Tajique HFRA Citizen's Alternative

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March 21, 2005

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Dear Ms. Estrada:

The following is an outline for a Citizen's Alternative for the Tajique Healthy Forest Restoration Act (HFRA) Project on the Mountainair Ranger District of the Cibola National Forest. The HFRA of 2003[1] is a highly controversial new statute passed by Congress and signed by the President in a state of hysteria following the shocking wildfires in southern California in that same year. Because this statute is so contentious, severely limits public participation, rewrites

[1] Public Law 108-148.

portions of the National Environmental Policy Act (NEPA) process itself, and the Tajique HFRA Project is the first of its kind in the Southwestern Region, we are asking the Forest Service to exercise extreme prudence and to consider a fourth alternative: the Citizen's Alternative.

If the agency is genuinely concerned with public participation in and acceptance of the HFRA, we ask that it slow down and consider a full range of alternatives, not just those that the agency itself has generated. At this time the agency's alternatives are unacceptable to this coalition. In particular, the scale of the project, the inordinate road construction, the lack of any diameter cap, as well as the haphazard application of broad tree cutting prescriptions driven by economics rather than ecological conditions are considered significant obstacles for community agreement and project implementation.

The citizens of the Tajique watershed are directly and immediately affected because the project will adversely affect their drinking water supply, aesthetics, fire risk and traditional use and enjoyment of the watershed. Forest Guardians is a non-profit corporation with approximately 1400 members throughout the United States, including New Mexico. Forest Guardians' mission is to protect and restore the natural biological diversity of forests in America's Southwest, including forests in the Cibola National Forest. Members of Forest Guardians engage in outdoor recreation, wildlife viewing and other activities in the Cibola National Forest, including the watershed, and intend to continue to do so.

Introduction

The Mountainair Ranger District of the Cibola National Forest has proposed the first ever Healthy Forest Restoration Act project in the state of New Mexico since President Bush signed the legislation into law in December 2003. Ostensibly to reduce fire hazard and return the planning area to within its "natural range of variability," the Forest Service is proposing, in part, to commercially log and burn 17,500 acres of public forestlands, including virtual clearcutting of 605 acres and construction or reconstruction of nearly 30 miles of roads in a forest that currently has three times its legal roads : permanently scaring the landscape, polluting water quality, and increasing the fire hazard. This action will increase fire danger instead of reduce it by removing the large fire resistant trees, leaving behind mountains of flammable logging debris, and significantly increasing ignitions via road construction and the inevitable rise in access. The Forest Service proposal would result in 35 truck loads of trees or biomass per day from March to November for 7 years – minimum. (DEIS, at 191) This amounts to 2,180 loads of logs, 16,477 cords of firewood and 6,684,500 cubic feet of general biomass (enough to fill a football field 140' high) for a total of approximately 44 million board feet of trees (11,000 truck loads). This project may also significantly increase sediment delivery to Tajique Creek.

The Tajique Project as proposed by the Cibola National Forest 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 Cibola 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.

The Forest Service states unequivocally that "based on historical fire data this area has an average of 5 lightning caused fires per year which the Mountainair Ranger District fire personnel respond to and extinguish." (DEIS page 84). However, the Forest's own map entitled Manzano Mountain Historic Fire Occurrences (1970-2000) demonstrates that 102 lightning and 52 human caused fires occurred in a 30 year period over the entire Mountainair Ranger District.[2] Our count shows 17 lightning and 16 human caused which amounts to a ratio of approximately 50/50 and combined translates into just 1 fire a year. The government's fire risk number is off by 500%. The fire risk in the planning is actually quite low, consigning the Forest Service's stated purpose and need to a conjecture at best.

The amount of human caused fires is significant because an increase in visitors as a direct result of 28 miles of temporary road construction, will translate into an increase in fire danger to residents and landowners in the future. Much more so than lightning because during thunderstorm season the watch crews are out whereas during the dry non-thunderstorm months the tower remains unmanned.

The citizen's of Tajique and surrounding areas as well as Forest Guardians respectfully request that the Forest Service consider the Citizens' Alternative described below to restore vegetation conditions and reduce fire hazard while protecting structures by using the Fuel Discontinuity Network model and providing strategic fuel breaks and defensible spaces without impairing water quality and degrading wildlife habitat.[3] The Fuel Discontinuity Network (FDN) is based on examining the existing vegetation, landscape characteristics, and human constructions (e.g. roads, structures, etc.) and carefully planning for reintroduction of natural fire. This model does implement limited manipulation of vegetation but only where proven necessary for subsequent use of fire as the central tool for restoration. One significant advantage to the dominant use of fire over vegetation manipulation in the Citizen's Alternative is that the vast fire suppression funds of the USFS can be tapped into rather than relying on limited timber or fuels reduction funds and citizen's would be trained in ecological inventory and monitoring while creating long-term jobs in fire management.

The citizen's alternative strikes the middle path between ecologically impossible efforts to fireproof fire-adapted forests (Agee 1997; Kauffman 2004) and natural regulation of fire-deprived forests (Allen et al. 2002:1428) which is preferred by some of the local residents. "First, do no harm" is the ecological Hippocratic oath that guides our decision-making in deference to the unknowable complexity of natural systems and the inherently uncertain impacts of management (DellaSala et al. 2004:984). This requires ceasing activities that impair the ecosystem's ability to self-heal (Dale et al. 2000; 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 ultimately 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).

[2] See attached Fire Occurrence maps with the Tajique project area drawn in.
[3] See attached letters of support.

Unlike the Forest Service's preferred alternative, the Citizen's Alternative restores natural vegetation conditions, protects the water supply and protects structures on private property from wildfire without large-scale, commercial logging. It would also eliminate livestock impacts to soils and vegetation as well as pollution.

We are simply asking the Forest Service to undertake the same level of analysis and give citizen's equal opportunities to participate, as envisioned by the HFRA itself, in decision making as the agency has done for similar watersheds such as the Santa Fe Municipal Watershed project, Perk-Grindstone HFRA project and the Ashland Forest Resiliency HFRA Project in Oregon (both HFRA authorized projects). The smaller Santa Fe watershed project is going forward with intensive monitoring and without commercial logging or the threat posed by livestock grazing. The Ashland Fire Resiliency Project has undertaken a genuine collaborative approach, informed by the most current science on forests, fire, and restoration. The Perk-Grindstone HFRA Project in Ruidoso grew from a one-year Collaborative Wildfire Protection Plan (CWPP) developed by local stakeholders.

The Tajique Citizens' Alternative protects communities and resources without harming important ecological values in the watershed while providing restoration jobs and income for local workers and businesses. The Citizen's Alternative is a reasonable and multi-faceted approach to ecological restoration that does not include large-scale, commercial extraction and extensive road construction. The Citizen's Alternative addresses activities in both the larger Tajique Watershed as well as the Wildland-Urban Interface surrounding private lands in the watershed.

Any commodity production derived from implementation will occur only as a by-product of restoration and only when such activities do not impair efforts to restore the ecological integrity of the watershed and protect water quality. When those conditions are met, we support the use of small products such as vigas and latillas and firewood by local businesses and individuals. However, the primary economic benefits of the plan are not market-based. Instead the community benefits from investments that train skilled certified restoration practitioners who earn a living wage managing fire, replanting fire-resistant riparian areas, removing unneeded roads and felling small trees to control erosion and protect water quality (DellaSala et al. 2003). Redirecting a small portion of National Fire Plan appropriations could underwrite this investment. Last year 70 percent of National Fire Plan money, more than $2 billion, was spent on fire suppression (McCarthy 2004) despite scientific consensus that fire suppression is contrary to the goal of restoring fire resiliency (Allen et al. 2002; Kauffman 2004:881).

1. The Fuel Discontinuity Network and Plant Association Groups (PAGs)

Recognizing that wildland fire is "a critical natural process [that] must be reintroduced into the ecosystem," the 1995 Federal Wildland Fire Management Policy and Program Review and the 2001 Review and Update of the Federal Wildland Fire Policy ("Federal Fire Policies") commit agencies to shift away from systematic fire exclusion and to use prescribed and natural wildland fire for restoration of fire-adapted ecosystems. Use of management-ignited prescribed fire can help to sustain ecological functions that have been limited or rendered dormant by fire exclusion, and it has been used effectively in the restoration and maintenance of wildlife habitat. Because prescribed fires are typically conducted at relatively low intensity, they do not replicate all of the ecological functions of lightning-ignited fires that burn in a full range of environmental conditions.

Reintroduction of prescribed and naturally ignited fire to the Tajique Creek watershed is critical to restore forest ecosystems because it supports natural, dynamic interactions between ecosystem structure and process. Wildland fire offers distinct advantages over other management options in terms of restoration of landscape structures and spatial patterning, and reflects one of the overall purposes of this alternative, to restore wildland fire as a natural process in the watershed.

In order to safely reintroduce fire to this forest ecosystem, some measures will have to be taken to prevent crown fires from traveling great distances as well as protect human infrastructure. The Fuel Discontinuity Network (FDN) model uses Plant Association Groups (PAGs) and portions of the landscape and infrastructure that are already fire resilient to plan for conservative vegetation manipulation and the subsequent reintroduction of fire. There are at least 19 distinct ponderosa pine and 14 Douglas fir plant association groups ("PAGs") that have been identified in the diverse landscapes of the Southwest (USDA Forest Service 1997). PAGs are an aggregation of closely allied habitat types, a widely used classification of potential local vegetation (Daubenmire 1968). If PAGs are not already mapped, then teams of local individuals can be trained in simple survey techniques to identify and inventory PAGs in the planning area for later mapping by the agency.

Another reason for caution is the 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 investigations have consistently recommended the 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.

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). Other recent research implies that crown fire may have played a larger role in ponderosa pine ecosystems than has been previously believed (Baker 1992, Baker and Ehle 2003, Kotliar et al. 2003).

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 and ecosystem function (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 hazard. The integration of these factors is complex and there will always be significant uncertainty.

We have relied on the following principles to inform the citizen'(sp) alternative with the best available science (Allen et al. 2002; Brown et al. 2004; DellaSala et al. 2004): 1) retain all trees of significant size and age, generally 12 inches in diameter or larger; 2) place highest priority on stands where there is a history of low-severity fire and good evidence that fire regimes have been altered; 3) tailor treatments to site-specific conditions; 4) restore fire as a keystone process; 5) strive for heterogeneity at all scales to protect habitat and enhance biological diversity; 6) apply restoration treatments incrementally with minimal impact to aquatic ecosystems; 7) commit to long-term monitoring and adaptive management programs and; 8) burn or otherwise treat thinning and pruning debris (activity fuel) to reduce fire risk.

Consistent with these principles, we recommend that the following information be gathered immediately to determine the proper role of mechanical treatments as part of a larger restoration strategy: 1) identify PAGs in areas to be treated; 2) determine the range of historic stand structure and tree density in the xeric mixed conifer and ponderosa pine PAGs; 3) use statistically valid methodology to determine the range of fire intervals in xeric mixed conifer and ponderosa pine stands; 4) identify areas outside the wildland-urban interface where prescribed fire and wildland fire use can be safely employed without prior mechanical fuels reduction and; 5) calculate crown bulk density (a measure of aerial fuels) for multiple layers that characterize the xeric PAGs (Perry et al. 2004:914).

a. Category 1. Features that are currently fire resilient.

An examination can be made of mapped vegetation and physical features of the watershed that, according to conceptual ecological models, might currently exhibit conditions that support low crown fire potential. These areas include natural openings, meadows, relatively open ridge tops, moist riparian areas typically indicated by perennial streams, fire resilient stands characterized by large trees and little or no understory vegetation and areas where management or recent fire has temporarily reduced crown fire potential.

b. Category 2. Features that “readily” are made fire resilient.

Physical settings and vegetation data can be analyzed to identify sites in addition to the previously treated lands discussed above where forest composition and structure should be managed or maintained to restore conditions that increase the potential for fire resiliency by sustaining relatively low fire intensity and severity in the future.

The Alternative calls for retaining the following elements of thinned stands: 1) all living or standing dead trees (snags) older than 100 years or with a d.b.h of 12 inches or greater; 2) all dominant and co-dominant trees of both early and late successional species; 3) at least 40% of a younger stand’s basal area and 60% of an older stands basal area; 4) course woody debris at or above levels recommended by Graham et al. (1994); and 5) at least 30% or more of the treatment area in an unthinned condition.

The Alternative calls for no thinning in riparian zones, slopes greater than 40 percent, sensitive areas characterized by poor/unstable soils, low productivity or low regeneration potential and “reference landscapes” and “undeveloped areas” as these are defined in draft National Forest Management Act regulations published in the Federal Register on November 9, 2000.[4] In addition, the Alternative calls for manual thinning treatments to be staggered over time and intensively monitored for impacts to wildlife populations, water quality and impacts to soils.

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[4] 36 C.F.R. § 219.36.

c. Category 3. Strategic Connections (geographic, ecological, logistical, and social).

These areas are evaluated for fire hazard based on several factors including ecological value at risk and the social values and hazards associated with the Wildland Urban Interface (WUI).

Example priorities might include: the planning area that is considered the WUI because of the hazard of fire in the proximity of homes and other development and escape routes, plantations established in earlier timber harvest units, riparian corridors and MSO and Goshawk PACs, and PFAs and roadside corridors within 100 feet on either side of roads spanning short distances between other selected units (designed to offer fuel reduction zones that would be useful in promoting use of prescribed fire and to facilitate wildfire management).

2. Activities within the Wildland-Urban Interface surrounding private land in the project area.

    a. Protecting Homesites

The Citizens' Alternative would spend 50 percent or more of all National Fire Plan money allocated to this project on homeowner education, technical assistance, low-interest loans and grants to clear flammable vegetation from around homes creating a defensible space *if requested by homeowners*.

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).

b. Community Protection Zone and Defensible Spaces

The Community Protection Zone includes utility poles, fences, propane tanks and other flammables immediately adjacent to buildings. The Citizens' Alternative calls for creating a defensible space where firefighters can safely operate by thinning to create breaks in the continuity of tree crowns and partial removal of ladder and small-diameter understory trees. The Community Protection Zone extends approximately 1/4 mile from structures (Schulke and Nowicki 2002).

In this zone, tree crown cover would be reduced to 40 percent with a minimum of 10 feet of open space between crowns; lower branches would be pruned up to 10 feet to reduce spread of fire into crowns; and understory trees would be thinned to achieve the same spacing as overstory trees. On slopes, delimbed trees would be arranged in a shingle pattern, staked on the downhill side and backfilled on uphill side to hold water, reduce soil erosion and retain nutrients. Slash would be lopped and scattered so that it is in close contact with the soil to promote rapid decomposition (Vander Meer 2000). Decaying logs break down relatively quickly in the southwest, contributing both organic matter and nutrients to the soil. All large fire-resistant trees would be retained to suppress the growth of highly flammable brush, reduce wind speed and block radiant heat from igniting nearby structures.

Homeowners would be strongly encouraged to implement effective homesite treatment before public funds are invested to create a Community Protection Zone. The Community Protection Zone is not effective without homesite treatment (Schulke and Nowicki 2002).

3. Fuel Breaks

Fuel breaks would only be located along existing and maintained roads, tying together existing fuels breaks or openings, as well as along private property inholdings with approval of the property owner. Fuel break tree cutting would be limited as above. The generally stated purpose of a fuel break is to reinforce an existing defensible location by fire suppression forces in stopping fire spread (Green 1997 as cited in Finney and Cohen 2003). Very little benefit away from the fuel breaks themselves can be expected and additional impacts may actually occur due to fuel breaks including large burnout operations, which may be of equal or larger size than the original fire, resulting in negative effects on vegetation greater than the original wildfire (Finney and Cohen 2003). Maintenance of fuel breaks is rarely considered either as a fiscal or environmental issue and has not been considered in this particular instance either.

Fuel breaks have already been created around most of the private in holdings and even along some roads in the planning area (DEIS at 79). In fact, the failure to maintain these fuel breaks along FR55 has resulted in ladder fuels growing to a hazardous condition and negating the prior investment. The citizen's alternative proposes tying together existing fuel breaks with existing openings such as the 1000-acre Tajique fire, the juniper push areas, meadows and existing fuel breaks into a network of natural and created fuelbreaks. The citizen's alternative proposes a 75% reduction in the number of miles of constructed fuel breaks from the Forest Service Alternative 1.[5] For the Apache Canyon fuel break suggested on the attached map, we suggest access via the Inlow fuel break on the north end, Novillo Canyon on the south end and access in the middle of Apache Canyon via FR55 above 4th of July campground.

Total existing fuel breaks (Alt 1): 33 miles

Total revised fuel breaks (Citizen's Alt): 8 miles

Total change: -25 miles (75%)

Along ridges and upper slopes, snag levels will be retained at current levels (i.e. no additional snags will be created) unless their retention will create a wildfire control hazard. Snags that increase fire hazard will be felled and left on site unless that, in turn, increases wildfire hazard. Snags should be retained as high as possible on slopes.

4. Restore Natural Fire Regimes

We call for the restoration of natural fire regimes in fire-adapted forests by using managed natural ignitions as prescribed fires.

When fire suppression is required, we call for the use of Minimum Impact Suppression Tactics (MIST) designed to control the intensity and severity of the fire. MIST should become core curriculum in fire training, and competency in MIST should become part of the certification process required for firefighting employment. Crew performance evaluations on wildfires should be based on their ability to safely and effectively utilize MIST. We oppose the dumping of chemical retardants to suppress fire in the project area.

We oppose fire suppression in the lightly roaded areas of the project area and forest types where the fire regime has not been significantly altered.

5. Protect Soils from Erosion

To hold soil from washing off steep slopes in the watershed, we call for the use of contour felling, small check dams and other measures. We oppose all new road construction and road

[5] See citizen's alternative fuel break map attached.

"improvements" and the use of feller/bunchers, masticating machines and other heavy equipment as a major threat to soils and water quality.

Contour felling is a labor intensive process that requires limbed trees be placed perpendicular to the slope, set into the soil, staked on the downhill side and arranged on a shingle pattern. When done properly, contour felling helps reduce impacts of soil disturbance, protects water quality, captures soil nutrients, increase soil organic matter content and improves site productivity. The Citizens' Alternative calls for small trees that may become ladder fuels during prescribed fires to be felled and placed every ten to twenty feet on sloping terrain. Logs less than 6 inches d.b.h. are bundled to increase their size and effectiveness. Decaying logs break down relatively quickly in the southwest, contributing both organic matter and nutrients to the soil. Thus contour felling is also a soil building strategy.

6. Permanently Retire Grazing Allotments

Because:

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.

Livestock grazing allotments within the planning area would be permanently retired to allow the establishment of native grasses needed to carry prescribed burns, restore vegetative diversity and prevent the contamination of water supplies from the microbial parasite *Cryptospordium*.

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).

7. Consider Manzano Mountain Wilderness Additions and Protect any Lightly Roaded Areas

Although there are no areas that meet the roadless definition of the Forest Service in the Tajique planning area, we call for the consideration and eventual designation of any adjacent small roadless or lightly roaded lands as wilderness additions and full protection for all roadless lands from roads and commercial use. These lands should be recommended for wilderness designation because of their proximity to Tajique and the important wildlife values that only roadless lands provide. While these lands are waiting protection as wilderness, the roadless portion of the planning area should be fully protected under the Roadless Area Conservation regulations.[6]

8. Adaptive Management and Monitoring

Monitoring, the periodic measurement or observation of a process or action, must be an integral part of land management, in particular the HFRA of 2003. This process of closely linking management planning with monitoring is an important aspect of Adaptive Management.

Intensive monitoring of water quality, peakflows, stream morphology, soil erosion, snag density, vegetation response to logging and population changes of indicator wildlife is essential to the success of the Citizens' Alternative. This effort will: 1) meet the Healthy Forests Initiative and Healthy Forests Restoration Act (HFRA) requirements to monitor the results of authorized hazardous-fuels reduction projects by establishing a collaborative multiparty monitoring, evaluation, and accountability process to assess the positive and/or negative ecological effects of fuel-reduction projects; and 2) contribute to HFRA reporting requirements by providing an evaluation of and recommendations for the project goals as they relate to National Fire Plan.

Adaptive management or corrective action immediately taken is another key element (for example, if soil erosion or water quality standards are exceeded). The Santa Fe Municipal Watershed project includes a well-funded and comprehensive monitoring program that is not included in the Forest Service preferred alternative for this project.

This plan establishes monitoring objectives and protocol for implementation, baseline, effectiveness, validation, and trend monitoring.

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[6] 36 CFR Part 294.

Implementation monitoring will track the project through layout, contract preparation, during and immediately following project implementation, to ensure that it is implemented as planned. This asks, "Did we do what we said we were going to do as outlined in the Record of Decision (ROD)?"

Baseline monitoring will be carried out in conjunction with effectiveness monitoring. Baseline data will be collected prior to project implementation to characterize the existing conditions specifically for comparison to post project conditions and will provide a basis for effectiveness monitoring.

Effectiveness monitoring will determine if the project activities were effective in achieving the stated goals and objectives based on comparison of pre (baseline) and post project conditions. Effectiveness monitoring asks, "Was the result of the project as we had planned?"

Validation monitoring determines if certain assumptions and data used in the development of this project were valid.

Trend monitoring is designed to detect changes over time, and is useful for assessing how management activities occurring throughout the watershed are affecting (positively or adversely) landscape or watershed scale processes. Trend monitoring is required in some instances by the NFMA, in particular for Management indicator Species (MIS) before the Tajique HFRA project can even commence.[7]

9. Law Enforcement

In order to protect remaining habitat features (e.g. oak, alligator juniper, etc. etc.), prevent wildlife poaching, reduce unwanted human fire ignitions, and curtail illegal OHV use, the Forest Service should commit to an increased law enforcement presence that includes patrols outside of the normal business hours, increased fire patrols and Capilla Peak Fire Tower observation days, and close the area during extreme fire danger periods.

10. Mitigation - Invasive Plants and Roads

The Citizens' Alternative encourages the establishment of native flora and reduction of the spread of non-native invasive plants by manually removing all invasive plants before thinning and burning. During the post-treatment recovery phase roads would be closed and off-road vehicles banned until the full complement of flora is well established. In addition, vegetation monitoring must be done before and after treatments to establish treatment effects and to help determine if treatment objectives are being achieved (Crawford et al, 2001; Griffis et al, 2001).

The Citizen's Alternative calls for no road "improvements" (i.e. reconstruction) or the use of heavy equipment that damages retained trees, harms riparian areas, introduces disease and the

[7] 36 C.F.R. Sections 219.19 and 219.26.

seeds of invasive plants and are major threats to soils and water quality. Instead, the Citizen's Alternative calls for effectively obliterating roads to eliminate motorized traffic and excluding vehicles. This will greatly reduce human-caused fires in the wildland urban interface that have increased rapidly in recent years. Human-caused fires are of greater concern because they are larger and more intense than lightning caused fires that are generally associated with rain and elevated humidity (USDA Forest Service 2001).

Supporters of the Citizen’s Alternative:

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4. Lisa Latven
5. Paul Davis
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7. Jan Moore
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11. Winifred S. Devlin
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14. David Fritz
15. Stefa Zawerucha,
16. Tom Chancey
17. John Davis
18. Elise Johnston
19. Ann Coleman (Forest Valley Ranch developer)
20. Nancy Gardner
21. Katie Park
22. Eric Park
23. Elise Johnston
24. Mike Sweeney
25. Betty W. Smith
26. Ann Adams
27. Paul Chenoweth
28. Patrick Falvey
29. Lisa Falvey
30. David B. Fritz
31. Jeff Davis
32. David Black
33. Claudia Black
34. Ellen Ashbrook
35. Terry Simmons
36. Gary Smethurst
37. Jane Smethurst
38. Dave Davenport
39. Edward Herrera
40. Colette Herrera
41. Jess Alford
42. Peter Neils
43. and at least 125 other individuals expressing support directly to the USFS through the Forest Guardians’ website.

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