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Re: Comments to the Hyde Park Wildland Urban Interface Project and the Pacheco Canyon Forest Resiliency Project pursuant to 40 C.F.R. § 1501.7.

Dear Sandy:

The following comments are hereby submitted on behalf of the citizens and non-profit groups listed above in response to the February 14th letter requesting public comments to the Hyde Park Wildland Urban Interface Project and the Pacheco Canyon Forest Resiliency Project ("projects"). These comments are submitted in accordance with the agency's obligations under the National Environmental Policy Act's ("NEPA") regulations at 40 C.F.R. § 1501.7.

1) The two projects cumulative effects must be documented in an Environmental Impact Statement whose scope is the Greater Santa Fe Fireshed planning area.

The Forest Service must disclose and analyze significant cumulative impacts in the Greater Santa Fe Fireshed. The 1825 acre Hyde Park and the 2200 acre Pacheco Canyon projects are among several past, on-going and proposed tree clearing projects in the Greater Santa Fe Fireshed. Previously announced projects within the Fireshed include the 3754 acre Gabaldon and the 1200 acre Thompson Peak projects. On the southeastern side of the Fireshed there is the on-going 1100 acre La Cueva Fuel Break Project. In addition, trees have been cleared from thousands of acres in the Santa Fe Municipal Watershed as part of continuing man-

agement actions within the Greater Santa Fe Fireshed that will continue into the indefinite future.

The cumulative impacts of all proposed, past, on-going and planned projects for the foreseeable future in the Great Santa Fe Fireshed must be analyzed and documented in a comprehensive Environmental Impact Statement ("EIS"). NEPA does not allow the agency to avoid disclosing and analyzing a project's cumulative impacts "by breaking it down into small component parts." 40 C.F.R. § 1508.27(b)(7).

Earlier the Forest Service proposed reducing tree densities 97 percent (from 1200 trees per acre to 40 to 60 trees per acre) and prescribed fire every 10 to 20 years in the Hyde Park area. These targets are consistent with on-going tree clearing projects in the Santa Fe Municipal Watershed and La Cueva. According to the agency's own researchers, the cumulative impacts to soil productivity may be greater than the impacts from wildfire these treatments are meant to mitigate. The quote below is from Robichaud et al. (2008).

> Fuel management treatments generally are needed every 10 to 20 years and the associated cumulative effects occur during each access and treatment cycle. Although hillslope erosion rates recover quickly, the road system, which is typically used and maintained between treatment activities, is a chronic source of sediment. Sediment yields from high severity wildfires are much greater than the increase in sediment yields due to fuel management activities, but the recurrence interval of such wildfires can be hundreds of years. **Over longer time scales, the cumulative impacts of fuel treatments, repeated at 10-20 year intervals, when combined with the impacts of continuous road maintenance and use, may be similar to the pulse impact from wildfires.** *(emphasis added)*

The extensive network of vehicle routes haphazardly constructed to move heavy machinery and personnel in the project area, which is currently roadless, may cause even greater effects than the designed road system discussed above. In the Santa Fe Watershed these routes typically run straight uphill without waterbars or other mitigation. These routes are typically not obliterated following treatment and therefore will continue to channel soil off slopes and into streams for decades. Similar routes are planned for the Hyde Park and Pacheco Canyon projects.

Machine piling, burning activity fuels ("slash") and unplanned vehicle routes compact soils and elevate surface runoff (Rieman et al. 2003, Reid and Dunne 1984, Karr et al. 2004). Prescribed fire can also increase soil erosion and sediment delivery, sometimes significantly and persistently (Megahan et al. 1995), especially if fires escape and burn larger and more severely than planned.

Earlier analysis predicted that the combination of tree clearing and burning will result in a minimum of 986 tons of soil loss and 25 tons of sediment delivered to streams every treatment cycle. This is a 20 percent increase in soil erosion and a 30 percent increase in sediment over current conditions. These estimates are likely low because of the difficulty of establishing grasses following treatment on steep rocky slopes in Terrestrial Ecosystem Survey Unit 353 (USDA Forest Service 1983:7). These obstacles to successful revegetation of the area cannot be ignored.

Another cumulative impact of extensive soil disturbance is invasion by non-native plants (Dobson and Fielder 2006, Merriam et al. 2007) (unlike the adjacent Santa Fe Municipal Watershed, Hyde Park and Pacheco Canyon receive extensive public use). The project must disclose and analyze the threat of invasive plants from off-road vehicles and other vectors.

The project will destroy a 400 acres monitoring site, one of three wildlife reference sites established to document impacts from aggressive tree clearing within the adjacent Santa Fe Municipal Watershed (see Dr. Peter Stacey's declaration, attachment #1, in our August 25, 2006 comments) The Record of Decision for the Santa Fe Municipal Watershed Project requires that terrestrial and associated wildlife be monitored, including species in the undisturbed reference site (USDA Forest Service. 2001:7).

The second monitoring site in the proposed Gabaldon project is also at risk. The third monitoring site within the Santa Fe Municipal Watershed was destroyed and abandoned in 2004. The loss of all three monitoring sites is a significant cumulative impact that invalidates wildlife monitoring in the Santa Fe Municipal Watershed.

As documented at a meeting held January 6, 2006, a Forest Service scientist peer-reviewing the decision to destroy monitoring sites was told "this is going to be done, what can we do to make it statistically sound?" Besides being unethical, pressuring scientists to produce desired outcomes is contrary to the purpose of NEPA which is to assure that high quality information and accurate scientific analysis guide agency actions. 40 C.F.R. Section 1500.1(b).

2) <u>The benefits of mixed-severity fire and the adverse effects of suppressing large, high-severity fire must be documented, disclosed and evaluated in a comprehensive EIS. A mixed-fire based alternative must evaluated in the EIS.</u>

The scoping documents state that low-intensity fires occurred in the project area every 5-10 years and that reducing fuels will return the area to this historic fire re-

gime. The assumption that low-intensity fire is the historic norm is based on data from scars in the growth rings of surviving trees damaged by fire. While such data can provide annually precise dates for past fires at the sampled locations, these methods cannot effectively determine past occurrence of high-severity fire.

Multiple lines of evidence suggests that mixed conifer and ponderosa pine forests such as those found in the project area are characterized by mixed-severity fire that include ecologically significant amounts of weather-driven, high-severity fire. The ecological importance of large, infrequent, and often severe natural disturbances in structuring historical landscapes and maintaining their biological diversity is well established. Suppressing large fires results in multiple adverse impacts that must be disclosed and evaluate in an EIS. They include: (1) declining and potentially threatened native animals dependent on severely burned patches (Hutton 2008 and Hanson 2014); (2) loss of biologically diverse early-successional habitat (Swanson et al. 2001 and Della Salla et al. 2014); reduction in fire-stimulated native shrubs and trees that were historically abundant (Baker 2014 and Vankat 1978); and simplification of landscape heterogeneity that is key to landscape resilience to future climate-change effects (Millar et al. 2007).

A reasonable alternative must be developed that focuses fire risk reduction activities adjacent to homes to help maintain characteristic biodiversity, expand opportunities to manage fire for ecological benefits, reduce management costs and protect human communities.

3) Fuel treatments will likely have negative ecological impacts without providing compensatory benefits from reduced fire severity due to the transient effects of treatments and the patchy nature of fire.

In the earlier analysis, the Forest Service claimed there is more than a 90 percent probability of a large crown fire in the next 20 years. This maybe true at a landscape scale but the probability that such a fire will occur in the relatively small project areas is vanishing small. Rhodes and Baker (2008) estimate the probability of a moderate to high intensity fire in any given area of Southwestern ponderosa pine forests as .0025% per year, or 15% over 60 years.

Since fuels reduction treatments may be effective for only 10-20 years (Agee and Skinner 2005), this treatment is unlikely to encounter the fire it was designed to withstand. Thus there will be only negative effects to watershed, soils and wildlife from tree clearing without providing any compensatory benefits from reduced fire severity. Rhodes and Baker (2008) find that for the vast majority of treated areas:

> Potentially adverse treatment effects on watersheds are not counterbalanced by benefits from reduced fire severity.

Our Citizen' Restoration Plan for the Greater Santa Fe Fireshed 1.0 ("CRP") provides seven strategies and numerous management prescriptions to reduce the effects of crown fire with minimum environmental impact (the CRP was provide to the agency with our earlier comments). In the long-term the CRP seeks to create a more resilient landscape by allowing fire to burn at the seasons, frequencies and intensities to which forests in the fireshed are historically adapted.

4) Please disclose and analyze impacts to human health and the environment of hazardous airborne emissions released during prescribed fires.

Combustion of forest fuels during wildfires and prescribed fires results in the emission of thousands of chemical compounds into the atmosphere (Montana Department of Environmental Quality 2001) including mercury and DDT breakdown products.

The Mercury Inventory for New Mexico (New Mexico Environment Department 2008) estimated the total amount of mercury released in 2002 to the state's air, water and land from all sources, including forest fires, is 5,854 pounds. Wildfires and prescribed burns account for the second highest total amount of mercury released in New Mexico, approximately 20% of the total or 1171 pounds.

Mercury is a neurotoxin and can damage the brain, kidneys and lungs. Unborn and young children are the most susceptible to the toxic effects of mercury. Pregnant and nursing mothers can pass mercury to the developing fetus or infant. Mercury released into the atmosphere is eventually deposited into soil, vegetation and surface waters. Biological processes in water and soil convert elemental and inorganic mercury into methylmercury, which is taken up by small organisms in the food web. The concentrations of atmospheric mercury in New Mexico are the highest in the U.S. (New Mexico Environment Department 2008).

Another concern is DDE in the soil that may be present as the result of past aerial spraying of DDT in the Santa Fe National Forest and adjacent lands (Dr. Ann McCampbell, personal communication).

Vulnerable populations to these and other hazardous compounds include the young, the elderly, asthmatics, chemically sensitive, pregnant women and those with cardiovascular disease. The total percentage of these vulnerable populations in New Mexico is 87%, clearly a majority.

To protect citizens and maintain air quality standards the Forest Service must comply with New Mexico's Smoke Management Regulation 20.2.65 that allows only "untreated wood" and uncontaminated vegetation to be burned. To determine

whether vegetation in the Hyde Park area meets this requirement, the Forest Service must analyze representative woody material, leaves and soil for chemical contaminants. The Forest Service should also disclose and analyze all products, ingredients and chemicals used in igniting fires and evaluate their potential environmental and health impacts.

The Hyde Project uses antiquated modeling of smoke emissions that fails to account for the cumulative effects of multiple prescribed fires, wildfires and other sources of air pollution. The BlueSky program developed by the agency's Pacific Northwest Research Station provides consistent and reliable real-time forecasts of the local and remote effects on air quality from wildfires, prescribed burns and wildland-use fires (Rapp 2006). The Forest Service must utilize the best available information and technology to comply with NEPA.

5) <u>The Hyde Park project must address global warming in a comprehensive Environmental Impact Statement</u>.

Climate change is a fundamental environmental issue and its effects fall squarely within NEPA's purview. The Council on Environmental Quality ("CEQ") provides guidance that assist federal agencies in disclosing the impacts of greenhouse gas ("GHG") emissions. Effects include both the potential effects of the proposed action as indicated by assessing GHG emissions and the effects of climate change on the proposed action and its environmental impacts. These effects include more frequent and intense heat waves, longer fire seasons and more severe wildfires, degraded air quality, more heavy downpours and flooding, increased drought, more intense storms, harm to water resources, and harm to wildlife and ecosystems.

In addressing GHG emissions, the Forest Service must include a comparison of estimated net GHG emissions and carbon stock changes that are projected to occur with and without the proposed actions. A tool for such calculations is the Carbon On Line Estimator (COLE), which uses Forest Service inventory and other ecological data. It is available at http://www.fs.usda.gov/ccrc/tools/cole.

According to the CEQ, finding that a land management action represent only a small fraction of global emissions is <u>not</u> an appropriate basis for deciding whether or to what extent to consider climate change impacts under NEPA. CEQ also notes that monitoring is particularly appropriate to confirm the effectiveness of mitigation to reduce the impacts of a proposed action to resources increasingly vulnerable to climate change. It is well established that the Santa Fe National Forest has been woefully deficient in monitoring the impacts of its Land Management Plan.

The Global Climate Change Prevention Act of 1990, sections 6701(b)5 and (c)3, requires that all federal agencies analyze climate change effects in decision-making and propose alternatives that mitigate the adverse effects of climate change.

National Forests function as a critical carbon pool in the global balance of greenhouse gases. Tree clearing projects adds carbon to the global carbon budget. Depro et al. (2008) calculated that if all tree cutting ceased on National Forests, the rate of carbon storage on those lands would increased by an average of 30 percent over the next five decades. The Hyde Park project alone will produce 6162 tons of carbon dioxide and over 13 tons of methane as the result of prescribed burning.

The future will not look like the past, requiring adaptation to a dryer and warmer climate. New growth is often failing to replace dying trees (Pennisi 2009), a trend that may result in less dense forests. Also changing climate, not past fire exclusion polices, are primarily responsible for recent wildfire trends (Running 2006). These and similar findings must be thoroughly addressed in a comprehensive EIS.

6) <u>It is unlawful under the Migratory Bird Treaty Act and applicable New Mexico law to kill birds in the project area without a permit.</u>

Mr. Bill West, an experienced birder who resides in Hyde Park, has documented bird species found in both the general Hyde Park area and in the project area itself. His survey from May and June of 2015 documented: Grace's Warbler, White-winged Dove, Gray Flycatcher, Western Tanager, Flammulated Owl, Violet green Swallow, Black-throated Gray Warbler, Warbling Vireo, Orange-crowned Warbler, Yellow-rumped Warbler, Hermit Thrush, Plumbeous Vireo, Cordilleran Flycatcher, Common Poorwill, Western Screech Owl and Common Nighthawk. His survey in May and June of 2016 include all of the above plus: Northern Goshawk, Cooper's Hawk, Sharp-shinned Hawk, Ash-throated Flycatcher, Western Wood Pewee and Townsend's Solitaire. He noted that Flammulated Owls called much later in 2016 (mid June) than in 2015.

In addition, on the morning of July 24, 2006, Mr. West identified 23 bird species within the Hyde Park project area, including several pairs and juveniles, indicating that the project area provides excellent bird breeding habitat. Nine species were cavity nesters that would be killed by felling occupied snags during the breeding season. We provided a list of those species in our March 23, 2009 comment letter to Hyde Park Wildland Urban Interface Fuels Reduction Project.

In should be noted that the most recent survey documented the presence of Northern Goshawk. The Northern Goshawk was designated by the Forest Service as a sensitive species in 1982 to meet its duty under the National Forest Management

Act to provide for the diversity of animal communities. The Santa Fe Forest Plan was amended in 1996 with guidelines to protect Goshawk habitat mandating a 40 percent average canopy cover in all mid-aged, mature and old growth forests (VSS 4,5 and 6) outside of Mexican spotted owl restricted and protected habitat. These guidelines must be complied with to be consistent with the Forest Plan. The Goshawk canopy closure requirement is a bare minimum. Arizona Game and Fish Department (1993) contend that a denser canopy closure is needed by non-hibernating, non-migratory prey species, such as Abert's squirrel that Goshawks utilize for winter prey.

The Goshawk, and the bird species listed above, are protected by the Migratory Bird Treaty Act ("MBTA") 50 C.F.R. 10:13 and the international migratory bird treaties implemented through the Act. Under the MBTA it is unlawful "at any time, by any means or in any manner to . . . kill . . . any migratory birds" 16 U.S.C. 703-711. This applies to federal agencies and their employees who may not intend to kill migratory birds but whose actions nonetheless result in unauthorized "incidental take" of migratory birds (incidental take is the unintentional death of adults, juveniles, nestlings, fledgings or eggs resulting from an activity although that is not the purpose of the activity). Humane Society v. Glickman, 217 F. 3d 882 (D.C. Cir. 2000).

The U.S. Fish and Wildlife Service (FWS) has long recognized the MBTA's prohibition on incidental take. Consistent with that longstanding view, FWS is developing regulations to provide legal authorization of incidental take in circumstances in which the take is consistent with the purposes of the MBTA. (see Migratory Bird Permits; Programmatic Environmental Impact Statement, Notice of Intent, 80 Fed. Reg. 30,032: May 26, 2015).

In summary, the MBTA's broad prohibition on taking and killing migratory birds by any means and in any manner includes incidental taking and killing. It is not necessary to show that a defendant willfully or intentionally took or killed birds to prove a violation of the MBTA. A more detailed explanation of MBTA's incidental take provisions can be found at https://solicitor.doi.gov/opinions/M-37041.pdf.

Therefore, the Forest Service must obtain a "take" permit from the FWS and abide by its conditions (such as only cutting trees and burning outside the nesting season). It is a violation of the MBTA to cause the unintended but foreseeable death of individuals of these protected species by clear cutting stands of "decadent" aspen and removing thousands of ponderosa pine trees, thereby killing nestlings, fledglings and destroying eggs without the required permit.

The Forest Service also has yet to officially implement the measures called for by Executive Order 13186. Executive Order 13186 signed by former President Clinton on January 10, 2001 directs federal agencies to take specific actions to further implement the MBTA. These actions include integrating bird conservation principles, measures and practices into agency activities and avoiding or minimizing adverse impacts to migratory birds and their habitats when conducting agency actions.

In addition, New Mexico law imposes penalties on "any person or persons" that in any manner destroys any songbird. NMSA 1978, Section 17-2-13 (2006); NMAC 19.30.2.7.

To assist you in complying with the FWS permit, we will locate nests of protected birds that utilize the project area and monitor these nests during the breeding season. Any willful violations of the permit will be fully documented and become evidence for review by a federal court.

6) Please document how plant and animal diversity is provide for in the Hyde Park project area using the best available science.

The National Forest Management Act of 1976 ("NFMA") imposes a substantive duty on the Forest Service to "provide for diversity of plant and animal communities . . ." 16 U.S.C. § 1604(g)(3)(B). This statutory intent is attained in NFMA's 2005 implementing regulations by requiring the Forest Service to:

> document how the best available science was taken into account in the planning process; evaluate and disclose substantial uncertainties in that science; evaluate and disclose substantial risks associated with plan components based on that science and document that the science was appropriately interpreted and applied. 36 C.F.R. § 219.11(a)(1)-(4).

The Forest Service may satisfy the 2005 regulations' requirements through the use of "independent peer review, a science advisory panel, or other review methods to evaluate the consideration of science in the planning process." *Id*. § 219.11(b).

Please document how the best available science is taken into account in planning to provide for diversity in the project area and the larger Greater Santa Fe Fireshed. For example, evidence from multiple sources across large land areas, combined with comprehensive recent fire-severity data, together show that high-severity fire is generally operating at or below historical rates. Thus, reducing fire-severity is fire suppression rather than restoration. Fire suppression is incompatible with laws and programs that mandate or encourage restoration of historical fire

regimes and forest structure (e.g., Collaborative Forest Landscape Restoration Program) (Baker 2015).

Miscellaneous Comments:

- Please present site-specific evidence that fire regimes have been altered in the Hyde Park project area.
- We oppose off-road vehicles used for project activities in inventoried roadless areas because repeated and unregulated use results in soil erosion and loss of soil productivity. These vehicle routes are roads since, in many cases, they are motor vehicle travelways over 50 inches wide. Road construction is prohibited in inventoried roadless areas such as the Hyde Park project area.
- An open canopy increases fireline intensity, reduces fuel moisture and increases midflame wind speed (Platt et al. 2006). Please evaluate these effects on increased short-term fire risk.
- The estimate that slash from vegetation treatments will be disposed within one year of project completion is unrealistic. Slash piles in the Santa Fe Watershed have been untreated for more than 10 years.
- Please document the species associated with high severity fires and dense forests that will be negatively impacted by project activities.
- Please document how wildlife populations will be restored to the project area.
- Please disclose how leave trees will be protected during prescribed fires.
- Please provide empirical evidence to document the success or failure of contour felling in the Santa Fe Municipal Watershed.
- Please perform a complete cultural resources survey to document and protect valuable cultural properties.
- The Forest Service must comply with the Clean Water Act and obtain a 404 permit when cutting trees in the 5 acre riparian area northeast of the campground.
- Cutting trees in the riparian area violates the riparian protection standards in the Santa Fe National Forest Plan.
- Aggressive tree cutting and burning is harmful to Abert's squirrel. Please document how the Abert's population will be protected in the project area.

- ❖ Document why project activities will not raise aluminum levels in Little Tesuque Creek, an impaired water under the Clean Water Act due elevated aluminum levels.
- ❖ Will peak flows into Little Tesuque Creek be monitored?
- ❖ How does the project account for the fact that all Habitat Types in the project area have Douglas fir/white fir, not ponderosa pine, as the potential natural vegetation.
- ❖ To help the agency comply with the Migratory Bird Treaty Act, we are willing to work with the Forest Service to document songbird nest sites and protect them during project activities.

Respectfully submitted,

Sam Hitt /s/

Sam Hitt (contact)

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