 2554.1; FSH 2509.18 2.12.

State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution..."[80] Courts have also found the CWA to be directly applicable to National Forest activities like the one at issue here, where the Forest Service must comply with State water quality standards when permitting activities on National Forest lands.[81]

Road construction and reconstruction and attendant infrastructure can be the source of significant discharge. States are required by CWA §401 to provide a water quality certification before a federal license or permit can be issued for any activity that may result in a discharge into navigable waters.[82] The certification must "set forth any effluent limitations…necessary to assure that any applicant" will comply with various provisions of the Act and "any other appropriate" state law requirement.[83] This is an affirmative duty imposed on the State by the CWA, and clearly any action that requires a Federal license or permit must have an accompanying State 401 certification before the Federal agency can issue the license or permit. The antidegradation policy of the State, as mandated by the CWA, requires the State to impose conditions or limitations when issuing the certification that provide the proper level of protection to the water and thereby prevent lowering of water quality and protect designated uses.

CWA §303 places directly on Federal agencies the responsibility to comply with all federal, state, and local requirements for water pollution control and it explicitly applies to "runoff" as well as "discharge" of pollutants. "State standards adopted pursuant to §303 are among the "other limitations" with which a State may ensure compliance through the §401 certification process.[84] Although §303 is not specifically listed in §401(d), the statute allows States to impose limitations to ensure compliance with §301 of the Act, and §301 in turn incorporates § 303 by reference. EPA's view supports this interpretation.

EPA's regulations implementing this section of the CWA likewise require the State to complete §401 certification. When doing so, States are required to find that "there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards."[85]

---

[80] 33 U.S.C §1323(a).

[81] *See* Marble Mountain Audubon Society v. Rice, 914 F.2d 179, 182 (9th Cir. 1990); Northwest Indian Cemetery Protective Assn v. Peterson, 795 F.2d 688 (9th Cir. 1986), accord Oregon Natural Resources Council v. U.S. Forest Service, 832 F.2d 1489 (9th Cir. 1987).

[82] 33 U.S.C §1341.

[83] Ibid at (d).

[84] 33 U.S.C 1341 (d).

[85] 40 CFR §121.2(a)(3).

The Forest Service is considering the Tajique project without obtaining the legally required State 401 certification, and with recognized violations of Section 404) in clear violation of the CWA. Because a Federal license or permit is required before this activity can take place on National Forest land, and because the activity, specifically road construction and reconstruction as well as all the attendant infrastructure (e.g. culverts), will result in discharges to the Tajique Creek and its tributaries, the agency is required to obtain State certification of the activity pursuant to § 401 of the CWA.[86]

The CNF has acknowledged that it is possibly in violation of CWA Section 404 in the January 2004 Tajique Watershed Assessment. In that document the forest states that "potential failure of culverts at relatively low storm events creates cumulative effects in excess of that supported by the forest road exemptions under Section 404 of the CWA… The culverts also fail to meet the 1985 Forest Service agreement with the Environmental Protection Agency (EPA) to implement standards in the Forest Service manual and Handbook (FSM, FSH) and WRENSS (Water Resources Evaluation of Non-Point Silvicultural Sources) as of that date." (Tajique Watershed Assessment at 13).

Further, The New Mexico Environment Department (NMED) pointed these same legal shortcomings in comments on the DEIS, noting that Section 402 may be required as Section 404 and 401 permits. (FEIS at 330-331). The NMED pointed out that the proposed thinning for the purpose of fuels reduction or the establishment of permanent firebreaks and roads may not fall within the traditional exemptions for silviculture. (FEIS at 330).

X. Cibola National Forest Proposed Action in this FEIS Would Violate the Administrative Procedures Act.

The APA requires all agency actions to conform to general standards of regularity and rationality. The courts will overturn agency decisions that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law."[87] The Supreme Court has held:

> "Normally, an agency [action] would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."[88]

[86] 33 U.S.C §1341.

[87] 5 U.S.C. 706.

[88] Motor Vehicle Manufacturers' Association v. State Farm Mutual Automobile Ins. Co., 463 U.S. 29, 43 (1983).

Failures to comply with the Forest Plan, the NFMA, the MBTA and E.O. 13186, HFRA, the US Constitution, and NEPA by implementing the proposed action as is would all be in violation of the APA because that decision would be arbitrary, capricious, or otherwise not in accordance with the law.

The 2002 Responsible Official determination to not analyze the DFS only alternative in violation of HFRA and NEPA that was carried into the 2005 EA is a violation of the APA.

XI. **The HFRA Violates the U.S. Constitution**

HFRA, including it's §106 restrictions on judicial review violate the U.S. Constitution, and its separation of powers.

Request for Relief

Due to the violations of federal law and regulation cited above that have occurred or that are pending, the objector requests relief in the form of instruction to the Forest that it:

- Systematically and legally evaluate the HFRA suitability criteria for Wildland Urban Interface as it applies to this project. If the legal criteria cannot be met, conduct a standard NEPA process outside the HFRA.

- Facilitate and participate in the creation of a CWPP and prepare an alternative that reflects the final CWPP prior to a decision.

- Re-issue the FEIS with full consideration of the Citizen's Alternative

- Re-issue the FEIS using an accurate characterization of the No-Action Alternative and re-run all of its models using site-specific information;

- Gather MIS population trend data and actually analyze the impacts of the range of alternatives to the actual population trends before approving this project.

- Use the most up-to-date science on forest self-thinning to give an accurate representation of the no-action alternative and its effects on forest conditions.

Objectors invite the Agency to a meeting to resolve this objection.

References

Agee, J.K. 1997. Fire management for the 21th century. In K.A. Kohm and J.F. Franklin, editors, *Creating forestry for the 21th century*. Island Press, Washington D.C, pages 191-201.

Allen, C.D., M. Savage, D.A. Falk, K.F. Suckling, T.W. Swetman, T. Schulke, P.B. Stacey, P. Morgan, M. Hoffman and J.T. Klingel. 2002. Ecological restoration of southwestern ponderosa pine ecosystems: a broad perspective. *Ecological Applications* 12:1418-1433.

Baisan, C.H. and T.W. Swetnam. 1995. Sandia/Manzano Fire History: Final Report. January 1995.

Baisan, C.H. and T.W. Swetnam. 1997. Interactions of fire regimes and land use in the central Rio Grande Valley. RM-RP-330. Fort Collins, CO. 20 pp.

Baker, W.L. 1992. Effects of settlement and fire suppression on landscape structure. *Ecology* 73:1879-1887.

Baker, W.L. and D. Ehle. 2001. Uncertainty in surface-fire history: the case of ponderosa pine forests in the western United States. *Canadian Journal of Forest Research* 31:1205-1226.

Baker, W.L. and D. Ehle. 2003. Uncertainty in fire history and restoration of ponderosa pine in the western United States. USDA Forest Service Proceedings. RMRS-P-29. 2003.

Baker, W.L. and D.J. Shinneman. 2004. Fire and restoration of piñon-juniper woodlands in the western United States: a review. Forest Ecology and Management 189: 1-21.

Belsky, A.J. and Dana Blumenthal. 1997. Effects of livestock grazing on stand dynamics and soils in upland forests of the interior west. Conservation Biology, Vol. 11, No. 2.

Belsky, J., Matzke, A., and Uselman, S., 1999. Survey of livestock influences on stream and riparian ecosystems in the western US. J. Soil and Water Cons. 54: 419-431.

Beschta, R.L. 1978. Long-term patterns of sediment production following road construction and logging in the Oregon Coast Range, Water Resources Research, 14:101-1016.

Bessie, W.C. and E.A. Johnson. 1995. The relative importance of fuels and weather on fire behavior in subalpine forests. *Ecology* 76:747-762.

Bond, W.J. and B.W. van Wilgen. 1996. *Fire and plants*. Chapman and Hall, London.

Brown, P.M., M.R. Kaufman, W.D. Shepard. 1999. Long term landscape pattern of past fire events in the montane ponderosa pine forests of central Colorado. Landscape Ecology 14:513-532.

Brown, R.T., J.K. Agee and J.F. Franklin. 2004. Forest restoration and fire: principles in the context of place. *Conservation Biology* 18:903-912.

Carey, H. and M. Schumann. 2003. *Modifying wildfire behavior – the effectiveness of fuel treatments: the status of our knowledge*. National Community Forestry Center Southwest Region Working Paper #2. Santa Fe, NM. http://www.theforesttrust.org/images/swcenter/pdf/WorkingPaper2.pdf

Cohen, J.D. 1995. Structure ignition assessment model (SIAM). In: Weisse, D.R., R.E. Robert, technical coordinators. Proceedings of the Biswell symposium: fire issues and solutions in urban interface and wildland ecosystems. February 15-17, 1994; Walnut Creek, CA. Gen. Tech. Rep. PSW-GTR-158. Albany, CA: Pacific Southwest Research Station, Forest Service USDA; 85-92.

Cohen, J.D. and J. Saveland. 1997. Structure ignition assessment can help reduce fire damage in the W-UI. Fire Management Notes 57(4): 19-23.

Cohen, J.D. and B.W. Bulter. 1998. Modeling potential ignitions from flame radiation exposure with implications for wildlands/urban interface fire management. In: Proceedings of the 13th conference on fire and forest meteorology, vol. 1. October 27-31, 1996; Lorne, Victoria, Australia. Fairfield, WA: International Association of Wildfire Fire; 81-86.

Cohen, J.D. 1999. Reducing the wildland fire threat to homes: where and how much? Gen. Tech. Rep. PSW-GTR-173. USDA Forest Service, p. 189-195.

Cohen, J.D. 2000a. What is the wildland fire threat to homes? Thompson Memorial Lecture, School of Forestry, Northern Arizona Univ., April 10, 2000. Flagstaff, AZ.

Cohen. J.D. 2000b. Examination of the home destruction in Los Alamos associated with the Cerro Grande fire, July 10, 2001; USDA Forest Service, Rocky Mtn. Research Station, Fire Sciences Laboratory, Missoula, MT.

Countryman, C.M. 1955. Old-growth conversion also converts fire climate. *U.S. Forest Service Fire Control Notes* 17:15-19.

Crawford, J.A., C.H.A. Wahren, S. Kyle and W.H. Moir. 2001. Responses of exotic plant species to fires in Pinus ponderosa forests in northern Arizona, Journal of Vegetation Science 12: 261-268.

Dale, V.H., S. Brown, R. A. Haeber, N.T. Hobbs, N. Huntly, R.J. Naiman, W.E. Riebsame, M.G. Turner and T.J. Valone. 2000. Ecological principles and guidelines for managing the use of land. *Ecological Applications* 10:639-670.

Daubenmire, R. 1968. *Plants and environment*. Harper and Row, New York.

DellaSala, D.A, J.E. Williams, C. D. Williams and J.F. Franklin. 2004. Beyond smoke and mirrors: a synthesis of fire policy and science. *Conservation Biology* 18:976-986.

DellaSala, D.A., A. Martin, R. Spivak, T. Schulke, B. Bird, M. Criley, C. Van Daalen, J. Kreilick, R. Brown and G. Aplet. 2003. A citizen's call for ecological forest restoration: forest restoration principles and criteria. *Ecological Restoration* 21:14-23. http://www.worldwildlife.org/wildplaces/kla/pubs/eco_restoration.pdf

Dombeck, M. P., J.E. Williams and C.A. Woods. 2004. Wildfire policy and public lands: integrating scientific understanding with social concerns across landscapes. *Conservation Biology* 18:883-889.

Fleischner, T.L., 1994. Ecological costs of livestock grazing in western North America. Cons. Biol., 629-644.

Foote, Ethan and K.J. Gilless. 1996 Structural survival. In: Slaughter, Rodney eds., California I-zone. Sacramento, CA: CFESTES; 112-121.

Graham, R.T. , A.E. Harvey, M.F. Jurgensen, T.B. Jain, J.R. Tonn and D.S. Page-Dumbroese. 1994. Managing course woody debris in forests of the Rocky Mountains. Research Paper INT-RP-477. U.S. Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT.

Graham, R.T., S. McCaffrey and T.B. Jain (tech. eds.). 2004. *Science Basis for Changing Forest Structure to Modify Wildfire Behavior and Severity*. USDA Forest Service Gen. Tech. Rep. RMRS-120. Rocky Mountain Forest and Range Experiment Station, Ft. Collins, CO.

Graves, D.A., and L.F. Neuenschwander. 1999. The effects of thinning and similar stand treatments on fire behavior in western forests. In: Neuenschwander, L.F.; Ryan, K.C., editors. *Proceedings of the conference on crossing the millennium: integrating spatial technologies and ecological principles for a new age in fire management, volume II.* Univ. of Idaho, Moscow, pages 162-166.

Griffis, K.L., Crawford, J.A., Wagner, M.R., Moir, W.H. 2001. Understory response to management treatments in northern Arizona ponderosa pine forests. *Forest Ecology & Management* 146: 239-245.

Howard, Ronald A., W.U. North, F.L. Offensend, C.N. Smart. 1973. Decisions analysis of fire protection strategy for the Santa Monica mountains: an initial assessment. Menlo Park, CA: *Stanford Research Institute*, 159 p.

Kauffman, J.B. 2004. Death rides the forest: perceptions of fire, land use, and ecological restoration of western forests. *Conservation Biology* 18:878-882.

Kotliar, N. B, S.L. Hairer, and C.H. Key. 2003. Lessons from the fires of 2000: Post-fire heterogeneity in ponderosa pine forests. *USDA Forest Service Proceedings*. RMRS-P-29. 2003.

Lisle, T. and Hilton, S., 1992. The volume of fine sediment in pools: An index of sediment supply in gravel-bed streams. *Water Resour. Bull.*, 28: 371-383.

McCarthy, L. F. 2004. *State of the national fire plan*. Forest Trust. Santa Fe, NM. http://www.foreststewardsguild.org/images/forestprotection/Snapshot-Master.pdf.

McIntosh, B.A. and four others, 2000. Historical changes in pool habitats in the Columbia River Basin. Ecological Applications, 10: 1478-1496.

Moir W.H., B.W. Geils, M.A. Benoit and D. Scurlock. 1997. Ecology of southwestern ponderosa pine forests. In: Songbird ecology in southwestern ponderosa pine forests: a literature review. W.M. Block and D.M. Finch, technical editors. Gen. Tech. Rep. RM-GTR-292. Ft. Collins, CO: USDA Forest Service, Rocky Mtn. Forest and Range Res. Station. pp. 3-27.

Odion, D.C., E.J. Frost, J.R. Strittholt, H. Jiang, D.A. DellaSala and M.A. Moritz. 2004. Patterns of fire severity and forest conditions in the western Klamath Mountains, northwestern California. *Conservation Biology* 18: 927-936.

Omi, P.N., and E.J. Martinson. 2002. *Effects of fuels treatment on wildfire severity*. Final report submitted to the Joint Fire Science Program Governing Board, March 25, 2002. Western Forest Fire Research Center, Colorado State University, Ft. Collins, CO. http://www.cnr.colostate.edu/frws/research/westfire/FinalReport.pdf

Perry, D.A., H. Jing, A. Youngblood and D.R. Oetter. 2004. Forest structure and fire susceptibility in volcanic landscapes of the Eastern High Cascades, Oregon. *Conservation Biology* 18:913-926.

Pierce, J.L., G.A. Meyer and A.J.T. Jull. 2004. Fire-induced erosion and millennial scale climate change in northern ponderosa pine forests. Nature (432): 87-90.

Platts, W.S., 1991. Livestock grazing. Influences of Forest and Rangeland Management on Salmonid Fishes and Their Habitats, Am. Fish. Soc. Special Publ. 19: 389-424.

Pollet, J. and P.N. Omi. 2002. Effects of thinning and prescribed burning on crown fire severity in ponderosa pine forests. *International Journal of Wildland Fire* 11:1-10. http://jfsp.nifc.gov/conferenceproc/T-03Polletetal.pdf

Rhodes, J.J., McCullough, D.A., and Espinosa Jr., F.A., 1994. A Coarse Screening Process for Evaluation of the Effects of Land Management Activities on Salmon Spawning and Rearing Habitat in ESA Consultations. CRITFC Tech. Rept. 94-4, Portland, Or. http://www.critfc.org/text/tech_rep.htm

Rhodes, J.J. and Purser, M.D., 1998. Thinning For Increased Water Yield in the Sierra Nevada: Free Lunch or Pie in the Sky? Pacific Rivers Council, Portland, OR.

Schroeder, Mark J and Charles C. Buck. 1977. Fire Weather: A Guide for Application of Meterorological Information to Forest Fire Control Operations. U.S. Government Printing Office: 0-244:923. Washington DC.

Schulke, Todd and Brian Nowicki. 2002. Effectively treating the wildlands-urban interface to protect houses and communities from the threat of forest fire. Center for Biological Diversity, May 2002. www.biologicaldiversity.org

Reider, D.A. 1988. California conflagration – recounting the siege of '87. *Journal of Forestry* 86:5-8.

USDA Forest Service. 1997. *Plants associations of Arizona and New Mexico*, volume 1: forests. 3rd edition. USDA Forest Service, Southwestern Region.

USDA Forest Service, 2000. Sierra Nevada Forest Plan Amendment DEIS, USFS PSW Region, San Francisco, CA.

USDA Forest Service. 2004. Biological Assessment for the Continued Implementation of the Land and Resource Management Plans for the Eleven National Forests and National Grasslands of the Southwestern Region. April 8, 2004. Albuquerque, NM. 820 pp.

USDA Forest Service, 2001. Biological assessment and evaluation, WUI fuel treatment, USDA Forest Service , Southwestern Region, Feb. 28.

USDI Fish and Wildlife Service. 2001. Biological and conference opinion of the Forest Service wildlands/urban interface fuel treatments in New Mexico and Arizona. R2 CL O4-005, April 10 2001.

USFS and USBLM, 1997a. The Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins, Volumes I-IV. PNW-GTR-405, USFS, Walla Walla Washington.

USFS and USBLM, 1997b. The DEIS for the "Eastside" Planning Area. USFS, Walla Walla, Washington.

USFS and USBLM, 1997c. Evaluation of EIS Alternatives by the Science Integration Team Vol. I-II. PNW-GTR-406, USFS, Walla Walla, Washington.

Vander Meer, Mark. 2000. The role of wood decay fungi in coniferous forests and the implications of forest management practices on sustaining fungus-based ecological processes. www.watershedconsulting.com.

van Wagtendonk, J.W. 1996. Use of a deterministic fire growth model to test fuel treatments. In: Sierra Nevada Ecosystem Project: Final Report to Congress, Vol. II, *Assessments and scientific basis for management options*. University of California, Davis, Centers for Water and Wildland Resources, pages 1155-1165.

Whitlock, C. 2004. Forests, Fires and Climate. Nature (432): 28-29.

Appendix B - Water Resources

A major purpose for the activities described in the FEIS is the protection and enhancement of water resources and watershed health. Essentially the FEIS makes the following argument: 1) the Estancia Basin and the village of Tajique receive their water from the Tajique watershed; 2) that without any action these resources are in danger; and 3) the activities planned under this project will improve water quantities and quality. Specifically with respect to current conditions the FEIS states:

> *The purpose of this project is to reduce hazardous fuels and protect values at risk such as riparian vegetation, fisheries, water quality, and federally listed and regionally sensitive species habitat. This watershed also contributes to water recharge for the community of Tajique and the Estancia Basin. FEIS p.iii* and that *The Tajique watershed is also a closed basin that provides domestic water to the communities within Torrance County. The town of Tajique primarily receives their drinking water from this watershed. FEIS p. 7*

The FEIS goes on to list all of the negative consequences that the USFS can imagine happening to water supply and quality if no action is taken. Following quotes are indicative of these types of claims. If nature continues the course it is on, the FEIS states:

> *Conifer encroachment would result in a reduction in base flow water yields over time.* FEIS p. 35. *The unsatisfactory condition* (soils) *relates to a Watershed Condition Class II, where portions of the watershed may exhibit an unstable drainage network and some soil and water systems are at risk of being unable to support beneficial uses. FEIS p.139, a*nd *The combination of high road density and human developments, such as homes, in flood plains increases the risk of flood damage during heavy precipitation events. Many of the developments in Sherwood Forest and Forest Valley are located in the flood plains of Tajique and Torreon Creeks. FEIS p.141*

Then the USFS employs their fundamental assumption about what will happen to the entire watershed in 2006. That is, the entire project area will burn down in a catastrophic fire and every inch of ground will experience high burn severity (the worst case the USFS could imagine). Based on these unfounded (see comment ***** of this document), the FEIS goes on to state:

> *The values at risk include riparian vegetation, recreational fisheries, water quality… FEIS p. 5, These wildfires threaten residential areas, water supplies, communication towers, electrical transmission lines, natural resource values and endanger human life. FEIS p.79,* ***Fire Behavior …*** *Soil damage and soil loss resulting from high intensity wildfire will reduce productivity of the site. This includes the potential for long-term loss of wildlife habitat, vegetation cover, organic matter, and soils in general. Adverse impacts to water quality and an increase in sheet erosion would also occur. FEIS p.81,* and, *Beneficial uses, including fisheries habitat, can be negatively affected by these natural events* (fires)*. FEIS p.144.*

The FEIS goes on to claim that if they proceed with this project:

> *Removal of vegetation could potentially increase downstream water delivery. FEIS p.iii, Treatment of mixed conifer stands may improve watershed health and function by increasing water flows in upper elevation streams where these stands occur. FEIS p. 46, Large woody debris would dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality. FEIS p.128, The* (erosion) *model indicates that a combined operation of thinning and prescribed fire could reduce sediment yield in the project area by 55 to 75 percent on an average annual basis, compared to the No Action Alternative. (Emphasis added). FEIS p.143*

In each case (current conditions, effects of no-action, and effects of implementing their preferred alternative), the FEIS makes false, misleading, and/or unsupported statements to justify the Tajique Watershed Restoration Project and discount the no-action alternative. Inherent in all of the above assertions is a relation between the water supplies of the Estancia Basin, the Tajique water supply, and the proposed USFS actions. No such relation exists. The hypothetical impacts of the activities proposed in the FEIS are on surface water flow (mainly issues of erosion and sedimentation). On the other hand, no individual or community in the Tajique area or the entire Estancia Basin utilizes Tajique Creek or any other surface water body as a water supply. That is, water to all users is supplied by wells.[89] For example, the Tajique municipal supply well is 400 feet deep and draws water from 240-400 feet below the land surface. Between the land surface and the water producing zone are hundreds of feet of soil, sand, silt, shale, and limestone.
So when the FEIS hypothesizes an increase in water supplies: Removal of vegetation could potentially increase downstream water delivery. *FEIS p.iii,* it fails to provide a single study or piece of data supporting this contention. Further, the Environmental Assessment for the USFS Thunderbird project (the most recent thinning project in the Manzano Mountains) states on pages 23 and 24, "*the mindset that greater increases in overstory removal will generate greater increases in groundwater recharge is not supported by research."* It goes on to quote another USFS publication which states "*Strategies for dealing with water shortages should avoid relying on augmentation from National Forests as a substitute for practices to reduce water consumption and improve conservation."* Since the instigation of the Thunderbird project no monitoring has been undertaken that even addresses the relation between thinning and changes in recharge or stream flow.

With respect to water quality, the only issue the FEIS address is potential changes in erosion and sediment carried to Tajique Creek. The FEIS starts by acknowledging that erosion is a serious concern: *Proper functioning condition surveys classified most of the riparian areas in the watershed as functional-at-risk and portions as nonfunctional. FEIS p.140,* and goes on to list the main causes of erosion and sedimentation, roads and grazing:

> *Recent watershed surveys completed by the forest hydrologist indicate that past grazing practices have reduced vegetative ground cover in upland areas causing*

[89] Regional Water Plan, Shomaker and Associates, 1997.

increased runoff during large storm events. FEIS p.139, Erosion is a concern in areas with many unclassified roads and trails, especially on steep slopes and areas of shallow soil. FEIS p.139, High road densities can compound the effects of infrequent, high magnitude precipitation events. Roads increase surface and subsurface drainage efficiency by routing upslope water into channels, thereby increasing floodwater levels. FEIS p.141.

The FEIS further acknowledges that when grazing and vehicle use are curtailed watershed conditions improve:

About 3,500 acres of riparian and upland habitat have been excluded from cattle grazing and off-road vehicle use in the analysis area. These projects have led to enhanced riparian vegetation conditions including improved species and structural diversity. FEIS p.137, and Riparian areas along Apache Springs, Albuquerque Trail Canyon, Ojo Tererro, and Troncon Negro are improving due to permanent exclusion of livestock grazing. FEIS p.140.

So does the FEIS recommend the elimination of grazing and road closure? No. The FEIS does not even recommend reductions in grazing and, if implemented, would result in about 14,000 acres being opened up to off-road vehicles (tree spacing resulting from thinning are given as 10-12 feet or larger, Appendix B of the FEIS, which is wider that most existing USFS unclassified roads).

And even with all of the current erosion problems, the FEIS states that least erosion would occur if the forest was left alone:

Canopy cover and stand densities would remain high in the project area's watershed, with most of the kinetic energy of rainfall intercepted, reducing short-term accelerated soil loss. And *...potential risk of short-term accelerated soil losses, due to high canopy cover, remains lowest. FEIS p.145 No Action Alternative.*

Instead of eliminating grazing and closing roads, the FEIS recommends spending millions of dollars based the unfounded assumption that a catastrophic fire is imminent. Based on this assumption the USFS ran two erosion models, one for the DEIS and a different model for the FEIS. Both models use the totally unrealistic assumption that a catastrophic fire happens immediately, destroys all vegetation and damages all soils over the entire project area and that no re-seeding or re-vegetation follows the fire (see the no-action alternative in the following FEIS table).

Table 35: Sedimentation rates (tons per square mile per year) by alternative for treatments that include both thinning and prescribed burning

Vegetation Treatment Areas	Alternative 2: No Action (High Severity Wildfire)	Alternative 1: Proposed Action*	Percent Change Compared to No Action	Alternative 3: No Temp Roads**	Percent Change Compared to No Action
Mixed Conifer	507	202	-60%	200	-60%
Piñon-Juniper	95	28	-71%	26	-73%
Ponderosa Pine	1,176	369	-69%	365	-69%
Ponderosa/P-J Transition	713	242	-66%	238	-67%
Fuelbreaks	144	37	-75%	36	-75%
Slopes > 40%	882	390	-56%	390	-56%
Inaccessible Areas	487	190	-61%	190	-61%
Tajique Fire	1,003	276	-72%	276	-72%

In the draft EIS, the Hillslope Erosion Model (HEM) was used:

> *"The (HEM) model of the two watersheds indicate there may be a reduction in sediment yield of 11.5 percent in the south watershed and 19.1 percent reduction in the north watershed after treatment and over time. Treatments that would restore the watershed to natural conditions may result in a 15.3 percent reduction in sediment movement within the project areas over the long-term."* DEIS p.147.

Between issuing the DEIS and publishing the FEIS, the USFS switched to using the Water Erosion Prediction Project fuel management tool (model).

Most importantly, the WEPP model produced much larger erosion rates:

> *The model indicates that a combined operation of thinning and prescribed fire could reduce sediment yield in the project area by 55 to 75 percent on an average annual basis, compared to the No Action Alternative.* FEIS p.143.

The published reason for switching models is provided in the FEIS:

> *The HEM (Hillslope Erosion Model) that was used in the DEIS was determined to be inappropriate for this analysis because the HEM is designed to be used in a steady state situation and does not incorporate re-growth or recovery of vegetation from*

disturbance. Sediment yield from the general purpose vegetation treatments and the specific purpose vegetation treatments can be more accurately predicted from the Water Erosion Prediction Project (WEPP) fuel management tool. FEIS p.142.

However this explanation is confusing because the WEPP model existed at the time the DEIS calculations were done. A more detailed evaluation reveals that a key parameter of the DEIS was changed. The DEIS and the FEIS recognize that the majority of erosion occurs during intense short periods of precipitation:

Deep snowpacks and heavy monsoon rains can cause significant flooding. FEIS p.144 The DEIS modeling with HEM is consistent with this observation: (HEM model) …Rainfall was calculated based on a 24 hour rain event. Watershed Specialist Report, 2004 p.17.

However, the FEIS is not: (WEPP) …The outputs are also based on 50 years of average precipitation. FEIS p.143.

Therefore, the DEIS provides a more reasonable estimate of the potential erosion rates – assuming a catastrophic fire occurs over the entire project area.

Now apart from the absurdity of a catastrophic fire immediately encompassing the entire project area, there is the issue of the effects of a fire on erosion and streamflow. In 1988, the USFS lit a controlled burn (the Tajique Fire listed in Table 3 above). The Tajique controlled burn was soon out of control and ended up being a stand-replacing crown fire that burned 941 acres (see enclosed USFS GIS map of fire occurrences, fire number 202768). Apart from the discrepancy in the size of this fire between the FEIS and the USFS data, a more important observation is that this very large fire occurred, a large rainstorm followed the fire, and the stream quickly returned to normal conditions such that in 1990 the USFS concluded:

Water quality analysis conducted in the early1990s indicated that water quality is sufficient to support a fishery, although during drought years, portions of Tajique Creek are dry. FEIS p.99.

Thus, even if a fire were to occur the effects would be short-lived contrary to the modeling in both the DEIS and the FEIS. In summary, the FEIS is not justified in stating that watershed health is a purpose for the proposed alternative.

Appendix A – HFRA and CWPP Legal Points and Authorities

I. Definition of CWPP

HFRA Sec. 101

> (3) COMMUNITY WILDFIRE PROTECTION PLAN.—The term ‘‘community wildfire protection plan’’ means a plan for an at-risk community that—
>
> > (A) is developed within the context of the collaborative agreements and the guidance established by the Wildland Fire Leadership Council and agreed to by the applicable local government, local fire department, and State agency responsible for forest management, in consultation with interested parties and the Federal land management agencies managing land in the vicinity of the at-risk community;
> >
> > (B) identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment on Federal and non-Federal land that will protect 1 or more at-risk communities and essential infrastructure; and
> >
> > (C) recommends measures to reduce structural ignitability throughout the at-risk community.

II. Legislative History of the HFRA emphasizes collaboration with local governments and groups and public involvement in the decision-making process.

> A. *In response to concerns about the wildfires of 2000 the following report was generated by the secretaries of Agriculture and the Interior (relevant excerpts follow). This report was the first in a series that eventually resulted in the creation of the HFRA as part of a response to issues herein discussed.*

A Report to the President in Response to the Wildfires of 2000 September 8, 2000

> I. Executive Summary

On August 8, 2000, President Clinton asked Secretaries Babbitt and Glickman to prepare a report that recommends how best to respond to this year’s severe fires, reduce the impacts of these wildland fires on rural communities, and ensure sufficient firefighting resources in the future. The President also asked for short-term actions that Federal agencies, in cooperation with States, local communities and Tribes, can take to reduce immediate hazards to communities in the wildland-urban interface and to ensure that land managers and firefighter personnel are prepared for extreme fire conditions in the future.

Developing a locally led, coordinated effort between the Departments of Agriculture, the Interior, and Commerce, and other appropriate agencies through the establishment of integrated fuels treatment teams at the regional and field levels. (Emphasis added). The role of each team would be to identify and prioritize projects targeted at communities most at risk, coordinate environmental reviews and consultations, facilitate and encourage public participation, and monitor and evaluate project implementation. Each team will work closely with local communities to identify the best fit for each community.

> 4. Work Directly with Communities. Working with local communities is a critical element in restoring damaged landscapes and reducing fire hazards near homes and communities. To accomplish this, the Departments recommend:
>
> - Expanding community participation. Expand the participation of local communities in efforts to reduce fire hazards and the use of local labor for fuels treatment and restoration work.
>
> - Increasing local capacity. Improve local fire protection capabilities through financial and technical assistance to State, local, and volunteer firefighting efforts.
>
> - Learning from the public. Encourage grass roots ideas and solutions best suited to local communities for reducing wildfire risk. Expand outreach and education to homeowners and communities about fire prevention through use of programs such as Firewise.

III. Key Elements of the Administration's Wildland Fire Management Policy

The new wildland fire policy that the Administration has developed in recent years acknowledges the dangers posed by the long-term building of excessive fuel levels in our forests and rangelands. It seeks to reduce those risks through a variety of approaches, including controlled burns, the physical removal of undergrowth and other unnatural concentration of fuel, and attacks on invasive plants. Implicit in the Administration's policy is the understanding that reversing the effects a century of aggressive fire suppression has had on our nation's public lands will be an evolutionary process, not one that can be completed in a few short years. The key elements of the Administration's wildland fire management policy are set forth below. They include: (1) integrated firefighting management and preparedness; (2) reducing hazardous fuel accumulations; and (3) local community coordination and outreach.

Local Community Coordination and Outreach

The Administration's wildland fire policy recognizes that effective fire management requires close coordination with local communities, particularly those communities that are in the wildland-urban interface. As the management of private lands has become a key factor in the fire-risk equation, the Departments have recognized the importance of

providing outreach, education, and support for local communities who must play a primary role in reducing fire hazards in and near their communities.

As discussed above, the changing demographics are expanding the wildland-urban interface and creating new challenges for fighting wildland fires. Increasingly, many homes on private land in and around new communities are at risk. Indeed, the National Fire Protection Association (NFPA) estimates that wildfires destroyed more than 9,000 homes between 1985 and 1995.Officials further believe that the number of homes damaged by wildfires in the 1990s is six times that of the previous decade. More than 1,000 homes have been destroyed during this summer. Safe and effective protection in these areas demands close coordination between local, State, Federal and Tribal firefighting resources. Typically, the primary burden for wildland-urban interface fire protection falls to property owners and State and local governments. Rural and volunteer fire departments provide the front line of defense, or initial attack, on up to 90 percent of these high-risk and costly fires. While they have a good record in rapidly suppressing traditional wildland fires, these local resources often struggle to effectively address the complex demands of fighting fire in the wildland-urban interface. The Departments also have taken steps to assist communities in developing their own firefighting capabilities. The Forest Service's State and Volunteer Fire Assistance Programs, for example, effective and coordinated integrated fire management response. Through the Volunteer Fire Assistance Program, the Forest Service has been successful in providing firefighting equipment to rural fire departments and in training their firefighters to meet Federal interagency standards.

Work Directly with Local Communities

Working with local communities is a critical element in restoring damaged landscapes and reducing fire hazards proximate to homes and communities. To accomplish this, the Departments recommend:

a. Expanding the participation of local communities in efforts to reduce fire hazards and the use of local labor for fuels treatment and restoration work.

b. Improving local fire protection capabilities through financial and technical assistance to state, local, and volunteer firefighting efforts.

c. Assisting in the development of markets for traditionally underutilized small diameter wood as a value added outlet for removed fuels.

d. Encouraging a dialogue within and among communities regarding opportunities for reducing wildfire risk and expanding outreach and education to homeowners and communities about fire prevention through use of programs such as Firewise.

Although Federal agencies are engaged in these activities on an on-going basis, the Departments recommend that a significant new initiative be undertaken to coordinate

appropriate investments and outreach activities with affected communities. The proposed initiative would focus on three major arenas: (1) improving community-based firefighting capabilities and coordination with state and Federal firefighting efforts; (2) working closely with communities-at-risk in implementing post-fire restoration activities and fuels reduction activities; and (3) expanding joint education and outreach efforts regarding fire prevention and mitigation in the wildlife-urban interface.

Budget

To support this initiative for community involvement and participation, additional funding of $88 million in FY 2001 is required.

The above report led to the following directive to Congress:

Congressional Direction for the 10-Year Comprehensive Strategy Conference Report for the Fiscal Year 2001 Interior and Related Agencies Appropriations Act (Public Law 106-291)

"The Secretaries should also work with the Governors on a long-term strategy to deal with the wildland fire and hazardous fuels situation, as well as the needs for habitat restoration and rehabilitation in the Nation. The managers expect that a collaborative structure, with the State sand local governments as full partners, will be the most efficient and effective way of implementing a long-term program.

The managers are very concerned that the agencies need to work closely with the affected States, including Governors, county official, and other citizens. Successful implementation of this program will require close collaboration among citizens and governments at all levels... The managers direct the Secretaries to engage Governors in a collaborative structure to cooperatively develop a coordinated, National ten-year comprehensive strategy with the States as full partners in the planning, decision-making, and implementation of the plan. Key decisions should be made at local levels."

Part of the response to this directive was the creation of the 10 year strategy (excerpts follow):

Summary

A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy

This strategy reflects the views of a broad cross-section of governmental and nongovernmental stakeholders. It outlines comprehensive approach to the management of wildland fire, hazardous fuels, and ecosystem restoration and rehabilitation on Federal and adjacent State, tribal, and private forest and range lands in the United States. This strategy emphasizes measures to reduce the risk to communities and the environment and provides an effective framework for collaboration to accomplish this. Congress directed

the Secretaries of the Interior and Agriculture to work with the Governors to develop this strategy in the FY 2001 Interior and Related Agencies Appropriations Act (P.L.106-291).The direction requires "close collaboration among citizens and governments at all levels," which, by extension, includes a geographically diverse group of people, representing all levels of government, tribal interests, conservation and commodity groups ,and community-based restoration groups. A set of core principles was developed to guide the identification of goals for this strategy. These principles include such concepts as collaboration, priority setting, and accountability. An open, collaborative process among multiple levels of government and a range of interests will characterize the fulfillment of this strategy. The end results sought by all stakeholders are healthier watersheds, enhanced community protection, and diminished risk and consequences of severe wildland fires. The primary goals of the 10-Year Comprehensive Strategy are:

1. Improve Prevention and Suppression

2. Reduce Hazardous Fuels

3. Restore Fire Adapted Ecosystems

4. Promote Community Assistance

Framework for Collaboration
The multi-faceted nature of the issues and jurisdictions addressed by this strategy necessitates communication and collaboration across Federal and adjacent State, tribal, and private forest and range lands. While the line officers of the land management agencies are the principal decision makers concerning public lands, the collaborative framework, with clear roles and responsibilities, will assist in the implementation of this strategy across all ownerships and jurisdictions.

Information Sharing
This strategy recognizes that key decisions in setting restoration and fire and fuel management project priorities should be made at the local level. Consequently, there should be an ongoing process whereby the stakeholders exchange information necessary to make fully informed decisions. As part of the implementation plan to be developed for the strategy, an information system will be designed to facilitate information gathering and exchange.

Preface
Meeting the objectives of the strategy requires a coordinated effort across landscapes to restore and maintain the health of fire-prone ecosystems. Because of the breadth of this challenge, this strategy will be most successful if it involves collaborative input from local, tribal, State, and Federal governments, as well as interested stakeholders to best inform private and public land managers who are actively involved in decision-making on their respective lands.

<u>Creation of the WFLC</u>

The Wildland Fire Leadership Council (WFLC) was established in April 2002 by a memo of understanding between the Secretaries of Agriculture and the Interior. The purpose of the council is to support the implementation and coordination of the National Fire Plan and the Federal Wildland Fire Management Policy.

The WFLC generated a report called: "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy Implementation Plan" dated May, 2002. HFRA sec. 101(3)(A) requires a CWPP to be "developed within the context of the collaborative agreements and the guidance established by the Wildland Fire Leadership Council." This report contains those "agreements" and the "guidance" referred to.

Excerpts from the Report:

Its three guiding principles are:

1. Priority setting that emphasizes the protection of communities and other high-priority watersheds at-risk.

2. Collaboration among governments and broadly representative stakeholders

3. Accountability through performance measures and monitoring for results.

The Collaborative Framework established in the 10-Year Comprehensive Strategy and further explained in the Implementation Plan will improve cooperation and communication among all parties at national, regional, and local levels, acknowledging that key project planning decisions should be made after collaboration at the local level. It also establishes responsibility among all parties at all levels for planning, prioritizing and accomplishing the tasks and related activities needed to achieve results in a timely and cost-effective manner consistent with changing conditions and relevant science.

The 10-Year Strategy and its Implementation Plan reflect the views of a broad cross-section of governmental and nongovernmental interests. The endorsers of this Implementation Plan recognize that a problem a century in the making will not be solved overnight. With progress in achieving objectives in the collaborative manner envisioned, the risks to our communities and environment posed by wildland fire will be significantly diminished over time.

The Collaborative Framework's Three-Tiered Organization Structure

Local Level
Local level collaboration should involve participants with direct responsibility for management decisions affecting public and/or private land and resources, fire protection responsibilities, or good working knowledge and interest in local resources. Participants should include Tribal representatives, local representatives from Federal and State

agencies, local governments, landowners and other stakeholders, and community-based groups with a demonstrated commitment to achieving the strategy's four goals. Existing resource advisory committees, watershed councils, or other collaborative entities may serve to achieve coordination at this level. Local involvement, expected to be broadly representative, is a primary source of planning, project prioritization, and resource allocation and coordination at the local level.

IV. **The main vehicle for establishing collaboration with local governments, groups and individuals and for fostering public involvement in the HFRA was intended by Congress to be the CWPP. This is manifested by the strong message on the face of the statute involving the CWPPs in significant aspects of the project planning and implementation process**

a. Statutory language addressing CWPPS:

1) Sec. 101(3)(A)—definition (see previous)

2) (16) WILDLAND-URBAN INTERFACE.—The term ''wildland-urban interface'' means— (A) an area within or adjacent to an at-risk community that is identified in recommendations to the Secretary in a community wildfire protection plan;

3) SEC. 103. PRIORITIZATION.

(a) IN GENERAL.—In accordance with the Implementation Plan, the Secretary shall develop an annual program of work for Federal land that gives priority to authorized hazardous fuel reduction projects that provide for the protection of at-risk communities or watersheds or that implement community wildfire protection plans.

(b) COLLABORATION.—

(1) IN GENERAL.—The Secretary shall consider recommendations under subsection (a) that are made by at-risk communities that have developed community wildfire protection plans.

(2) EXEMPTION.—The Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to the planning process and recommendations concerning community wildfire protection plans.

(c) ADMINISTRATION.—

(1) IN GENERAL.—Federal agency involvement in developing a community wildfire protection plan, or a recommendation made in a community wildfire protection plan, shall not be considered a Federal

agency action under the National Environ-mental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

(2) COMPLIANCE.—In implementing authorized hazardous fuel reduction projects on Federal land, the Secretary shall, in accordance with section 104, comply with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

4) Sec 103(d)

(2) NON-FEDERAL LAND.—

(A) IN GENERAL.—In providing financial assistance under any provision of law for hazardous fuel reduction projects on non-Federal land, the Secretary shall consider recommendations made by at-risk communities that have developed community wildfire protection plans.

(B) PRIORITY.—In allocating funding under this paragraph, the Secretary should, to the maximum extent practicable, give priority to communities that have adopted a community wildfire protection plan or have taken proactive measures to encourage willing property owners to reduce fire risk on private property.

5) Sec 104(d)

(3) PROPOSED AGENCY ACTION AND COMMUNITY WILDFIRE PROTECTION PLAN ALTERNATIVE.—In the case of an authorized hazardous fuel reduction project described in paragraph (2), if the at-risk community has adopted a community wildfire protection plan and the proposed agency action does not implement the recommendations in the plan regarding the general location and basic method of treatments, the Secretary shall evaluate the recommendations in the plan as an alternative to the proposed agency action in the environmental assessment or environmental impact statement prepared pursuant to section 102(2) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)).

V. **HFRA sec. 104(f) by its plain language and the Implementation Plan require that the FS "facilitate" the formation of a CWPP within the planning area before "any key planning decisions" are made.**

(f) PUBLIC COLLABORATION.—In order to encourage meaningful public participation during preparation of authorized hazardous fuel reduction projects, the Secretary shall facilitate collaboration among State and local governments and Indian tribes, and participation of interested persons, during the preparation of each authorized fuel reduction project in a manner consistent with the Implementation Plan.

Notice that the statute says "facilitate collaboration among" the various groups. The Forest Service, by gathering input from groups individually is not facilitating collaboration "among" them. The method prescribed by Congress for this type of collaboration "among" is the CWPP. Therefore, the Forest Service needs to "facilitate" the formation of a CWPP. Furthermore, the collaboration needs to be facilitated "in a manner consistent with the Implementation Plan."

> The Collaborative Framework established in the 10-Year Comprehensive Strategy and further explained in the Implementation Plan will improve cooperation and communication among all parties at national, regional, and local levels, acknowledging that **key project planning decisions should be made after collaboration at the local level.** Excerpt from Implementation Plan. (Emphasis added).

Key planning decisions must be made after collaboration at the local level. In other words, sec. 104(f) in combination with the implementation plan, requires the Forest Service to "facilitate" the formation of a CWPP (Congress' prescribed method for local collaboration) and to allow that CWPP to create its own plan before the agency makes any "key" decisions.

Appendix C – Unsupported, Arbitrary and Capricious Statements

The following numbered statements or claims are made in the FEIS without any scientific support either in the FEIS or in the referenced documents.

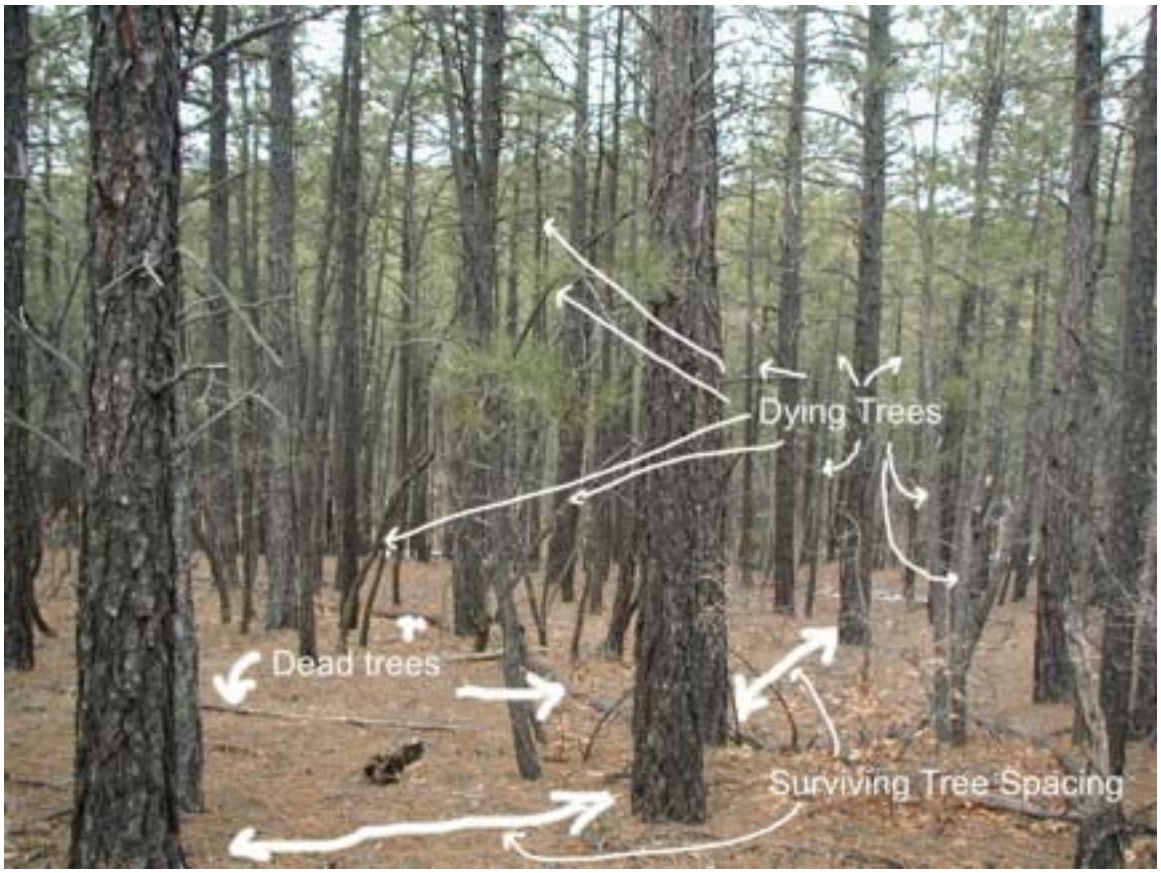
1. Tree densities will remain constant or even increase with time.

The believe by the USFS that tree densities will either remain the same or increase with time is evidenced by the following quotes from the FEIS. Note these are only a few of many such quotes throughout the FEIS.

> *Ponderosa pine stands would remain in an overstocked, unproductive, relatively homogeneous condition. FEIS, Table 4, p.23.*
>
> *Under this alternative, no fuel reduction treatments would be applied within the watershed. Stands would be left in their current overstocked condition and the threat of wildfire would continue to exist. FEIS p.vii.*
>
> *Without management activities in the analysis area, the current stand structure would remain similar to current conditions for many decades. FEIS p.67.*
>
> *Without stand disturbances, the mixed conifer forest type would remain out of balance for decades to centuries. FEIS p.67.*

Assuming that tree densities will remain the same or increase is a key unsupported misstatement that occurs in one form or another throughout the FEIS. For data support, this statement would require tree density surveys performed at the same location at different times. No such data are mentioned in the FEIS or supporting documents. Beyond direct data, there are no scientific studies referred to or provided that substantiate this claim. What is left are USFS opinions, but opinions in the face of evidence to the contrary.

Following are a series of photographs from the Tajique project area demonstrating a significant and continuing decrease in the number of trees. So right now in the project area, the forest is successfully thinning itself. Not only do this pictures point out that tree density in the ponderosa forests is decreasing, they point out another inherent problem with the biasing of science that occurs in the FEIS. Specifically the first picture below is essentially equivalent to Figure 6 of the FEIS. However, the FEIS fails to show the other conditions that also occur within the ponderosa pine forest of the project area. Those pictures, (the second and third pictures below) show the majority of conditions within the project area and do not have nearly the tree density shown in Figure 6 of the FEIS.



Early stage of self thinning. Picture taken at the location where the tree density was highest and there were the fewest trees had already died. Note the surviving trees were measured to be 16 to 20 feet apart.

Toward the final stage of self-thinning. Self-thinned trees (the dead trees) are on the ground, decaying,:

At the end of self thinning. Dead trees on the ground in the previous picture have rotted to become soil for the grasses seen in between the large healthy trees. This poses little or no threat of a crown fire according to the FEIS definition:

> *Agee (1996) determined that it takes a flame height of 4 feet to initiate crown fire when foliar moisture content is below 120 percent and the distance between the surface and the lowest live branches (crown base height) is less than 5 feet. FEIS p.89*

Perhaps more important, this forest has reached the same tree density that the FEIS considers optimum for a ponderosa pine forest. That is, the FEIS provides ranges of tree densities on page 69. These ranges are given in percentage of an SDI of 450 trees per acre. The percentages given in the FEIS range from 10 (45 trees per acre) to 35% (158 trees per acre). So without spending any taxpayer money, without increasing soil erosion, and without increasing fire risk, the forest has reached the desired conditions on its own.

Next however, the FEIS contracts its statements about constant or increasing tree densities in the response to comments:

> ***8. Comment****: It needs to be recognized that the present "doghair" forest is functioning naturally according to the laws of plant succession. (J. Davis)*

***Response**: A forest will continue to self-thin given enough time…..FEIS Response to Comments.*

The FEIS however claims that this process will take essentially forever:

Forest Vegetation Simulator (FVS) predicts very minimal SDI value changes over 100 years with stands currently within the zone of imminent competition induced mortality (>50 percent max SDI). FEIS p. 70.

The above photographs prove the Forest Vegetation Simulator is wrong. The photographs show that some areas have already completed the self-thinning process and others are well on their way. However, sound science does exist that explains these conditions shown in these photographs. Forest researchers have long known of and quantified the self-thinning process (Reineke, L. H. 1933. Perfecting a stand-density index for even-aged forests. Journal of Agricultural Research 46:627-638). Researchers believe that the process is so well defined that they have defined and tested a so-called "self-thinning rule" (*2003 University of Calgary Kananaskis Field Stations Alberta Innovation & Science ISRIP Science Awareness & Promotion Program,* McRoberts and Miles, 2005). This rule is shown graphically in the following plot taken from the University of Calgary presentation mentioned above.

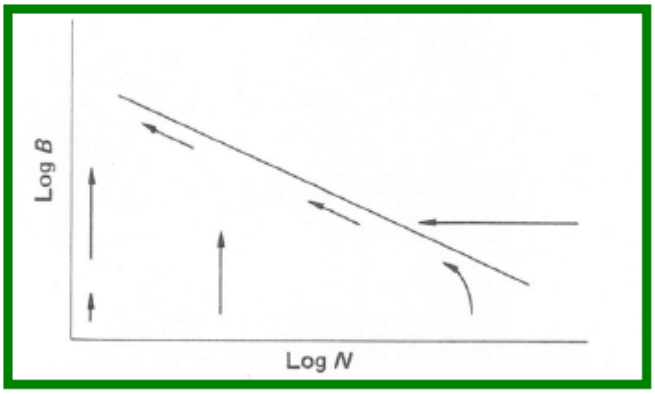


Figure 4.1 The *B-N* graph. The line of slope (-1/2) is the self-thinning line. Arrows indicate trajectories that stands follow at different biomass-density combinations. *(Adapted with permission from: Fig. 1, Pg 168. Westoby (1984) © Elsevier)*

The authors of this report describe the self-thinning rule as follows: *As an even-aged monoculture grows it accumulates biomass until it hits the thinning line, then it follows the trajectory of the thinning line to the left of the graph. In other words, once the boundary has been reached the population's density* (N) *must be reduced before total biomass* (B) *can be further increased. This reduction in density is a result of individuals dying.*

It is important to note that both axes of Figure 4.1 are drawn on a logarithimic scale. This means that after trees reach the self-thinning line, the rate of the weaker individual trees dying increases with time. So instead of a constant death rate, there is an ever increasing death rate of the weaker trees. The above photographs show that the forest has reached the self-thinning rate (trees are dying) and that since part of the forest has finishing self-thinning, the rest is rapidly approaching the final desirable state.

2. The risk of fire is high and increasing

A key justification of the Tajique Watershed Restoration Project is the false assumption that the risk of catastrophic fire is high and increasing. This assumption is made throughout the document and is the basis for the evaluation of every alternative relative to every potential environmental consequence. In the analysis of the no-action alternative, the FEIS goes so far as to assume that a catastrophic fire will immediately consume the entire project area is no action is taken.

Perhaps the most direct statement in this regard appears in the discussion on erosion and sedimentation where the FEIS states directly that the no action alternative is equivalent to a high severity wildfire:

> ***Alternative 2: No Action (High Severity Wildfire)*** *FEIS, Table 35, p.143.*

Statements like these (equating the no action alternative to a high severity wildfire) are found thoughout the FEIS.

In addition, somewhat milder statement, still implying that if no action is taken there will be a catastrophic fire pervades the FEIS. In fact every comparison of the no-action alternative to Alternatives 1 and 3 include such statements. Below is a list of such statements along with the associated affected environment and environmental consequence being addressed:

Affected Environment – Ponderosa Pine

> *Within the unmanaged ponderosa pine stands there would be an increased risk of catastrophic fire events that were rare under historic stand conditions. FEIS, p.50.*

Affected Environment – Stand Density Index

> *In addition, the excessively high stand density index values would place these areas at risk for significant mortality density, fire, insect, or disease induced) within the next few decades. FEIS, p.70.*

Affected Environment – Wildlife and Plant Species of Special Interest

> *Without treatments to abate fire risk, the Forest Service would not be meeting the intent of the MSO Recovery Plan or the Forest Plan. FEIS, p.113.*

Mexican spotted owl: *Without treatments wildfire could reduce canopy closure and density of trees, snags, and large logs below levels preferred by owls. Wildfires invariably destroy many existing large logs and snags, and few snags and logs created by fires are in the large classes preferred by owls. FEIS, p.112.*

Affected Environment – Heritage Resources

Exposure to fire has the potential to affect all heritage resources, not just sites with wood elements, in that all materials exposed to heat and flame can be altered to some extent. FEIS, p.155.

Affected Environment – Scenic Resources

If stand-replacing wildfire were to occur, this would also result in the loss of valued scenic character. FEIS, p.164.

A. ***Affected Environment – Recreation***

… a catastrophic fire event, which would drastically change the experience of wildlife viewing and sightseeing. FEIS, p.173.

1. Affected Environment – Social Assessment

The greatest impact under this alternative would be if there was a landscape-scale wildfire. FEIS, p.187.

From these statements it is clear; the USFS believes that if no action is taken a catastrophic fire will destroy all vegetation and soils over the entire project area.

The simple fact is with all the dangerous conditions the FEIS wants us to believe exist and with all of the lightening-strike fires the FEIS documents, there have been no large natural or man-made fires in the region for over 300 years (see fire risk analysis attached to this objection) with the exception of the USFS 'controlled burn", referred to in the FEIS as the Tajique fire. It is important to point out that this period of time includes a large number of periods of drought including the recent severe drought periods of the early 1950s and the early part of this century. Except for the 'controlled' burns ignited by the USFS, all man-made and lightening-caused fires have been very small. In fact the FEIS states on page 118 that "*Fire history in the watershed is known for the past 70 years with the vast majority of fires being less than 0.2 acre."*

The FEIS attempts to justify their assumption of an imminent catastrophic fire in two ways. First they point out how many lightening fires have occurred over the past 30 years (see Figure 8 and page 81). However, all of these fires are accounted for in their above statement about the minimal size of fires. Next, the claim that the fire risk is increasing due to increasing stand density and increasing population. The false claim of increasing

stand density has already been refuted (see point #1 above). The claim of increasing fire risk due to increasing population is stated below:

> *Given the high number of fire starts in the east Manzano Mountains and the increasing population along the forest boundary, the risk of a fire getting started is on the rise. FEIS p. vii.*

Not only is the statement totally unsupported within the FEIS or referenced documents, a review of USFS fire data (see included GIS fire coverage for the Cibola National Forest) shows that not a single man-made forest fire has ever originated on private land within or near the project area. In fact, within the past 5 years one home burned completely to the ground north of the USFS boundary and the project area but within a forested area. On that property the area on the north side of the home was open pasture and the south side was forested. In this case, only a few trees very near the home were burned.

The other fire-risk related concept that is inherent in the FEIS is that no catastrophic fire will occur if either thinning alternative (1 or 3) is chosen. In fact, scientific studies indicate that the effect of thinning on catastrophic fires is mixed at best (see the attached paper "Modifying Wildfire Behavior by Carey and Schumann, 2003). While Carey and Schumann report of some successes with prescribed fire and the reduction of catastrophic fire, the fact is that most of the large fires in the southwest, specifically New Mexico were caused by prescribed fires. The only large fire that has occurred in the project area (fire number 202768 in the attached GIS coverage) was set by the USFS. The so-called Tajique fire was a controlled burn that quickly got out of hand. A fire that was supposed to burn only 45 acres burned 941 acres. In addition, alternatives 1 and 3 will require at least 10 years to complete during which time most of the land will be in the same state as it is in the no-action alternative. In addition, the FEIS clearly states that Alternative 3 would "… *not fully reduce the threat of crown fire since some stands would remain untreated.*" However, at no time does the FEIS include this fact in the evaluation of potential impacts even thought it is the same basis used for the virtually every evaluation of the impacts of the no action alternative.

To be consistent, the evaluation of Alternatives 1 and 3 should have considered the potential for a catastrophic wildfire during and after thinning.

In summary, the entire argument against the no-action alternative is not only baseless; the evidence is to the contrary. That is, the risk of catastrophic fire is much larger if Alternative 1 or 3 is chosen and the evaluation of Alternatives 1 and 3 was biased without the inclusion of the potential for a catastrophic fire.

3. Additional Unsupported Statements in the FEIS

Beyond the lack of support for the major contentions of the FEIS, an almost endless list of other unsupported statements are made. Following is a list of statements for which no scientific support was found in the FEIS or the referenced documents.

Vegetation conditions are such that shade-tolerant species would continue to reproduce in the understory and create high stand densities with significant ladder fuels. The accumulation of vegetation coupled with low crown base heights only further increases the risk of a fire moving from the ground into the tree canopy. FEIS, p.vii.

Wildfires would continue to be suppressed and fire suppression efforts would become more difficult with time as more trees die and add to the fuel load. FEIS, p. vii.

Southwestern willow flycatcher potential habitat would continue to decline from encroaching conifers. FEIS, p. vii.

Merriam's turkey habitat that would decline at the project scale. FEIS, p. viii.

Conifer encroachment would continue to reduce water yields over time. FEIS, p.viii.

Total present net value costs for replacing or repairing property in this watershed after damage from a catastrophic wildfire would be close to $9.5 million. FEIS, p.viii.

In addition, National Forest System lands encompass the headwaters of this watershed and contribute to water recharge for many domestic water systems. These values are all at risk of loss from wildfire due to overstocked stands and the proximity of private developments that adjoin Federal lands creating a wildland-urban interface zone. .FEIS, p. 5.

The proposed activities are expected to temporarily increase water quantity and lengthen the season of flow within the mountain streams that are critical to nearby communities. FEIS, p.6.

The Citizen's Alternative proposed using only natural ignition to reduce fuel loads, which could result in a large-scale uncontrolled wildfire across most of the watershed. FEIS, p.19.

Mortality among the oldest trees would occur at a faster rate due to resource competition, insects, disease, drought, and potential fire. FEIS, p.23.

Piñon pine mortality would increase and woodlands would become dominated by juniper and oak. FEIS, p.24.

Bark beetle infestations would increase in piñon-juniper stands as density increases. FEIS, p.26.

With the current road system conditions, access for fire suppression, in some areas, would increase the response time, which would allow more vegetation to burn if a wildfire started. FEIS, p.28.

Over the next decade, these stands would become susceptible to western pine beetle outbreaks. FEIS, p.50.

Watershed health is declining. FEIS, p.55.

…some soil and water systems are at risk of being unable to support beneficial uses. FEIS, p.139.

Storm responses show an increase in peak flows due to concentrations of flow in narrow channels. FEIS, p.141.

Channel incision has drained the low flood plains, relative to the historic streambed elevation, leading to a loss of water storage in the sandy alluvium that supported some extension of the base flows over what they are now. FEIS, p.141.

Some gullies have been stabilized by the growth of sedges and rushes on the downstream end of the headcut, thereby raising the water table. FEIS, p.141.

Many of the developments in Sherwood Forest and Forest Valley are located in the flood plains of Tajique and Torreon Creeks. FEIS, p.141.

The above list is only a few of the unsupported claims made in the FEIS. It is very important to reiterate what is meant by an unsupported claim. These are claims for which there are no scientific references or data provides in their support. Some of the statements may appear not to require support but that is not the case. For instance, take the last statement about developments residing in the flood plain. The FEIS presents no data or map showing the flood plain. More important, no home in these developments has ever been flooded. In addition, Forest Valley has covenants requiring that homes not be built in the flood plain. There is one home that violates these covenants but even that home has never been flooded.

Now take all of the statements about water and water supplies. Just briefly there are no measurements of water table elevation (p.141 quote), no measurement of base flows (p.141 quote), and no measurements of peak flows (p.141 quote).

In each case listed above no justification is provided for the claims being made.

2. BIAS SELECTIONS OF DATA OR SCIENTIFIC LITERATURE

The next type of arbitrary and capricious use of science to justify Alternative 1 and 3 and discount the No-Action Alternative is bias in the selection of data and scientific literature.

Throughout the FEIS, the USFS has chosen to use only data and studies that support their pre-selected alternatives (1 and 3) and ignore contrary evidence.

The most glaring examples of this bias have already been discussed: 1) ignoring all scientific literature and site specific data that confirm that self-thinning is occurring and occurring at a rapid rate and; 2) ignoring data on the real risk of a catastrophic fire with the most important risk, prescribed fires, being ignored altogether.

In addition to these two examples of biased use of data, one other major bias is evident throughout the evaluation of the no-action alternative. That bias arises from switching back and forth between the effects of fire and the effects of overcrowding whenever it is convenient. For example, on page 112 the northern goshawk is stated as heading toward extinction because the trees are (supposedly) getting "*even more densely stocked with young trees.*" Then on the same page, the claim is made that "owl habitat could be lost for decades" because of "*stand-replacing fires*." So in essence the USFS wants to have it both ways depending on the issue being analyzed. They assume fire occurs when it is to their advantage and assume fire does not occur when that is to their advantage. There are many examples of this duplicity and other classic one is the evaluation of aspen stands. On page 56, the FEIS states that under the no-action alternative – "*Without treatment, conifer and hardwood competition for resources (sunlight, water, and nutrients) would further reduce clone vigor. Mature stems would become increasingly susceptible to diseases, such as cankers, stem decay, and root rot (Hinds, 1985). Within 10 to 15 years, the mature stems would begin to die."* However, it is well known that fires are key to the regeneration of aspen and FEIS is silent about the potential benefits of fires. Continuing with their inconsistency, the state ponderosa pine forests would be eliminated by a catastrophic forest fire (see page 50, last paragraph).

Just one more example of bias in the selection of science to support the thinning alternatives and discount the no-action alternative. This example is found in the assessment of insects and disease. First the FEIS clearly states that insect activity "*as a whole (insect damage) had been insignificant until 2001,"* 2001 being the time up to which insect surveys had been done. They then go on to state that insect infestation has been observed to be a problem on Isleta Pueblo because of the construction of a fuel break. In their remainder of the document they: 1) discount any problems of insect infestation related to fuel breaks and thinning; and 2) justify thinning (see page 64 for example) based on the threat of insect infestation if no thinning is done. This section also highlights the selective use of science in dealing with mistletoe. First mistletoe is called a pathogen (a name rarely if ever used in describing mistletoe) with respect to tree mortality. The existence of mistletoe is the only reason the USFS has provided for logging large diameter trees. However, mistletoe also reduces the likelihood of catastrophic (see Moir and others, 1997 who by the way consciously do not label mistletoe as a pathogen). Moir and others (1997) also go on to state that

> "*Although there is evidence that mistletoe abundance has increased in the last century (Maffei and Beatty 1988), it has long been an important natural disturbance (figure 5). In addition to mistletoe shoots and associated insects providing wildlife forage,*

infections and brooms are especially suitable for roosting and nesting birds. Dead tops and snags created by mistletoe also enhance wildlife habitat (Bennetts et al. 1996; Hall et al. this volume; Rich and Mehlhop this volume)."

However these documented benefits of mistletoe are never mentioned in the FEIS.

In summary, the FEIS is arbitrary and capricious in the choice of data and science in an attempt to favor the thinning alternatives (1 and 3) over the no-action alternative (2).

3. FAILING TO USE BEST AVAILABLE SCIENCE

Probably the most egregious failure to use the best available science is in the FEIS estimate (actually lack of estimate) of fire risk. The entire basis for any action under this project is that unfounded assumption that a catastrophic fire is about to engulf the entire project region. However, the likelihood of such a fire is never calculated. The closest the FEIS comes to estimating the probability of a catastrophic fire is in the Fire and Resources section starting on page 79. The only way to approximate the implied risk is by combing statements found in different sections. On page 81, the FEIS states that "*this area has an average of five lightening-caused fires per year."* Review of Figure 8 of the FEIS and other fire data show this to not be a true statement but for illustrative purposes, the assumption is made that there are five fires per year. Then on page 79, the FEIS states that "*Approximately 1 percent of all wildfires have been found to escape initial attack and turn into a large- scale fire (Graham and McCaffery, 2003)*[90]*."* The combination of these numbers would lead to an expectation of 1 large-scale fire every twenty years. As stated before the analysis of the no-action alternative assumes that the occurrence of a catastrophic fire is an absolute certainty. Both of these estimates are obviously wrong as the only large-scale fire that has occurred any where near this area in recorded history was the Tajique fire, an uncontrolled controlled burn. As documented in our comments on the draft EIS, the likelihood of catastrophic fire is less than 1 chance in 300 years. The FEIS totally ignores this assessment. Instead of evaluating the analysis presented, the FEIS (p. 327, public comments), rambles on about fire hazard (not risk), flame lengths (not probability), and lightening strikes (not large-scale fires). They proceed to shore up their (lack of) position by citing others who have also failed to calculate the risk of fire. In addition, they make two conflicting statements. On the one hand they state that a GIS can be used to estimate risk and on the other that "*there is no proven method to quantify risk."* Fire risks are calculated continuously by insurance companies. Perhaps more important there are a number of published methods for calculating the risk of a forest fire (see for example Farris and others fire probability, attached to this objection). However, the FEIS fails to even directly address the issue of fire probability preferring to bury its head in the sand and ignore on the ground evidence, site specific analysis, and existing science.

On the other hand the FEIS fails to recognize that the actions proposed under its Alternatives 1 and 3 do not eliminate the risk of fire. In fact, in the short run they acknowledge the risk of fire will increase.

[90] Actually the Graham and McCaggery, 2003 report says no such thing. A copy of this report is included with this objection. This report makes no mention of the likelihood of any fire.

Among other things the Healthy Forests Restoration Act (HFRA):

• Strengthens public participation in developing high priority projects;

• Reduces the complexity of environmental analysis allowing federal land agencies to use the best science available to actively manage land under their protection; HFRA Field Guide, p.1. (Attached on CD-ROM).