January 23, 2022

Objection Reviewing Officer
USDA Forest Service, Southwest Region
333 Broadway SE
Albuquerque, NM 87102
Submitted via email to: objections-southwestern-regional-office@usda.gov

Re: Objection to Santa Fe Mountains Landscape Resiliency Project Draft Decision and Finding of No Significant Impact

To the Objection Reviewing Officer,

WildEarth Guardians, The Forest Advocate, and the Santa Fe Forest Coalition submit this objection to the U.S. Forest Service's December 2022 draft decision notice ("Draft DN"), finding of no significant impact ("FONSI"), and the December 2022 Final Environmental Assessment ("Final EA") for the Santa Fe Mountains Landscape Resiliency Project (SFMLRP) on the Espanola and the Pecos-Las Vegas Ranger Districts of the Santa Fe National Forest. In its Draft DN and FONSI the Forest Service's selected alternative is Alternative 2, the Proposed Action, which includes mechanical and manual vegetation thinning treatments, use of prescribed fire, and riparian restoration on National Forest System (NFS) Lands within the project area. The project includes road closure on up to 1.5 miles of NFS roads. The project area covers 50,566 acres, with 38,680 acres designated for vegetation treatment over the next 10 years, including 18,000 acres of vegetation thinning, 38,000 acres of prescribed burning and 680 acres of riparian restoration. The project also includes maintenance burning, to occur every 5 to 10 years. The responsible official is Acting Santa Fe National Forest Acting Supervisor, James Duran.

As required by 36 C.F.R. § 218.8(d) the Lead Objector is:

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These objections are timely filed. The Draft DN and FONSI was published in the Albuquerque Journal (the newspaper of record) on December 9, 2022. The deadline to submit objections is thus January 23, 2023. We hereby incorporate the objections filed by Wild Heritage, (Exhibit 1), and an additional separate objection filed by Santa Fe Forest Coalition, (Exhibit 2).

On July 19, 2019 WildEarth Guardians, and the Defenders of Wildlife together submitted comments on the scope of the SFMLRP raising a number of concerns, including potential impacts to a range of wildlife species. On October 29, 2021, WildEarth Guardians, The Forest Advocate and the Santa Fe Forest Coalition together submitted timely comments on the September, 2021 Santa Fe Mountains Landscape Resiliency Project (SFMLRP) Draft Environmental Assessment ("Sept. EA"). Yet, it is unclear if the agency considered our Draft EA comments as they fail to appear on the Forest Service SFMLRP webpage reading room.[1] However, we received the automated reply acknowledging our comment submission. Exhibit 3. In addition, our comments do not appear on the list of letters under "Table B-1. Draft Environmental Assessment Comments Received." Final EA, Appendix I at 29. Unfortunately, that table lacks corresponding letter numbers that align with the Forest Service's response to comments in the Final EA, Appendix G. The inclusion of a table listing the comment coding structure also fails to delineate which comment letters correspond to specific issues or action. Final EA, Appendix H, Table A-1. As such we are not able to determine if any of the agency's responses to comments are specific to those we submitted in our October 29, 2021 letter.

Our comments advocated for a number of considerations, including thoughtful management of the agency's road system, its associated impacts, and the overall need to protect and improve the ecological integrity of forest, watersheds and wildlife habitat in the planning area. Each of the objectors here have organizational interests in the proper and lawful management of forest

[1] *See* https://cara.fs2c.usda.gov/Public//ReadingRoom?Project=55088 (last visited 1/17/2023).

resources, including the road system and its associated impacts on the Santa Fe National Forest's wildlife and wild places.

OBJECTIONS

I. Failure to Prepare an Environmental Impact Statement

Our comments explained at length how this project may have a significant impact on the environment and thus requires detailed analysis through an Environmental Impact Statement (EIS). The Council for Environmental Quality's (CEQ) regulations define significance in terms of context and intensity, which includes *inter alia* the scope of beneficial and adverse impacts, unique characteristics of the geographic area, degree of controversy, degree of uncertainty, and degree to which an action may affect species listed or critical habitat designated under the Endangered Species Act. 40 C.F.R. § 1508.27, 1978 (defining "significantly").[2] We noted that this project may significantly affect the human environment for a number of reasons, all of which still remain. In the Draft DN the agency fails to provide or offers flawed rationales for dismissing as significant the reasons and examples we provided in our comments.

In determining significance of the selected alternative, the applicable regulations direct that "an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. 40 C.F.R. § 1508.27, 1978. The Forest Service asserts that annual acre limits on thinning and prescribed burn activities assure there will be no significant impacts in regards to the project's context, even while stating "[h]owever, if factors such as funding, technology, and weather allow for moving ahead at a greater pace without exceeding the impacts described in this document, the intention is to implement this project as soon as it can be safely completed." Draft DN at 16. Here the agency fails to address the actual context of this project, including its 10-15 year timeframe, with "with additional prescribed fire maintenance treatments beyond 20 years." *Id.* Essentially, the Forest Service is proposing perpetual active management over the life of the SFNF Revised Forest Plan, and fails to address how this will affect the interests of those who visit the forest seeking a natural experience. Our comments explained many people do not enjoy the artificial conditions that would result from the Selected Alternative, which we expand on further in this objection. Also, the Santa Fe National Forest's very close proximity to the City of Santa Fe amplifies impacts to local residents. Certainly within the context of the project's temporal scope and the extent of its actions affecting a variety of interests, there will be significant impacts necessitating evaluation in an EIS.

[2] The CEQ regulations per 85 Fed. Reg. 43304 (July 16, 2020)implementing NEPA are inapplicable to this project since they only apply to projects "begun" after September 14, 2020.Scoping for this project began in June, 2019.

In determining the intensity of the selected alternative to assess significance, the regulations provide a list of considerations, several of which we raised in our comments and that the agency fails to properly address.

- Will cause significant impacts, both beneficial and adverse. In response to our draft EA comment that we were concerned that the use of heavy equipment for vegetation thinning and prescribed burns will likely result in a decrease of soil productivity, especially in class 6 soils, "Under the Proposed Action, mechanical treatments involving the use of heavy equipment for thinning vegetation would result in degraded soil productivity by disturbing, compacting and sterilizing the soil. These activities would result in soil disturbances and compaction, making soils more susceptible to erosion, less able to absorb water, and less productive (Stednick 2010)." The Forest Service dismisses these concerns and simply states, "[t]he reader is referred to EA Section 3.6, where impacts to soil productivity, watershed flow, and water quality are disclosed…Appendix C describes best management practices, project design criteria, and mitigation measures that would be implemented to mitigate potential adverse impacts to soil, water, and riparian resources and guide implementation to achieve desired conditions." Final EA, Appendix G at 4. The response fails to demonstrate how the adverse impacts lack significance as there is no evidence provided that these BMPs would substantially mitigate the impacts of mechanical treatments. Further, the Forest Service asserts that in comparison to wildfire, watershed impacts are insignificant: "Under the Selected Alternative, disturbance associated with fire management activities, vegetation loss from fire, and vegetation thinning treatments will result in short- and long-term adverse impacts to watershed resources (soil, water quality, and flow regimes). Adverse impacts to watershed resources are expected to be minimal, short term, and insignificant when compared with those resulting from high-intensity wildfire." Draft DN at 20. Here the agency fails to address the long-term watershed impacts, and arbitrarily asserts the selected alternative would only result in minimal, short-term impacts when compared to high-intensity wildfire. The Forest Service here uses high-intensity wildfire effects as the point of comparison to assert all actions under the selected alternative would be insignificant without providing justification or evidence for the comparison. Such a response erroneously assumes high-intensity wildfire would result in each treatment area absent implementing the selected alternative. Yet our comments raise the likelihood that wildfire intensity would be variable and raises serious concerns about any assumption that treatments would prevent high-intensity wildfire.

- Involves a geographic area with unique characteristics. As we stated in our SFMLRP draft EA comments, the Forest Service must consider the unique characteristics of the Thompson Peak Inventoried Roadless Area (IRA). The Forest Service arbitrarily fails to recognize this IRA as an area with unique characteristics. Draft Decision at 20. Yet, the agency states "[i]t is recognized that all of the IRAs, including Thompson Peak, are special areas to be protected for future generations, if not recommended wilderness areas

in the future." Final EA, Appendix G at 19. We agree, and as such the Forest Service should consider the Thompson Peak IRA's as an area with unique characteristics as was done in the Santa Fe National Forest Revised Land Management Plan FEIS that designates Thompson Peak as a recommended wilderness area. Under the Selected Alternative, the SFMLRP proposes various actions within the Thompson Peak IRA, and claims, "[t]reatments where the proposed project and recommended wilderness overlap would need to comply with plan components for recommended wilderness areas. If this area were to become a wilderness area or the forest plan were to be amended, the conditions-based approach would allow flexibility to conform to the forest plan." Final EA, Appendix G at 19. Here we note that if fuel treatments occur before Thompson Peak were to become designated as a wilderness area, then it would be too late to conform to the forest plan, despite utilizing the condition-based approach. Given that the Forest Service intends to treat 11,384 acres of the Thompson Peak IRA, much more than in any other IRA, we are concerned they may prioritize it as one of the early components of the SFMLRP that occurs before the Forest Plan revision is completed. Decisions regarding treatments in the Thompson Peak IRA should only occur after the Forest Plan Revision is completed, and after an EIS is completed for the SFMLRP.

- Involves effects on the human environment that are likely to be highly controversial. We stated in our draft EA comments that "[r]ecent scientific publications we discuss below raise serious questions as to the efficacy of vegetation treatments in reducing uncharacteristic wildfire risk and increasing forest resilience. Our comments show that such "resistance" strategies that attempt to mimic historical conditions are inherently flawed, especially during changing climate conditions, because they fail to utilize reference conditions based on current and future ranges of variability." These concerns are not significantly addressed in the Final EA or in the agency's response to comments, and the Forest Service analysis is based on flawed and unproven assumptions. For example, there is no mention or analysis of the important work of William Baker on the historical fire return in the Santa Fe watershed, and in ponderosa and mixed conifer forest across the west, yet the frequency of prescribed burn treatments, every 5-10 years, is substantially based on estimates of the historical fire return. The Forest Service completely and arbitrarily dismisses our comments demonstrating scientific controversy by asserting the following:

    > The U.S. Forest Service has determined that none of the comments provided during the public involvement process document a substantial dispute as to the environmental consequences of Alternative 2, the Selected Alternative (Appendix G of the EA). The conclusions in the EA analysis were drawn from scientific data and professional judgment of U.S. Forest Service subject matter experts, as documented in Chapter 3 of the EA. These conclusions are also supported by the USFWS.

Draft Decision at 21. Here the Forest Service fails to demonstrate that effects from the Selected Alternative are not highly controversial. We expand on this failure below.

- Involves effects that are highly uncertain or involve unique or unknown risks. Our comments explained that the high degree of scientific controversy also results in a high degree of uncertainty, which the Forest Service fails to address, and instead states "[t]he risk to the quality of the human environment associated with the Selected Alternative will be both adverse and beneficial." Final EA, Appendix G at 18. This fails to address the high degree of uncertainty resulting from the Selected Alternative, and demonstrates the arbitrary, capricious and conclusory nature of its supposed benefits. Further, the agency acknowledges "[a]lthough planned actions and management response to wildfire are not unique, and are predictable to a degree, wildfire can change rapidly due to changing conditions associated with such events." *Id.* Here we note prescribed burns also introduce a high degree of uncertainty that necessitates evaluation under an EIS. Specifically, the agency must acknowledge and account for the chance of escaped prescribed burns along with the associated costs and effects. The Hermits Peak/Calf Canyon Fire complex, which burned 341,741 acres and over 500 homes, was the largest wildfire in New Mexico history. The Hermits Peak Fire was caused by an escaped Forest Service prescribed burn, ignited during a period of intense spring winds, with red flag warnings nearby. This action has had severe impacts on the far eastside of the SFNF, including the Pecos Wilderness, and on many rural communities to the east and northeast of the SFNF. The Hermits Peak Fire merged with the Calf Canyon Fire, which was also caused by an escaped Forest Service prescribed burn, in this case pile burns. This fire complex has been extremely costly in terms of loss of forest resources, loss of homes, displacement and hardships for many local residents due to mandatory evacuations, and health impacts from high levels of particulates from wildfire smoke. There were three deaths due to post-fire flooding. It is abundantly clear that prescribed burns involve highly uncertain and unique or unknown risks. A full reevaluation of prescribed burn rules, procedures and BMPs within the SFMLR Project analysis, in addition to a revised national prescribed burn program and regulations, is absolutely necessary and required, and an analysis of the cost/benefit of prescribed burns proposed in the SFMLRP must be done in the context of an EIS. The potential for escaped prescribed burns must be evaluated. Any risk analysis only in the context of prescribed burn plans is not sufficient, nor is analysis in either the Gallinas-Las Dispensas Prescribed Fire Declared Wildfire Review or the National Prescribed Fire Program Review sufficient. Analysis must be specific to the SFMLRP, and done within the SFMLRP NEPA analysis.The Forest Service did not adequately consider the Santa Fe Conservation Alternative, which recommends smaller-scale fuel treatments in order to reduce risks and adverse effects.

- Is very likely to <u>establish a precedent for future actions with significant effects</u>, in particular the agency's misguided attempt to authorize a project that relies on

conditions-based management, as explained below. The Forest Service asserts there would be no precedent established and makes vague references to other projects stating "that this project is similar to what has been approved and/or currently exists on NFS land." Draft DN at 22. Yet, the agency fails to disclose what other projects have been authorized that rely on conditions-based management, evaluated only under an EA, that will last 10-15 years and beyond 20 for prescribed burns, and that take place across thousands of IRA acres.

- Is related to other actions with cumulatively significant impacts, A number of similar widespread and aggressive fuel treatments have been completed, and/or are planned to be completed within or adjacent to the SFMLR Project area, in particular the Santa Fe Municipal Watershed Project, the La Cueva Fuel Break Project, the Hyde Park WUI Project[3] and the Pacheco Canyon Forest Resiliency Project. The agency does not adequately address the cumulative impacts, primarily due to its reliance on conditions-based management resulting in little specific information provided about how the cumulative impacts of the project have been analyzed. There are likely cumulative impacts related to climate change, wildlife populations and habitat, air quality, potential insect outbreak from disturbances, understory health, and soils that the agency fails to properly analyze. Since the condition-based approach is being utilized for analysis, it is not possible to accurately analyze cumulative impacts. Cumulative impact analysis depends on the utilization of the best available scientific information and the utilization of appropriate assumptions,, and that is in question, as is explained below.

- May adversely affect species listed or critical habitat designated under the Endangered Species Act. In our draft EA comments we expressed concern about this Forest Service statement regarding Mexican Spotted Owls:

> Based on species sensitivities described in the 2012 MSO Recovery Plan (USFWS 2012), activities associated with the Proposed Action may affect MSO. Potential impacts include noise disturbance (e.g., operation of heavy machinery), removal of suitable nesting or perching trees or snags, and increased anthropogenic activity–related disturbance (e.g., increased vehicular traffic, human activity) (USFWS 2012). These disturbances have the potential to lead to change in MSO behavior or flush them from perches, daytime roots, and nests. MSOs are known to have high site fidelity in established territories, and short-term impacts may disrupt normal behavioral patterns, such as breeding, foraging, etc., and may not be avoidable. If disturbances and associated changes in behavior occur, this could lead to increased vulnerability to heat-related stress and predation, or lead to nest abandonment and reduced reproductive success (U.S. Forest Service 2022)." Final EA at 3-44.

[3] Please find as Exhibit 24 the Hyde Park WUI work order referenced in the Santa Fe Watershed Coalition objection.

The Forest Service response was to reiterate particular ecological perspective and research concerning requirements for MSO habitats, and failed to substantively address the scientific controversy, uncertainty and opposing scientific viewpoints which we elaborated on at length in our draft EA comments. Also, they again rely on design features, BMPs and mitigation measures, yet provide no evidence that they will substantially mitigate the impacts of the disturbances listed above. The Forest Service states that "Appendix C lists design features, best management practices, and mitigation measures intended to mitigate impacts to federally listed species, Forest Service management indicator species, and migratory birds. The project is anticipated to have potential beneficial and negative short- term impacts and long-term beneficial impacts including habitat resiliency." Final EA, Appendix G at 12. Our past comments explained that the Forest Service cannot rely on best management practices (BMPs), design features or mitigation measures as a rationale for omitting proper analysis or for assuming the selected alternative would not result in significant environmental impacts.

- Threatens to violate the Roadless Area Conservation Rule. The Forest Service did identify the Roadless Rule exemption under which its Selected Alternative falls. "As stated in the Chief's Review Process for Activities in Inventoried Roadless Areas of May 31, 2012, Regional Foresters shall review IRA activities involving "...the cutting, sale or removal of generally small diameter timber when [such removal is] needed...to maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period" (U.S. Forest Service 2012). The purpose and need of the SFMLRP fits within this allowed purpose, so the SFNF requested approval for the proposed treatments within the IRA areas of the project from the Southwestern Region's Regional Forester." Final EA at 3-151.

- However it did not explain how trees up to 16" in diameter can be considered "generally small trees" when, as we pointed out in our comments, the Forest Service itself defines trees up to 9.9" in diameter as generally small trees, and trees from 9.9" to 19.9" in diameter as medium sized trees. Final EA table 1.4 at 1-17. Trees 16" in diameter are contained in the upper half of the medium size tree class. The Selected Alternative, regarding IRAs, does not indicate what proportion of trees in the medium size class would be cut. This would need to be provided to determine if the trees to be cut would be "generally small diameter."

  We stated in our comments that "The agency also fails to demonstrate how such actions do not constitute significant effects on these geographic areas with unique characteristics, especially since the proposed action will last 10 to 15 years, and then potentially 20 more years thereafter for repeated prescribed burns."

Suggested Resolution: For these reasons, the Forest Service should prepare a draft EIS to analyze the significant impacts posed by the SFMLRP.

II. Failure to Facilitate and Encourage Public Involvement in Project Planning

A. The SFNF improperly relied on internal project files and failed to prepare an EA useful to facilitate planning, decision making, and public disclosure.

CEQ's NEPA regulations direct that information used to inform NEPA analysis "must be of a high quality" and that "[a]ccurate scientific analysis . . . [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b). In order to ensure Forest Service officials meet this standard, agency regulations provide further direction for environmental assessments:

> **(3)** Environmental Impacts of the Proposed Action and Alternative(s). The EA:
>
> **(i)** Shall briefly provide sufficient evidence and analysis, including the environmental impacts of the proposed action and alternative(s), to determine whether to prepare either an EIS or a FONSI (40 CFR 1508.9);
>
> **(ii)** Shall disclose the environmental effects of any adaptive management adjustments;
>
> **(iii)** Shall describe the impacts of the proposed action and any alternatives in terms of context and intensity as described in the definition of "significantly" at 40 CFR 1508.27;
>
> **(iv)** May discuss the direct, indirect, and cumulative impact(s) of the proposed action and any alternatives together in a comparative description or describe the impacts of each alternative separately; and
>
> **(v)** May incorporate by reference data, inventories, other information and analyses.

36 C.F.R. § 220.7(b)(3)(i - v).

We acknowledge these regulations allow the agency to prepare an EA, "in any format useful to facilitate planning, decision making, and public disclosure as long as the requirements of paragraph (b) of this section are met. The EA may incorporate by reference information that is reasonably available to the public."[4] In the Final EA and FONSI, the SFNF made numerous references to project files in order to support conclusory statements and respond to comments, for example:

- The Forest Service explains there has been an extensive effort "to identify and model MSO habitat outside of known PACs and designated critical habitat," which "has informed the creation of a detailed MSO habitat review procedure (MSO Checklist)" that the agency proposes to use prior proceeding with specific actions in MSO habitats. Final EA at 3-39. It is reasonable to expect the checklist and model would be disclosed in the analysis, or as part of the MSO biological assessment that the agency uses to make a

[4] 36 C.F.R. § 220.7(a).

determination "that Alternative 2 will not result in significant adverse effects on any threatened or endangered species or their critical habitats." Draft DN at 23. In fact, the Forest Service explains that the "USFWS issued a Biological Opinion on February 14, 2022 concluding that the project may affect but is not likely to adversely affect MSO and MSO critical habitat." *Id.* Yet, the Forest Service failed to provide either the biological assessment or the biological opinion it received from the USFWS. The Forest Service asserts in regards to MSO modeling that "[t]he full methodology and modeling results are available in a supplemental document on the project website (U.S. Forest Service 2020b)." Final EA at 3-43. Yet, the webpage lacks the aforementioned modeling methods or results.

- In regards to our concerns regarding southwestern white pine, the Forest Service responded as follows:

> Southwestern White Pine. The Vegetation Effects Analysis specialist report (see project record) addresses the anticipated effect upon southwestern white pine. Within this report the silvicultural approach to southwestern white pine management is described (i.e., retain as much as possible or feasible), and the outlook for southwestern white pine is described, explicitly, for the No Action Alternative, and generally for the Proposed Action as a shade-intolerant and fire-tolerant tree species.

Draft DN, Appendix G at 10. These and other project files are not publicly available, and the agency's reliance on them to supplant proper analysis in the EA is a violation of NEPA. Further, the agency's above response fails to address our comments and the Final EA lacks any detailed analysis of how the Selected Alternative will retain southwestern white pine. Rather, it offers only the conclusory statement that "[m]anagement of natural white pine in mixed forest stands includes the retention of white pine for the purposes of maintaining genetic diversity and for retention of blister rust resistant stock (Schwandt et al. 2013)." Final EA at 3-10. Not only does this fail to provide the requisite analysis NEPA requires, but it demonstrates the agency's over-reliance on project files or specialist reports that are not available and therefore the public is unable to meaningfully participate in the process.

B. The Forest Service utilized a flawed collaborative process to develop and advance the Selected Alternative.

Our comments explained that the Forest Service reliance on the Greater Santa Fe Fireshed Coalition (GSFFC) to inform the SFMLRP development and to promote the proposed actions improperly excluded public participation. The Forest Service fails to acknowledge this in either the Final EA or in their responses to our comments. Our main concern is not that the GSFFC excludes organizations and citizens not aligned with its goals, (which it does), but rather that the Forest Service gives outsized weight to its input, above and beyond other members of the public. This is especially concerning given those who are not GSFFC "Partners" are not allowed to

participate as voting members, or to genuinely participate at all. We stated in our draft EA comments::

> Although the Greater Santa Fe Fireshed Coalition (GSFFC), on behalf of the Forest Service, has held several public presentations and meetings, to "educate" the public about the project, these presentations were highly one-sided and did not in any way present the full range of ecological research pertaining to planning and implementation of a project such as the SFMLRP. There were many requests that there be presentation and discussion of ecological research beyond the relatively narrow range of research and the ecological perspective promoted by the Forest Service. Those requests were always refused. This project has been presented to the public as utilizing a "collaborative" approach, but it was only collaborative with organizations and individuals who agreed with the fundamental perspectives of the Forest Service.

The GSFFC, which is an informal organization with no legally-sanctioned standing, was given much of the responsibility and power in developing how the project would be designed, analyzed, and implemented. In order to be a voting member of the GSFFC, a "Partner," one has to sign onto a document indicating agreement to the group's ecological and forest management perspective:

> A Partner is an organization that is supportive of the vision and mission of the GSFFC, and that has signed the Coalition's plan and strategy document, and that agree with the operating principles. (GSSFC Operating Principles, p. 2; see Exhibit 4).

This excludes any organizations or individuals that do not accept the paradigm of forest "restoration" and management by widespread and aggressive thinning and prescribed burning treatments. Certainly the coalition is within its rights to offer its own goals, objectives and operating protocols, but it is improper for the Forest Service to claim broad public support for the Selected Alternative based on the coalition's input and advocacy.

The Forest Service fails to acknowledge the GSFFC's over-sized influence, or respond to our comments about including the public in the analysis process. Our statement was that the Forest Service does not "*really* include the public in the analysis process," meaning that any inclusion was pro forma and not genuine, and therefore disallowed the public significant input in project planning. The Forest Service simply stated that it "includes the public in the planning and refinement of a project." That is technically true, but by doing so in such a highly limited, pro-forma and in reality non-inclusionary way, it is not the type of inclusion that allows the public to genuinely and significantly influence the planning and refinement of the project.

As described in our draft EA comments, the Forest Service obstructed the public from genuine inclusion in the project planning process in a number of ways. The posting of NEPA comments

in the Forest Service online reading room is important for transparency and to facilitate public engagement. The Forest Service removed the SFMLRP scoping comments that had started to come into their reading room, and did not post others as they came in. The Forest Advocate repeatedly urged the Forest Service to post the public's SFMLRP scoping comments in their reading room, which the agency eventually did, but it took over a year for it to occur. They claimed that they were required to not post any comments that contained Personally Identifiable Information (PII) except comments that were submitted through the CARA system. But there were only about 300 unique comments total (the rest were form comments, mostly from the WildEarth Guardians Action Alert,) and many of them had been submitted through the CARA system. There were only a very limited number of comments that needed PII to be redacted. The Forest Service also denied public access to view the comments at the Forest Service headquarters, although the mNEPA PII Protection Job Guide required that public access be allowed. The public did not have the benefit of that information for over a year. That the public ever had that benefit of the comments being available was likely because the Forest Service had been urged to post the comments for so consistently and for so long, especially in a newspaper opinion piece by WildEarth Guardians. However it came too late to be particularly useful. The Forest Service does not acknowledge this issue at all.

The Forest Service did not respond to our concerns, discussed in the draft EA, that FOIA request fulfillment often occurred very late, and sometimes not at all. Conservation organizations and the public need documents and information to be made available in a timely way, in order to understand the project and to meaningfully participate in the planning of the project.

We stated that the specialist reports for the SFMLRP were not made available for the draft EA comment period, when there would have been an opportunity to affect the Final EA and perhaps the project decision. NEPA mandates that the agency provide the public "the underlying environmental data' from which the Forest Service develop[ed] its opinions and arrive[d] at its decisions." *WildEarth Guardians v. Mont. Snowmobile Ass'n*, 790 F.3d 920, 925 (9th Cir. 2015). Again, the Forest Service did not respond to this NEPA issue.

Virtually all research that forms the basis of the SFMLRP is within a limited range of science that supports and promotes widespread and intensive fuel treatments. All data and input that originates from the GSFFC, and the associated scientists, is within the same scientific range, even though there is much opposing scientific research available, as elaborated on in sections below.

This lack of a genuine public process and disenfranchisement of the public by the Forest Service, along with the exclusion of conservation and climate science in project planning has become a primary concern of the Board of Commissioners of Santa Fe County. On July 12, 2022 the Board unanimously passed Resolution 2022-050, "A RESOLUTION URGING THE UNITED STATES

DEPARTMENT OF AGRICULTURE FOREST SERVICE (USFS) TP PREPARE AN ENVIRONMENTAL IMPACT STATEMENT IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL POLICY ACT ON THE SANTA FE MOUNTAINS LANDSCAPE RESILIENCY PROJECT; TO REQUEST NEW RISK, COSTS, AND BENEFITS ASSESSMENT OF USFS FOREST FUELS TREATMENTS ON THE SANTA FE NATIONAL FOREST INCLUDING THEIR RISK TO NEW MEXICO HEALTH, WATER SUPPLIES AND ECONOMIES; TO PUBLICLY ASSESS USE OF ALTERNATIVE TREATMENTS UNDER ACCELERATING CLIMATE CHANGE; AND TO REQUEST THAT THE USFS CEASE INTENTIONAL BURNS IN SANTA FE UNTIL THESE PUBLIC REVIEWS."

Exhibit 5. By this resolution the Board of County Commissioners is urging the Forest Service to genuinely include the public in the project planning process through the required NEPA process of completing an EIS, to do a full cost/benefit analysis of the project, to reconsider how fuels treatments are implemented in the light of the Calf Canyon/Hermits Peak Fire, to utilize a full range of research in project planning and analysis, including climate and conservation science, and to investigate alternatives to large-scale and aggressive fuels treatments. ,

Suggested Resolution: To ensure meaningful and informed public comment in accordance with NEPA, the Forest Service should produce an EIS that fully analyzes the potential environmental consequences of the SFMLRP proposed actions, and make publicly available all specialists reports, project files or other documents used to inform the analysis.

III. The project relies on flawed assumptions for its purpose and need, and the agency fails to address scientific controversy, uncertainty and opposing scientific viewpoints.

In prior comments, we noted that the purpose and need relies on unsupported or flawed assumptions contrary to best science. Our comments identified, inter alia: (1) unsupported assumptions about the need or ability to return to historic conditions despite climate change; (2) assumptions and uncertainty about vegetation treatments and wildfire; (3) assumptions and uncertainty about vegetation treatments and forest resilience; (4) assumptions and uncertainty about vegetation treatments and wildlife habitat; (5) assumptions and uncertainty about vegetation treatments on riparian resources; (6) assumptions and uncertainty about vegetation treatments impacts on air quality; and (7) assumptions and uncertainty about vegetation treatments impacts on recreation.

Our overarching concern is that the Forest Service relies on its unsupported assumption that the (ill-defined) proposed treatments will effectively achieve the stated purpose and need. Fundamentally, the Forest Service fails to grapple with or explain how fuels reduction will address the key driving cause of recent wildfire—drought and extreme weather due to climate change—there remains a major question about whether the proposed actions will indeed achieve

or could even reasonably be considered possible to achieve the stated purpose and need for the project.

The Forest Service has a duty to acknowledge scientific controversy and uncertainty regarding the proposed prescribed burning activities and vegetation treatments. Our comments identified numerous unsupported or flawed assumptions contrary to best science, that highlight significant controversy and uncertainty about the impacts that will result from the proposed activities. What's more, due to an improper reliance on conditions based management, the Forest Service fails to disclose the specifics of when, where, or how it will implement the proposed activities, important details of the project are largely unknown and the extent of its environmental impacts (both beneficial and adverse) are highly uncertain and highly controversial. See, e.g., *Native Ecosystems Council v. U.S. Forest Serv*., 428 F.3d 1233, 1240 (9th Cir. 2005) ("A project is 'highly controversial' if there is a 'substantial dispute [about] the size, nature, or effect of the major Federal action rather than the existence of opposition to a use."). Yet the Forest Service fails to adequately address our comments regarding flawed assumptions, or scientific controversy and uncertainty in the Final EA and Draft DN.

NEPA requires agencies to explain opposing viewpoints and their rationale for choosing one viewpoint over the other. 40 C.F.R. § 1502.9(b) (2019) (requiring agencies to disclose, discuss, and respond to "any responsible opposing view"). Federal courts have set aside NEPA analysis where the agency failed to respond to scientific analysis that calls into question the agency's assumptions or conclusions. See *Ctr. for Biological Diversity v. U.S. Forest Serv*., 349 F.3d 1157, 1168 (9th Cir. 2003) (finding the Forest Service's failure to disclose and respond to evidence and opinions challenging EIS's scientific assumptions violated NEPA); *Seattle Audubon Soc'y v. Moseley*, 798 F. Supp. 1473, 1482 (W.D. Wash. 1992) ("The agency's explanation is insufficient under NEPA – not because experts disagree, but because the FEIS lacks reasoned discussion of major scientific objections."), aff'd sub nom. *Seattle Audubon Soc'y v. Espy*, 998 F.2d 699, 704 (9th Cir. 1993) ("[i]t would not further NEPA's aims for environmental protection to allow the Forest Service to ignore reputable scientific criticisms that have surfaced"); *High Country Conservation Advocates v. Forest Service*, 52 F. Supp. 3d 1174, 1198 (D. Colo. 2014) (finding Forest Service violated NEPA by failing to mention or respond to expert reports on climate impacts).

As noted throughout our comments and this objection, the EA on numerous occasions fails to respond, or respond in an arbitrary and unsupported manner, to many of the issues we raise regarding the uncertainty of impacts in light of climate change. The Forest Service's failure to respond to the comments and opposing science contained therein as it relates to the analysis of this project violates NEPA.

The following provides examples (and is by no means exhaustive) of the agency's failure to adequately respond to our comments and provides new information it must consider in an EIS.

A. Natural Range of Variability

In its response to comments, the Forest Service explains "[b]ecause most of the proposed project area currently is far outside the natural range of variability, wildfires would burn at unnaturally high intensity and crown fire over broad areas would kill thousands of acres of trees." Final EA, Appendix G at 8. The agency further responds by referencing section 1.3 in the Final EA. *Id.* at 1-6. This section states the following:

> Reference conditions, often characterized by historic range of variability, provide a scientific basis for understanding forests, and a framework for understanding forest conditions and ecological processes prior to extensive human influence. Reference conditions provide a best estimate of a functional and sustainable system, and are a useful basis for developing desired conditions while accounting for uncertainties (e.g., climate change). That is, restoration looks to ecological history as a means of identifying appropriate desired conditions
>
> Desired conditions use historical ecology within the context of historic range of variability in each vegetation type, in addition to social and economic considerations, as a template for management action.

Final EA at 1-6. The response and analysis fails to address our comments that explain recent science supports the need to look beyond historical references to inform proposed actions: "in a time of pervasive and intensifying change, the implicit assumption that the future will reflect the past is a questionable basis for land management (Falk 2017)." Coop et al., 2020. While it is useful to understand how vegetative conditions have departed from those in the past, (and the role mixed-severity fire played in Ponderosa pine dominated stands), the Forest Service cannot rely on them to define management actions, or reasonably expect the action alternatives will result in restoring ecological processes. Given changing climate conditions, the Forest Service should have emphasized reference conditions based on current and future ranges of variability, and less on historic departures. In response the Forest Service asserts "the IRAs within the project area are not suitable reference landscapes because their conditions do not represent desired conditions for ecosystem composition, structure, or processes (U.S. Forest Service 202l)." Final EA at 3-140.

To be clear, the agency uses historical ranges of variability to inform its reference conditions, which also shape its desired conditions. That the agency then claims it cannot use lightly managed lands such as IRAs or Wilderness for reference conditions because they would not move the forest closer to those desired conditions is circular reasoning that does not absolve the

agency from considering the use of reference conditions based on current or potential natural ranges of variability found in IRAs or Wilderness areas.

The Forest Service has not presented any historical data to inform reference conditions for understory or demonstrated their applicability under changed climate conditions anticipated in the future, yet the proposed fuels treatments are designed to highly alter, and in some cases obliterate forest shrub understory.

B. Assumptions about vegetation treatments and wildfire risk reduction

Our comments reference several studies that demonstrate, at the very least, the degree of scientific controversy and uncertainty regarding the efficacy of vegetation treatments in reducing wildfire severity and intensity on a landscape scale. Rather than address these studies or provide detailed analysis, the Forest Service responds as follows:

> The EA and specialist report show that currently, most of the proposed project area is at high risk of large, high-intensity wildfires that would significantly damage forest ecosystems, wildlife, homes, and other structures in the WUI, and adversely affect watersheds and water quality. Because most of the proposed project area currently is far outside the natural range of variability, wildfires would burn at unnaturally high intensity and crown fire over broad areas would kill thousands of acres of trees. The EA and specialist report show that implementation of the proposed project would move the area towards meeting forest ecosystem and fuels desired conditions and support the frequent use of fire at intervals and intensity that would approximate the natural range of fire intervals.

Final EA, Appendix G at 8. The response fails to address our comments that the Selected Alternative may not actually result in approximating the natural range of fire intervals, even if the agency's definition of "natural range" was valid, which is not under the climate crisis. Further, while some studies demonstrate that the treatments can reduce flame lengths and alter fire behavior, they are far from offering definitive proof that they will result in changes displayed in Figure 3.13 of the Final EA (illustrating expected net value change for all VRAs included in the Greater Santa Fe Fireshed Coalition's Wildfire Risk Assessment). Final EA at 3-27. While the Forest Service acknowledges "[m]odel results are not precise predictions but indicate relative trends and are sensitive to changes in management or disturbance," the agency fails to fully acknowledge the scientific uncertainty we raise in our comments or demonstrate that the Selected Alternative will substantially reduce wildfire risk in the planning area given the climate crisis effects of megadrought and high temperatures coupled with strong winds.

In addition to the papers and studies we provided with our comments, more recent publications demonstrate the scientific controversy and uncertainty regarding the efficacy of vegetation

treatments in meeting the project's purpose and need. Specifically, the new paper from DellaSala, et al., 2022 offers opposing scientific viewpoints that counter the Forest Service's assumption that adjusting the stand structures, fuel loadings, and continuity of the forested areas is necessary or effective for ensuring forest resilience in light of climate change.[5] Exhibit 6. As just one example, the paper lists evidence-based reviews that conflict with the viewpoint that contemporary fires are undermining forest regeneration due to excessive high severity fire effects, hotter drier conditions, and that the landscape is too permeable to megafires from a lack of management and fire suppression. Further, a paper from Harmon et al., 2022 found that as little as 2% of forest carbon is combusted and released by wildfire.[6] Exhibit 7. Another paper by Hanson found that "[c]ommercial thinning is widely conducted on public and private forestlands as a fire management approach designed to reduce fire severity and associated tree mortality. However, tree mortality from thinning itself, prior to the occurrence of the wildfire, is generally not taken into account, which leaves a potentially important source of tree loss, with its associated forest carbon loss and carbon emissions, unreported."[7] Exhibit 8. In addition, Downing et al. 2022 explores the role of cross-boundary wildfire spread, demonstrating a significant number of fires start on private lands and burn across jurisdictional ownerships, including into Forest Service lands: "[t]he population of the CB ignition zone surrounding national forests in our study area increased by 39% between 1990 and 2010, and our results indicate that CB fire risk will likely continue to increase as human development expands into sparsely populated landscapes[4]."[8] Exhibit 9. Downing et al. also provides the following compelling conclusion:

> Wildfire and its controls are non-stationary, and the utility of past trends for forecasting future CB fire activity is probably limited[74]. In some ways, simulation modeling studies share this limitation because these models are parameterized with historical fuels, weather, and ignitions data[40]. While not taking historical patterns as givens, we anticipate fire transmission will continue to increase given directional trends in climate, the number of human-caused large fires, and human development near national forest boundaries[7,17].

These studies represent opposing scientific viewpoints that the Forest Service must address to comply with NEPA's "hard look" requirement.

C. Assumptions about vegetation treatments and Air Quality

In our draft EA comments, we stated:

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[5] *See* DellaSala et al., Have western USA fire suppression and megafire active management approaches become a contemporary Sisyphus? 268 Bio. Cons. 109499 (2022).
[6] Mark E. Harmon et al., Combustion of Aboveground Wood from Live Trees in Megafires, CA, USA 13 Forests (2022).
[7] Chad T. Hanson, Cumulative Severity of Thinned and Unthinned Forests in a Large California Wildfire 11 Land (2022).
[8] Downing,William M., Human ignitions on private lands drive USFS cross-boundary wildfire transmission and community impacts in the western US. Sci Rep 12, 2624 (2022). https://doi.org/10.1038/s41598-022-06002-3.

> "The Forest Service makes extremely unrealistic baseline assumptions regarding the likelihood of wildfire in the project area under the No Action and Proposed Action Alternatives. In order to compare potential particulate and greenhouse gas emissions between these alternatives, the Forest Service assumes, under the No Action Alternative, that the entire project area would burn in a wildfire without the benefit of fuels treatments. "Compared with average annual estimated New Mexico wildfire emission, if the entire SFMLRP area were to burn in a wildfire, CP emissions would be….." Draft EA at 149.
>
> Under the Proposed Action Alternative, however, the Forest Service's assumption is that as a result of fuels treatments, there would be greatly reduced risk of high-intensity, high-severity wildfire in the project area while the fuels treatments are effective, i.e. that the only particulate and greenhouse gas emissions from the project area during that time would come from thinning and prescribed burning treatments. EA 149-151. The Forest Service is estimating 10-15 years as the span of expected efficacy of its fuels treatments. EA 152, Table 3.38.
>
> The probability that the entire SFMLRP area will burn in a wildfire in 10-15 years is exceedingly small, and the probability that there will be no wildfire of any size occurring in the project area in 10-15 years if fuel treatments are implemented is fairly small. However, the Forest Service's analysis is based on an entirely invalid comparison which assumes that not implementing the Proposed Action will result in the entire project area burning in a wildfire, and that implementing the Proposed Action will prevent any wildfires from occurring. Within those assumptions, there are a number of assumptions about the efficacy of fuel treatments, and an assumption that the trend of wildfire not occurring in the project area will change radically in the next 10 years, which is far from a given. These assumptions are without adequate support in the agency's analysis and fail to resolve the scientific controversy we demonstrate within our comments here. As a result, one has to strongly question what assumptions that are not visible exist within the various models that the analysis is based on, and that are a basis of project analysis planning. It is abundantly clear that the substantial degree of uncertainty about the validity of underlying assumptions in both analysis and modeling necessitates that an EIS be completed."

These extremely unrealistic baseline assumptions were not addressed in the Final EA, the Draft DN or the Public Comment Period Content Analysis and Response document, and they have continued to be utilized for the Forest Service's SFMLRP air quality analysis. These flawed assumptions render the ensuing analysis as virtually useless. The Forest Service must do a genuine analysis of the impacts of vegetation treatments on air quality, with realistic baseline assumptions, in the context of an EIS.

D. Failure to address the scientific controversy, uncertainty and opposing viewpoint related to the Santa Fe Fireshed Wildfire Risk Assessment

In 2018, the Santa Fe National Forest funded Steven Bassett of The Nature Conservancy for the creation of the Santa Fe Fireshed Wildfire Risk Assessment for the Greater Santa Fe Fireshed Coalition. This assessment was created to provide a basis for the Forest Service to determine where fuel treatments should be located within the designated Greater Santa Fe Fireshed area. The SFMLR Project is contained almost entirely within the designated Greater Santa Fe Fireshed area. A description of this risk assessment, and how it is utilized, is included in the SFMLRP Fuels and Wildfire Behavior – Air Quality – Climate Change and Carbon Storage specialist report. In this report, it states about the Risk Assessment map, "Figure 8. Expected net value change (eNVC) for all VRAs included in this wildfire risk assessment":

> Negative expected net value change following the next fire is high throughout the study area, though there are areas where the next expected fire will not have a negative outcome (Figure 8). In these risk maps, each risk is classified into bins that represent a doubling of wildfire risk. The transition between colors represents a doubling of risk. Dark red areas are expected to lose the most value relative to other areas. Dark blue areas are expected to increase in value relative to other areas. Investments in reducing wildfire risk (including reducing the intensity and likelihood of wildfire through forest restoration and fuels reduction treatments and decreasing the susceptibility of VRAs through hardening resources and assets to the effects of fire) should be prioritized in the highest risk areas. Investments in maintaining low risk areas through prescribed fire and re-treatment may be necessary to prevent low risk (blue) areas from becoming high-risk (red).

SFMLRP Fuels and Wildfire Behavior - Air Quality - Climate Change and Carbon Storage at 19. This indicates that the wildfire risk assessment is being utilized in the analysis and planning of the SFMLRP. In the SFMLRP scoping comments provided by WildEarth Guardians and Defenders of Wildlife, we stated:

> We believe it is necessary to estimate the risk of high-intensity fire within the SFMLRP area. This was not done in the Fireshed Wildfire Risk Assessment completed by Steve Bassett of The Nature Conservancy. Only the relative risk of fire from one pixel on the map to another was determined. A scientific estimate of the absolute risk of fire in the project area would assist in completing a realistic cost/benefit analysis of damage that fuel treatments may cause to forest ecology vs. the benefit in fire risk reduction and fire behavior modification. The cost and efficacy of methods to reduce or mitigate fire risk (thinning, prescribed burning, etc.) has also not been analyzed, and we request that these be analyzed as well. Please provide information as to how the Fireshed Wildfire Risk Assessment was and will be utilized in the development of the SFMLR Project.

An estimate of absolute risk of wildfire in the project area has not been completed. Also the cost and efficacy of methods to reduce or mitigate fire risk (thinning, prescribed burning, etc.) has also not been analyzed, have not been calculated, and the Forest Service has failed to address this scientific controversy, uncertainty and opposing viewpoint. Also in 2018, Paul Davis of EnviroLogic Inc. completed a "Review of Wildfire Risk Assessment. Prepared for The Greater Santa Fe Fireshed Coalition by Steven Bassett, The Nature Conservancy. Exhibit 10. In his summary, he stated:

> The TNC Wildfire Risk Assessment provides a useful first step toward rational planning of wildfire risk reduction treatments. However, the TNC Wildfire Risk Assessment is not a tool for planning wildfire risk reduction treatments" without knowing:
>
> a. The current risk of a wildfire,
> b. the probabilities that each VRA will be damaged,
> c. the costs of damage to each VRA, and
> d. the reduction in risk resulting from wildfire risk reduction treatments.

Review of Wildfire Risk Assessment at 7 and 8. On January 14, 2020, Dr. Dominick DellaSala, Luke Ruediger and Dr. Chad Hanson published "A Science-based Critique of The Nature Conservancy's Forest and Fire Management Programs with a Focus on Case-study areas in Western Fire-Dependent Forests." Exhibit 11. Within the critique, there was a section on the SFNF, focusing primarily on the Santa Fe Fireshed Wildfire Risk Assessment. They stated, summarizing Paul Davis' findings:

> While the risk assessment approach yields an array of maps and value risk assessment (VRA) characterizations, its problematic assumptions have not gone unnoticed. For instance, Davis (2019) examined the assumptions that went into the risk assessments, particularly the combination of likelihood and consequences of a wildfire, concluding that the approach was useless in supporting decisions concerning wildfire risk reduction treatments. Davis (2019) summarized the following modeling deficiencies:
>
> - The TNC Risk Assessment did not estimate the actual chance of a wildfire occurring within the greater Santa Fe Fireshed because it only calculated the consequences of 640,000 simulated wildfires. It did not take into consideration actual probabilities available via empirically based studies (see below).
> - The public is left not knowing the current probability of a wildfire.
> - Without knowing the current probability of a wildfire, the value of reducing the wildfire "risk" is not only unknown but unknowable.
> - Costs of the consequences of a wildfire affecting a community (homes burned, infrastructure destroyed, etc.) are not provided, nor are proven solutions for creating fire- safe communities (by focusing on making homes more fire-safe, and conducting defensible space pruning of vegetation within 100 feet of homes—DellaSala and Hanson 2015) provided in any meaningful way.

- Costs and benefits (effectiveness) of thinning activities are not provided and several subjective valuation indices are used.

The critique further stated:

> Problematic factors with Bassett's (2018) assessment include: (1) there is no information provided on the "experts" interviewed in setting the VRAs (again – this cannot be replicated); (2) ostensibly 53 VRAs were initially selected and then narrowed down to 19 with no criteria given (cannot be replicated), (3) no accuracy determination is provide for forest canopy, surface fuels, and other factors used in the risk assessment; and (4) private land structures within the WUI are all assumed to have the highest risk regardless of other factors (e.g., vegetation type).
>
> Additionally, Bassett (2018) under-represented the importance of mixed severity burns, which were incorrectly assumed to be uncharacteristic (only low severity is considered characteristic) and therefore not part of a "resilient" landscape even though many lines of evidence indicate that ponderosa pine and mixed-conifer forests of this region historically had a mixed-severity fire component, including high severity patches (Odion et al. 2014, DellaSala and Hanson 2015). For example, Bassett (2018) estimates that ~60,000 acres of the ~150,000-acre 2011 Las Conchas fire in New Mexico was high severity, yet, others place that component at 31,318 acres (analysis by Bryan Bird and Kurt Menke). The difference apparently is due to Bassett combining moderate with high severity into a single "high severity" category considered "uncharacteristic," which inflated the susceptibility factors and VRAs (again no specific wildlife analysis is provided, only subjective valuations based on inflated severity estimators).
>
> Another important missing component of Bassett (2018) is the actual probability of wildfire encountering a stand in any given time frame (Figure 10). This needs to be estimated empirically at the project scale – and not just by modeling – as exemplified by Schoennagel et al. (2017; see illustration below) in their wildfire-thinning probability assessment (using empirical data). Schoennagel et al. (2017) determined that of the 7.3 million acres of treated forests (2005-14) <1% of treated forest area per year actually encountered a fire. These data can be used to cross- validate scenario-modeling, using empirically and locally derived probability estimates to more narrowly focus thinning treatments by taking into consideration the exceedingly low probabilities that thinned sites will even encounter a fire. Using this empirical approach, TNC should aptly target the focus of treatments to a narrow defensible space area to protect homes (Schoennagel et al. 2017, also see Moritz et al. 2014) and not in the backcountry." A Science-based Critique of The Nature Conservancy's Forest and Fire Management Programs at 37-38.

We agree with both Paul Davis and Dr. Chad Hanson, Luke Ruediger and Dr. Dominick DellaSala that the Santa Fe Fireshed Wildfire Risk Assessment is not, in its present form, a useful tool for planning wildfire risk reduction treatments. The Forest Service has never addressed this scientific controversy, uncertainty and opposing scientific viewpoints concerning this risk assessment, yet continues to utilize it for project analysis and planning.

Suggested Resolution: The Santa Fe National Forest should complete an Environmental Impact Statement utilizing a broad range of the Best Available Scientific Information, utilizing real-world and evidence to support the agency's assumptions, and addressing scientific controversies, so that the project analysis will have a sound scientific basis.

IV. The Forest Service reliance on Condition-Based Management violates NEPA

Our comments explained at length the fallacy of relying on Condition Based Management to comply with NEPA, especially for projects that propose to occur over such a long period of time like the SFMLRP which would implement actions over a 10-15 year period. This is essentially the length of a forest plan.

In response, the Forest Service erroneously asserts the following:

> We do not have complete information on every acre of the landscape. However, we do have enough information to make very informed and guided decisions about the landscape. The conditions-based approach allows flexibility and lets us take into consideration and account for variances in information and adapt to the environmental conditions that are existing on each specific site. Prior to any implementation, the Forest Service would identify and determine site-specific treatment units and prescriptions based on site-specific conditions.

Final EA, Appendix G at 15. Fundamentally, projects of this size and scope are inappropriate for project-level analysis and authorization under an EA or EIS. In fact, what the agency proposes is more akin to what one would expect in a programmatic EIS followed by site-specific EAs for specific treatments. Specifically, the Forest Service states, "[t]he Proposed Action does not define specific treatment units, but rather general areas throughout the project area where treatments would be most likely to occur and the suite of tools that would be used." This approach is both a "black box" and a "blank check," and one that fundamentally undermines the purpose of NEPA to take a hard look at potential environmental consequences.

In order to meet its obligations under NEPA the Forest Service must collect, disclose and properly analyze resource conditions and potential environmental impacts of any proposed actions where and when they will occur before it makes a decision. It is arbitrary and capricious for the agency to assert that it can determine site-specific conditions at some vague point in the

next 10-15 years, and assert the Final EA properly considers and discloses all the potential environmental effects as it proposes here:

> The U.S. Forest Service does not have complete information regarding the conditions found on every acre of the project footprint, however sufficient information exists to make informed decisions about the types of treatments that work best in certain conditions, as well as make informed estimates so that the effects of those treatments can be disclosed in this document.

Final EA at 2-2. To be clear, informed decisions are those based on site-specific conditions determined through field verification that inform detailed analysis. Relying on "informed estimates" without complete information over the life of this project is a fundamental violation of both the law and spirit of NEPA's look-before-you-leap mandate. Such an approach is insufficient for an EA, or even an EIS.

For example, the Forest Service explains:

> The project would thin forest stands using tree felling and mastication. Activity slash and masticated fuels would be reduced by piling and burning, jackpot and broadcast burning. The use of lop and scatter slash disposal techniques would increase surface fuel loading. Excessive slash fuels that would produce undesirable flame lengths or fire behavior, would be removed to off site or pile and jackpot burned in order to reduce surface fuel loadings prior to broadcast prescribed burning or underburning.

Final EA at 3-32. Further, the proposed mitigation measures direct "[b]urn when fuel conditions are conducive for slow to moderate fire spread in short needle fuel beds. This typically occurs in the early spring, late summer, or fall," and " Broadcast burning will only be conducted during accepted weather conditions for wind + ventilation. Pile burning, which is usually conducted in the late fall and winter, may be done during fair or poor ventilation days using a waiver." Draft DN, Appendix A at 14. Here the agency assumes it will have the ability to burn slash and conduct broadcast burns, but then fails to specify what constitutes "accepted weather conditions," or what precisely is conducive for slow to moderate fire spreads. It is more than likely that should the Forest Service proceed with the SFMLRP, it will be generating tons of slash and fine fuels without the ability to safely remove them as anticipated in the mitigation measures. Leaving slash on the ground creates a very serious fire hazard, and during the first dry season, a bark beetle hazard. Further, the agency cannot assume the benefits from prescribed burns if conditions do not exist as predicted in the Final EA. This argues for a much narrower project and exemplifies the risks associated with condition based management.

Further, the Forest Service fails to consider or account for the potential impacts should those conditions fail to be present. Our concerns here are hardly hypothetical given the Las Dispensas prescribed fire on the Pecos/Las Vegas Ranger District of the Santa Fe National Forest was

declared a wildfire on April 6, 2022. Yet, the agency assumes conditions will be present each year for the next 10-15 years to allow for burning slash and masticated fuels. An assumption that the conditions-based management framework fails to adequately address, and one contradicted by a recent report from the multi-agency Joint Fire Science Program that just released a new report stating, "[a]ctively treating fuels with prescribed fire or non-fire techniques is infeasible for a substantial portion of federal lands, and there is a need for increased use of wildland fires from unplanned ignitions to help manage fuels." Miller et al., 2022. Exhibit 12. Due to both climate change and a long-term drought, there are substantially decreasing safe windows of time and weather in which to conduct broadcast prescribed burns. Yet, the Forest Service is proposing to burn 38,000 acres, and to repeat burning the entire area every 5-10 years without specifying where or when it will conduct those burns, or what conditions would preclude the agency's ability to implement prescribed fires. If the Forest Service increases acres burned while the optimal burn windows are decreasing, further escaped prescribed burns will be virtually inevitable, some with catastrophic effects similar to the effects of the Hermits Peak Fire.

In addition, the Forest Service's reliance on condition-based management precludes disclosing specifics about where precisely it intends to remove trees or their actual size. Instead, the agency provides a broad range of trees that may be cut within each ERU. For example, the Forest Service provides a range from 22 to 89 square foot BA to achieve the Ponderosa Pine: Mid-scale desired condition. Final EA at 1-21. These desired conditions are from the Revised Forest Plan, and the Forest Service failed to delineate how much of the project area currently meets this desired condition or how many acres Alternative 2 would alter to achieve the Ponderosa Pine: Mid-Scale condition. As stated in our comments, the broad basal area range could mean anything from a largely barren forest, to a sufficient number of trees for more open areas. We recognize in Table 1.5 of the Final EA that the agency also provides a percent of each seral state to achieve the desired condition for the Ponderosa pine ERU, again from the Forest Plan, but the agency fails to explain how achieving the desired seral state corresponds with achieving the desired condition for mid-scale and fine-scale Ponderosa pine stands. In other words, the landscape-scale percentages provided in Table 1-5 fail to replace the specificity NEPA requires that would disclose specific units where thinning would take place, what basal area would result, or quantify how many acres meet the desired conditions under Alternative 2. The only other indication of target BAs within the Final EA is with a chart in Table 2.8, "Elements Proposed under the Santa Fe Conservation Alternative Categorized by Screening Criteria and Rationale for Dismissal," in section 2.3. Final EA at 2-18. The source of the information in the chart is not identified. There are no indications if this chart is of desired conditions from the Forest Plan, or is thinning BA targets specific to the SFMLR Project, but it appears to also be from the Forest Plan.

Basal Area target ranges specifically for the SFMLRP must be identified for each ERU within the SFMLR Project area, and also for specific geographic locations. The distribution of thinning

across the BA range must be included. Overall, the Final EA lacks a reasonable and acceptable level of specificity.

Further, the Forest Service states that monitoring "allows" for condition-based management, and states the following:

> "The Santa Fe Mountains Landscape Resiliency Project (SFMLRP) would use a condition-based approach to restore desired conditions at the fine scale, mid-scale, and landscape scale. Project implementation would be monitored during and after completion of each phase (thinning, piling, burning, etc.) to allow for condition-based management as described in the Environmental Assessment (EA). Monitoring would be done by qualified individuals, such as a certified silviculturist, hydrologist and/or biologist as applicable, and reviewed by an interdisciplinary team of specialists, including those just listed." Final EA Appendix D.

Yet the monitoring plan has not yet been fully developed, although the agency asserts it is in progress. The plan has been primarily outsourced to the Greater Santa Fe Fireshed Coalition, and the Forest Service failed to disclose how it will verify monitoring results or how it will incorporate the coalition's findings into project implementation. The quality of the monitoring is a critical aspect of project implementation, especially when utilizing the condition-based approach, which is unacceptable for a multitude of other reasons, in addition to the examples listed above. No opportunity has been given for public comment on the acceptability of the full monitoring plan since it does not currently exist in any kind of completed form. While the Forest Service provides a table preceded with a short description, this falls far short of an actual plan. Final EA, Appendix D. Table D-1 answers some questions about the monitoring plan, and in every case, it states that if the "Action to be taken if results do not meet minimum compliance levels or if impacts are not mitigated as planned," then the responsive action to be taken is to "adjust treatment." Final EA, Appendix D at 2. There are no parameters as to how treatments would be adjusted. Since the full monitoring plan is not yet in place, and the personnel to carry out the monitoring are not in place, we have no reason to be assured that the monitoring plan will be carried out in a functional way if the project in its current planning state goes forward. Since the monitoring is not to be carried out primarily by the USFS, we have no assurance that it will be possible to obtain sufficient funding for a monitoring program, and there are no indications of where the funding might come from. The Forest Service states:

> A Multiparty Monitoring Strategy is also currently in development with partners through the Greater Santa Fe Fireshed Coalition. Current priorities for this Strategy include monitoring forest structure and composition, fuels and fire behavior, avian diversity and abundance, water quality, and air quality. Some of these monitoring activities, including the avian monitoring, would be developed as citizen science initiatives for public engagement and transparency.

Final EA, Appendix D. The Summary: Multi-party Monitoring Plan states:

> The Guild will engage GSFFC monitoring committee members and other technical experts in development of feasible and reliable monitoring protocols to answer each multiparty monitoring question, then pilot the monitoring protocols and suggest revisions to the plan, as appropriate. In addition, the Guild is designing a process that will engage interested stakeholders in interpreting monitoring results and applying them to future. restoration planning and resource management. However, additional funding will be required to support monitoring coordination, data collection, data analysis, review, and reporting.

Summary: Multiparty Monitoring Plan at 3. As discussed in section II. B., the GSFFC is an exclusive collaborative that excludes members of the public with ecological perspectives not aligned with the group's goals. The Forest Guild in particular, only promotes ecological research and perspective that supports widespread and aggressive fuel treatments. That raises questions as to whether the implementation of their monitoring plan would be sufficiently objective. The Forest Service also states that "A comprehensive Forest-wide monitoring implementation plan will be developed upon release of the final revised Forest Plan for the Santa Fe National Forest." Final EA at D. This plan cannot be reviewed in the context of the SFMLRP since it has not yet been released, and there certainly are no indications that the Forest Service will be funded enough, or have enough available personnel to carry out any significant monitoring program. The Forest-wide monitoring implementation plan may not be available when the SFMLR Project commences.

There are very strong reasons to be concerned that if this project goes forward as proposed, that fuel treatments will occur utilizing a facsimile of the condition-based approach that does not include the necessary monitoring. That is not even actually a condition-based approach, since the Forest Service states that monitoring allows for condition-based approach.

The condition-based approach simply defers analysis of impacts until after the project decision is made, and the project is in process of being implemented. It's a NEPA promise to do it later. That the Forest Service does not have a developed and funded way to carry out monitoring so as to obtain the required information on which to do the within-project analysis that condition-based approach claims to be able to do, debunks the view that the condition-based approach implemented by the SFNF would be able to respond to conditions. So the deferred analysis of impacts would not be able to be done, and there would not be sufficient impacts analysis done for project fuel treatments.

Suggested Resolution: Should the agency choose not to conduct site-specific analysis for each as NEPA requires, then it must produce an EIS that recognizes the conditions-based approach only programmatic in nature given the extensive amount of site-specific information, details, and

studies that are missing from the current analysis and the likely significant impacts the proposed actions will have. Under this scenario, the Forest Service would maintain the flexibility to subsequently tier future EAs to this programmatic analysis and analyze narrower, more streamlined site-specific projects.[9] In the alternative, revise this NEPA analysis to provide the necessary site-specific information, details, and studies to allow for disclosure of impacts, analysis of reasonable alternatives, and meaningful and informed public comment.

V. The Forest Service failed to adequately assess and disclose direct, indirect, and cumulative impacts, including detailed, site-specific information.

As we stated above, NEPA requires the Forest Service to "[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment." 40 C.F.R. § 1500.2(d). A critical part of this obligation is presenting data and analysis in a manner that will enable the public to thoroughly review and understand the analysis of environmental consequences. NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most importantly, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail. 40 C.F.R. § 1500.1(b). The Data Quality Act expands on this obligation, requiring that influential scientific information use "best available science and supporting studies conducted in accordance with sound and objective scientific practices." Treasury and General Government Appropriations Act for Fiscal Year 2001, Pub.L. No. 106-554, § 515.

Under the Forest Service's own NEPA regulations, it must consider the cumulative effects analysis in accordance with 40 C.F.R. § 1508.7 and in accordance with "The Council on Environmental Quality Guidance Memorandum on Consideration of Past Actions in Cumulative Effects Analysis" dated June 24, 2005. 36 C.F.R. § 220.4(f). Specifically, in regards to cumulative impacts, the Forest Service lists ongoing and past projects that it considers in the Final EA, and explains "[f]or the purpose of this analysis, "reasonably foreseeable" actions are considered where there is a Proposed Action or existing decision (e.g., draft NEPA document, Record of Decision, or issued permit), a commitment of resources or funding, or a formal proposal (e.g., a permit request)." Final EA at 3-1.The agency then provides a summary of actions to consider in its cumulative effects discussions. Notably absent are any projects on the Santa Fe National Forest Schedule of Proposed Actions (SOPA) for the Española and Pecos-Las Vegas Ranger Districts, except for the Rio Chama Aquatic and Wetland Habitat Restoration Project. The SOPA includes several projects labeled as "on hold," but they are not officially canceled, and as such should be considered as reasonably foreseeable. The Forest Service proposes to authorize other projects under categorical exclusions, which should be considered in

[9] Council on Environmental Quality. 2014. Final Guidance for Effective Use of Programmatic NEPA Reviews at 10.

the cumulative effects analysis such as the Capulin/Walker Flats CFRP Project and Rowe Mesa CEs.

Our comments detail numerous flaws with the Forest Service's analysis of the direct, indirect and cumulative impacts of the SFMLRP 2021 Draft Environmental Assessment. Because the NEPA analysis lacks site-specific information (including but not limited to how, where, and when it will implement various activities), the public is precluded from meaningfully evaluating effects of the project in violation of the Forest Service's own NEPA rules. The Forest Service also ignores numerous key factors for a project of this size and scale in the current context of a climate crisis that is growing worse every year. As just one example, the Forest Service ignores best available science showing that historic conditions may no longer be viable goals given the climate crisis and changing "new normal." The Forest Service fails to address or explain why it continues to seek to return to historic conditions despite best available science showing the climate is changing, and in turn forest conditions are changing. This omission is made worse by the lack of a definite time frame for the decision given the Forest Service seeks to implement additional prescribed fire maintenance treatments beyond 20 years.

The Final EA failed to adequately address these flaws, and others we note throughout this objection, or respond to our comments. As such the Forest Service failed to take a hard look at the environmental consequences of the selected alternative in violation of NEPA. In addition to the analysis failures already mentioned above, the following sections provide specific examples and demonstrate the need for the Forest Service to prepare an EIS.

A. Failure to disclose site-specific information

Due to its reliance on conditions-based management, the Forest Service proposes to determine site-specific conditions only after the final decision, which precludes the public from meaningful evaluation of existing resource conditions and the potential environmental impacts from the selected alternative as the agency demonstrates in its description of condition-based management:

> In order to implement the Proposed Action, the U.S. Forest Service would follow the steps outlined below to evaluate on-the-ground conditions that would inform the appropriate forest treatments and prescriptions to be applied in specific locations within the project area to move towards desired conditions described in Chapter 1:
>
> 1. Identify treatment area boundary and conduct field reconnaissance and inventory. The type of reconnaissance and inventory protocol required depends on the forest characteristics within the treatment area (e.g., homogeneity of stand conditions) and the availability of existing data (e.g., common stand exams).

Final EA at 2-4. The information gathered in just step one is what the agency should complete and then analyze through the NEPA process before issuing a final decision authorizing the project activities.

Under the Forest Service's own NEPA regulations, a proposal is subject to NEPA when: (1) the agency has a goal and is actively *preparing to make a decision on one or more alternative means to accomplish that goal and effects can be meaningfully evaluated*; (2) the proposed action is subject to Forest Service control and responsibility; (3) the proposed action would cause effects on the environment; and (4) the proposed action is not statutorily exempt from the requirements of section 102(2)(C) of NEPA. 36 C.F.R. § 220.4(a) (emphasis added). The effects of the selected alternative cannot be meaningfully evaluated due to the lack of site specific information.

B. Failure to adequately consider climate change

Our comments explained the SFMLRP will have direct, indirect, and cumulative impacts on climate change because the vegetation treatments will impact the ecosystem's ability to store carbon. The area's forests are likely currently acting as carbon sinks, meaning they are storing more carbon than they are emitting. Science makes clear that the proposed action will likely worsen climate emissions by removing trees that are currently fixing carbon, turning them into wood products (which results in a significant loss of that carbon fixed in wood), and leaving a landscape with fewer or no trees and (eventually) seedlings that fix far less carbon than mature forests for decades if not centuries. It is crucial not only to protect old and mature forests, but to ensure mid-seral stands can achieve mature, late-seral stage status.

In response the Forest Service states the following:

> Even though practices such as thinning and prescribed fire may release carbon in the short term, they focus growth and sequestration for the future on trees that are at lower risk and/or are more resilient to disturbance. Previous research in southwestern ponderosa pine forest has demonstrated that a restored condition that is maintained by regular surface fire can store more carbon than a fire-suppressed condition when the effects of unplanned wildfire are incorporated (Hurteau 2017). More information on carbon sequestration can be found in EA Section 3.8.1.

Final EA, Appendix G at 9. The referenced section in the agency's response provides this explanation:

> Previous research in southwestern ponderosa pine forest has demonstrated that a restored condition that is maintained by regular surface fire can store more carbon than a fire-suppressed condition when the effects of unplanned wildfire are incorporated (Hurteau 2017). Appropriate forest management and protection can substitute lighter, strategically placed, and more recoverable emissions for disturbance emissions that would be more severe, extensive, and less reversible (U.S. Forest Service 2015b).

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> Additionally, reducing tree density through thinning has been shown to reduce drought stress and increase growth and carbon sequestration relative to a fire-suppressed condition during dry periods (Hurteau 2017). The restoration of forest structure and the maintenance of that structure with regular surface fire helped sustain the forest carbon sink, even under an increasingly hotter climate (Hurteau 2017).

Final EA at 3-96. The agency's response and statements in its supporting analysis only partially addresses our concerns. First, the response assumes successful thinning and controlled burns will effectively reduce high-intensity/high severity fires; an assumption that is highly controversial and uncertain. Next, the agency fails to demonstrate that the 16 inch dbh limit will retain trees that will grow into mature and old growth forest stands, which we explained in our comments is crucial for increasing mature, intact forests that serve as a natural climate change solution. Our comments questioned why the agency did not select a lower diameter limit to ensure thinning only targeted smaller trees and found this response:

> Section 2.1.2 of the draft EA details the thinning diameter limits of the Proposed Action. Specifically, the limits are 16 inches dbh, 12 inches diameter at root collar (drc) for junipers and two needle pinyon pine, and 9 inches dbh within MSO protected activity centers. These diameter caps are all tiered to the U.S. Forest Service recovery plan for the Mexican spotted owl.

Final EA, Appendix G at 10. Looking more closely at the MSO Recovery Plan, it provides the following direction:

> Recovery Criteria for MSO given in USFWS (2012) are: 1) Owl occupancy rates must show a stable or increasing trend after 10 years of monitoring; and 2) Indicators of habitat conditions (key habitat variables) are stable or improving for 10 years in roosting and nesting habitat. Relevant key habitat variables and recommended minimum conditions in a minimum of 10% of PPF and 25% of MCD forests are: minimum canopy cover of 40% in PPF and 60% in MCD, diversity of tree sizes with trees 12-18 inches DBH contributing >30% of the stand basal area (BA) and trees >18 inches DBH contributing >30% of stand BA in PPF and MCD, minimum tree BA in stands = 110 ft2/acre in PPF and = 120 ft2/acre in MCD, and minimum density of large trees (>18 inches DBH) = 12 trees per acre in PPF and MCD.

USFWS 2012. Yet, the Forest Service fails to demonstrate in its analysis how the 16 inch DBH cap ensures compliance with the recovery plan, particularly in achieving a minimum canopy cover of 60% within MCD stands or maintaining a diversity of tree sizes within 12 - 18 inch DBH. Further, to retain primary constituent element for MSO critical habitat, the agency discloses that "[a] range of tree species, including mixed conifer, pine-oak, and riparian forest types, composed of different tree sizes reflecting different ages of trees, 30% to 45% of which

are large trees with a dbh of 12 inches or more." Final EA, Table 3.19 at 3-41. However, the agency's analysis fails to demonstrate how a 16 inch DBH cap within MSO habitat outside of the PACs will ensure large tree retention between 30% - 45%. We agree that large trees are those greater than 12" DBH and coupled with the lack of analysis that demonstrates the 16 inch diameter limit will maximize carbon sequestration, we urge the agency to lower its diameter limit to 12 inches DBH.

The need to emphasize retaining and recruitment of mature, and old growth forest conditions is supported by recent scientific publications. One study shows the rate at which young trees grow compared to old trees is not determinative of the total amount of carbon a forest with young trees is able to keep out of the atmosphere as compared to a forest with old or mature trees. Mildrexler et al., 2020 showed that for large trees, a small increase in diameter corresponds to a massive increase in additional carbon storage relative to a small tree increasing by the same diameter increment").[10] Exhibit 13. That is in part because it is more than just the tree itself that stores and absorbs carbon, including roots, soil, etc. *Id.* Old and mature forests (as opposed to old versus young trees) store significantly more total carbon than young forests, with the largest trees playing the biggest role. *Id*. During the time that a forest recovers and regrows following logging, the total amount of carbon that forest keeps out of the atmosphere is far less than the carbon sequestered without logging.

The need to ensure medium sized trees can grow into mature and old growth forests is further supported by the 2022 IPCC Sixth Assessment Report that shows that climate change is affecting forest landscapes faster than previously recognized. The report explains "[s]ince AR5 there is increasing evidence that degradation and destruction of ecosystems by humans increases the vulnerability of people (high confidence)" and that "[u]nsustainable land-use and land cover change, unsustainable use of natural resources, deforestation, loss of biodiversity, pollution, and their interactions, adversely affect the capacities of ecosystems, societies, communities and individuals to adapt to climate change (high confidence)").[11] We provided the summary for policy makers as Exhibit 14. The Forest Service must consider this new information in an EIS and demonstrate how the Selected Alternative and its diameter limits will ensure recruitment of mature and old growth forest conditions.

C. The Forest Service failed to properly analyze the roads and road use within the project area.

Our comments explained, at length, the environmental consequences associated with forest roads, the need to disclose the extent of existing system in the project area, while urging the

[10] David J. Mildrexler et al., Large Trees Dominate Carbon Storage in Forests East of the Cascade Crest in the United States Pacific Northwest Front. For. Glob. Change (2020).
[11] Intergovernmental Panel on Climate Change, Climate Change 2022: Impacts, Adaptation and Vulnerability, Summary for Policymakers (2022).

agency to comply with subpart A of the Travel Management Rule. 36 C.F.R. 212.5(b). Specifically we explained that if this is truly a landscape resiliency project, then the Forest Service must consider the SFNF's road system on a landscape-scale, using a thoughtful, strategic approach to improving public access to the forest, reducing negative impacts from forest roads to water quality and aquatic habitats, and improving watersheds and forest resiliency by returning expensive, deteriorating, and seldom used forest roads to the wild. Instead, under the Selected Alternative, the Forest Service explains, "[n]o permanent or temporary roads would be constructed, but existing roads, trails, and routes may be used for access. Overland travel by vehicles that do not require roads to be constructed (e.g., masticators, UTVs) may occur (U.S. Forest Service 2021l)." Final EA at 3-145. Due to its reliance on conditions-based management, the agency fails to disclose which roads it may use, when it would use them, or areas where it would allow administrative cross-country travel. The latter of which is particularly concerning given any establishment of new tracks or use of existing tracks will likely facilitate unauthorized motorized use.

Rather than respond to our comments with the requisite analysis NEPA requires, the Forest Service failed to disclose the extent of the existing road network or provide any analysis of its use. The omission is particularly egregious given that "[t]he primary resource concerns for riparian areas in the project area include departed vegetative conditions, wildfire risk, and *impacts to water quality from roads and trails*." Final EA at 1-22, emphasis added. In fact, the Forest Service discloses that of the 10 subwatersheds in the project area, 8 are functioning at risk under the Watershed Condition Framework (WCF), with one subwatershed not even rated. Final EA at 3-74, Table 3.27. However, the agency fails to disclose the attribute ratings that would provide more details about the rating. The WCF interactive map shows each watershed has a fair or poor road and trail attribute rating.[12] For example, the Headwaters Rio Tesuque, Rio Tesuque-Pojoaque Creek and Headwaters Santa Fe River (municipal watershed) all have poor ratings for the road and trail indicator. The Forest Service fails to consider the impacts from roads to the watershed condition. Similarly, the agency fails to consider road impacts to wildlife and habitat fragmentation.

Overall, the Forest Service fails to address our comments or explain why it omitted any dedicated section disclosing, discussing or analyzing the existing road network or road use. Rather, the agency seems to assert that only road construction would require such analysis and then states "No new roads or temporary roads would be constructed." Final EA at 2-5. In regards to the issue of unauthorized use and implementing a minimum road system that include road decommissioning, the agency responds as follows:

> As stated above, there are only 8.5 miles of existing motorized roads within the IRAs in the project area. Even so, unauthorized and illegal driving of motorized vehicles occurs throughout the forest. The concern that this will continue or get worse with the Proposed

[12] See https://arcg.is/1LKDWv

> Action is The Proposed Action will not prevent this trespass from continuing, although during implementation the increased presence of Forest Service personnel may help discourage unauthorized motor vehicle travel. Decommissioning of closed roads, along with plans and efforts to better enforce travel management, is beyond the scope of this EA.

Final EA, Appendix G at 18-19. Such a response demonstrates the Forest Service arbitrarily and capriciously dismissed unauthorized road and trail use as a significant issue, even while acknowledging it is a pervasive problem on the forest. The SFNF must consider the effects of the Selected Alternative on its ability to enforce travel restrictions on roads and trails across the planning area. NEPA requires the agency to take a hard look at the impacts of illegal motorized use on forest resources and the likelihood of illegal use continuing or expanding under each alternative.[13] Further, the agency must analyze the use of roads necessary to implement the Selected Alternative before it can issue a final decision.

D. Improper reliance on resource protection measures

Our past comments explained that the Forest Service cannot rely on best management practices (BMPs), design features or mitigation measures as a rationale for omitting proper analysis or for assuming the selected alternative would not result in significant environmental impacts. Yet, the agency does just that stating "[t]he analysis of effects presented in Chapter 3 assumes the implementation of relevant design features, BMPs, and mitigation measures as they apply to the proposed conditions-based management actions." Final EA, Appendix C at C-1. The Forest Service provided little evidence or analysis demonstrating proper implementation of BMPs, design features and mitigation measures, and assumed 100 percent effectiveness as rationale for conducting detailed analysis. For example, the agency states as follows:

> The use of skidders and bobcats may adversely affect the soil by removing ground cover and furrowing, making it more susceptible to erosion by gullying. While the use of masticators results in soil compaction and runoff effects, Hatchett et al. 2006 found the effect of the masticator on runoff and erosion was ameliorated by the groundcover (mulch) generated by the machine. Therefore, implementation of design feature Soil-6 would minimize these impacts.

Final EA at 3-70. When looking at the referenced design feature, it directs "[t]he depth of scattered slash would be the minimum needed to limit soil erosion, so as not to impede understory growth of grasses, forbs and brush." Final EA, Appendix C at C-2. The Forest Service fails to disclose, discuss or provide evidence for the minimum depth of scattered slash that would be needed to limit soil erosion.

[13] See Sierra Club v. USFS, 857 F.Supp.2d 1167, 1176-78 (D. Utah 2012) (discussing the forest's responsibility under NEPA to take a hard look at the impacts of illegal motorized use on forest resources and the likelihood of illegal use continuing under each alternative).

In another example, the Forest Service explains the following:

> The potential for adverse effects on soil and watershed processes by mechanical equipment and prescribed fire would be further minimized by the effective implementation of design features Water-11 (installing waterbars on fireline), Water-7 (excluding heavy equipment from riparian areas), and Rx-7 (controlling pile composition). Adverse effects on watershed resources are therefore expected to be minimal, short term, and insignificant when compared with the adverse effects of high-intensity wildfire.

Final EA at 3-70. Here the agency assumes each of these measures would effectively minimize adverse effects to soil and watershed processes without evidence and then arbitrarily asserts the effects will be minimal. The comparison to high-intensity wildfire is also erroneous because the underlying assumption is that wildfires will occur and burn at high-intensity across 100 percent of the planning area over the next 10-15 years. The Forest Service analysis should have compared the potential adverse effects to the existing condition instead of omitting the analysis altogether.

At the very least, the Forest Service should have responded to our comments and studies demonstrating BMP implementation and effectiveness do not occur with a 100 percent success rate.

E. Failure to analyze impacts on Mexican spotted owl

The Forest Service failed to consider and disclose numerous foreseeable direct, indirect, and cumulative impacts to MSO survival and recovery, and its habitat. In addition to the examples noted above, the Forest Service failed to disclose or consider the relevant and key factor of how thinning and prescribed fire to improve MSO habitat conditions is highly risky, uncertain, and controversial as we explained in our comments. Rather, throughout its limited analysis the Forest Service largely assumes that its proposed vegetation treatments within MSO PACs, critical habitat, nesting/roosting habitat and recovery habitat will achieve more resilient forests, and ultimately will improve conditions for MSO recovery. This despite the fact that the analysis lacks a sufficient baseline against which to measure impacts of the project on MSO or its critical habitat. Specifically, the Forest Service fails to disclose the current status of MSO populations, including whether MSO populations are trending towards recovery. For example, the agency states "[f]ive MSO PACs have also been delineated in the project area, and surveys are ongoing for activity in existing PACs as well as to discover active nest/roost sites for protection." The analysis fails to sufficiently discuss or disclose the status of owls within each of the five PACs, how that status affects population recovery within the project area and beyond, or how that would change under each alternative. The Forest Service fails to provide past survey results, or

any collected in preparation of the EA, or disclose even the survey methods, such as whether or not they occur when owls are actually active. Further, the Forest Service provides a table titled "MSO Habitat Types within the Analysis Area" that "defines and quantifies the known and modeled habitat for MSO within the analysis area as defined by the MSO 2012 Recovery Plan." Final EA at 3-41, Table 3-19. However, the Forest Service fails to delineate the amount of acres modeled versus known by other means, or provide evidence that verifies the modeled results. Habitat modeling cannot serve as a baseline for the actual MSO population status. In addition, the Forest Service failed to demonstrate how its approach outside of known PACs will lead to population recovery Rather, the agency explains "[t]his identification process and resulting regional habitat model has informed the creation of a detailed MSO habitat review procedure (MSO Checklist) which will be implemented throughout the region prior to U.S. Forest Service action within habitat areas (U.S. Forest Service 2021f, 2022)." *Id.* Yet, the agency's analysis fails to discuss or provide evidence for how utilizing this checklist will contribute to MSO recovery or prevent a taking as required under the Endangered Species Act.

Due to its reliance on conditions-based management, the Forest Service improperly downplays all short-term impacts and emphasizes the assumed long-term benefits without providing the requisite analysis under NEPA. For example, the agency asserts "[i]t is likely that the Proposed Action activities would have short-term adverse impacts on habitat on small spatial scales (e.g., logs that currently provide small mammal habitat may burn), but these effects will be mitigated by the long-term application of treatments, as well as species-specific IDFs." Final EA at 3-45. It is important to note here that the Forest Service fails to disclose the temporal length of what it considers "short-term" impacts, and it wholly relies on design features to mitigate adverse effects of the Selected Alternative instead of performing a detailed analysis as NEPA requires. The omission is particularly glaring when looking at the IDFs. For example, the IDF for MSO-6 directs that "100-acre Core Areas would be designated in each PAC, burning would be allowed to enter into Core Areas only if they are expected to burn at low intensity with low severity effects. Coordination with USFWS would occur for any active ignitions needed within the core areas to protect habitat from high intensity burning." Draft DN at A-19. The agency fails to explain how coordinating with USFWS will protect habitat from high-intensity burning, and it fails to provide evidence that it can ensure low-intensity controlled burns with MSO PACs. The IDF MSO-7 requires the preparation of a "burn plan" but the Forest Service fails to provide an example or provide evidence that such plan will ensure only low-intensity prescribed fire occurs within PACs. When looking at the IDF MSO-11 for recovery habitat, the agency directs that "[a]ll trees greater than 16 inches dbh, as well as hardwoods, large down logs, large trees and snags would be retained unless posing a hazard." *Id.* The Forest Service fails to provide evidence or analysis supporting the 16 inch dbh limit as sufficient for preserving recovery habitat conditions, and fails to explain when larger trees would pose a hazard and qualify for removal. In fact, the agency describes 12 inch dbh trees as large: "Removal of some larger trees (>12 inches

dbh) could have short-term impacts on MSO habitat until remaining trees grow larger." Final EA at 3-45.

The agency's reliance on condition-based analysis precludes our ability to carefully evaluate other IDFs, in particular MSO-13 that directs the following:

> Before implementing management activities in areas that have been identified as draft recovery nest/roost habitat (per the most recent GIS shapefiles) U.S. Forest Service staff will review site conditions and project activities for compliance with MSO management direction… This process will include the following considerations: 1. Field verification of existing stand conditions (e.g., tree species and forest structure, but potentially also landscape context and operability) a) If the vegetation conditions do not warrant all or part of the proposed action, or it would be operationally infeasible, then the action could be modified or dropped. For example, *if a stand does not have high density of small-diameter trees, it may not be appropriate to implement a thinning treatment but may still be appropriate to conduct prescribed burning.*

Draft DN at A-19. Identifying where thinning will occur within MSO nesting/roosting habitat is an action that should take place before issuing a final project decision with the results disclosed in a detailed environmental analysis, especially since the IDF lacks specific thresholds for what constitutes a "high-density of small-diameter trees." Overall, the agency cannot rely on vague IDFs or site post-decision commitments as a rationale for asserting the Selected Alternative will not have a significant impact on individual MSO, its habitats or overall recovery.

In sum, the agency's MSO analysis is insufficient, does not reflect the best available scientific information, and will not support the recovery of MSO on the Santa Fe National Forest. Ultimately we challenge the central assertion by the agencies that high-intensity and high-severity wildfire is the main threat limiting MSO recovery, and we provided extensive studies that raise significant uncertainty. As we explained at length in our comments, the best available science does not support the proposed actions within or outside MSO Protected Activity Centers.[14] The threats to MSO recovery the agency asserts in its analysis are premised on the need, in part, to reduce wildfire occurrence: "Improving MSO habitat and reducing the risk of catastrophic wildfire are the primary objectives of the Proposed Action, and both are recommended management actions for MSO conservation and recovery (USFWS 2012, 2021c)." Final EA at 3-44. However, the best available scientific information demonstrates that with respect to fire and logging, the proposed actions are likely to exacerbate the owls' decline rather than promote recovery. For example, a recent study focused on Northern spotted owls concluded that "the main treatment type on National Forest lands to lower fire intensity in NSO sites may

[14] See Exhibit 21 of our comments "Lee, D.E. Mexican Spotted Owl Supporting Literature Table 1." The full studies are enclosed with our objection.

actually be causing more habitat degradation than severe wildfires, especially when results of NSO site occupancy are conflicted by pre- and post-fire logging." Bond et al., 2022,[15] Exhibit 15. Given MSO management relies, in part, on studies pertaining to Northern spotted owl, the results from Bond et al.2022 are relevant to MSO. At the very least the uncertainty regarding tree cutting and prescribed burning within MSO recovery habitat, critical habitat and protected activity centers demonstrates the Forest Service must address scientific controversy and uncertainty in an EIS.

The Forest Service failed to respond to our comments and the numerous opposing scientific viewpoints, including scientific viewpoints that undercut or conflict with the agency's assumptions about the purpose, need, and effect of the project on MSO and its habitat. An agency's failure to respond to opposing scientific viewpoints violates NEPA. NEPA requires that agencies disclose, discuss, and respond to "any responsible opposing view," and provide a rationale for choosing one approach over the other. 40 C.F.R. § 1502.9(b). NEPA also requires agencies to consider all important aspects of a problem. See *WildEarth Guardians v. U.S. EPA*, 759 F.3d 1064, 1069-70 (9th Cir. 2014). The Forest Service also failed to consider reasonable alternatives to the proposed action, including but not limited to an alternative that includes site-specific details (as opposed to the condition-based management approach) and an alternative that is more conservative in active management and possibly more protective of MSO and its critical habitat.

F. Failure to analyze vegetation treatments and forest resilience

The Forest Service has failed to sufficiently analyze the impacts of fuel treatments on bark beetle populations. We stated in the our scoping comments:

> A third assumption is that widespread thinning will necessarily reduce insect attack on trees. Disturbances to the forest often increase trees susceptibility to insect attack, especially during times of drought. And, it is well known that slash left through a warm season can promote bark beetle outbreaks. Thinning is a massive disturbance, even hand-thinning. With our forest in a generally dry and fragile condition, care and restraint should be primary.

WildEarth Guardians/Defenders of Wildlife scoping comments at 10. We stated in our Draft EA comments:

> Further, slash is a serious concern in the SFNF. Substantial bark beetle outbreaks occur periodically, such as the very large occurrence in 2007-2008. The Forest Service claims fuel treatments will help prevent outbreaks of bark beetle and other insects, but they virtually always leave slash through the next warm season, when a bark beetle outbreak could occur. Slash should not be left on the ground through the warm season following

[15] Bond, M.L.; Chi, T.Y.; Bradley, C.M.; DellaSala, D.A. Forest Management, Barred Owls, and Wildfire in Northern Spotted Owl Territories. Forests 2022, 13, 1730. https://doi.org/10.3390/f13101730.

> thinning treatments. This could precipitate a bark beetle outbreak throughout large sections of the SFNF.

The Forest Service response about concerns that fuel treatments could precipitate a bark beetle outbreak is:

> The decrease in stocking resulting from thinning treatments and use of prescribed fire is anticipated to reduce resource (water, nutrients, and light) competition among trees, which would allow for improved resistance and resiliency from the impacts of agents such as bark beetles and defoliators (Kegley 2011; Livingston 2010; Pederson et al. 2011; Randall 2010a, 2010b, 2012). For example, healthier trees are more able to defend themselves from bark beetles, and more able to bounce back from defoliation events. See EA Section 3.2.2 for additional analysis on this topic.

Thinning forests can promote bark beetle outbreaks by stressing trees that are nearby cut down trees through soil compaction impacts from trucks and machinery on tree roots, especially pinon tree roots, from mechanical damage to trees caused by trucks and machinery, and as we previously stated, by leaving thinning slash and slash piles during the subsequent dry season.

The Forest Service bases their statement above on the controversial assumption that removing trees and understory though the application of fuel treatments improves tree resistance and resilience. They have not provided evidence of this statement. There is insufficient analysis concerning the impacts of fuel treatments on tree resistance and resilience, and whether design features and mitigation measures can be realistically relied upon to mitigate impacts.

In fact, the best available science brings into question many of the Forest Service's underlying assumptions about the efficacy of vegetation treatments in reducing the effects from what can be characterized as a natural response to changing climate conditions. See Hart, S.J., et al., 2015 (finding that although mountain pine beetle infestation and fire activity both independently increased with warming, the annual area burned in the western United States has not increased in direct response to bark beetle activity);[16] see also Hart, S.J., and D.L. Preston. 2020 (finding "[t]he overriding influence of weather and pre-outbreak fuel conditions on daily fire activity . . . suggest that efforts to reduce the risk of extreme fire activity should focus on societal adaptation to future warming and extreme weather");[17] see also Black, S. H., et al., 2010 (finding, inter alia, that thinning is not likely to alleviate future large-scale epidemics of bark beetle);[18] see also Six,

[16] Hart, S.J., T. Schoennagel, T.T. Veblen, and T.B. Chapman. 2015. Area burned in the western United States is unaffected by recent mountain pine beetle outbreaks. Proceedings of the National Academy of Sciences. Vol. 112, No. 14. (provided with our EA comments).
[17] Hart, S.J., and D.L. Preston. 2020. Fire weather drives daily area burned and observations of fire behavior in mountain pine beetle affected landscapes. Environ. Res. Lett. 15 054007. (provided with our EA comments).
[18] Black, S. H., D. Kulakowski, B.R. Noon, and D. DellaSala. 2010. Insects and Roadless Forests: A Scientific Review of Causes, Consequences and Management Alternatives. National Center for Conservation Science & Policy, Ashland OR. (provided with our EA comments).

D.L., et al., 2018 (study that found during mountain pine beetle outbreaks, beetle choice may result in strong selection for trees with greater resistance to attack, and therefore retaining survivors after outbreaks—as opposed to logging them—to act as primary seed sources could act to promote adaptation);[19] see also Six, D.L. et al., 2014 (noting "[s]tudies conducted during outbreaks indicate that thinning can fail to protect stands").[20] Further, prescribed burns can scorch and weaken trees, which increases the probability of bark beetle outbreak and hinders the area's natural response to climate change. The Forest Service is obligated to analyze the potential impacts of fuel treatments in a warming climate, given that there appears to be a substantial increase in bark beetle activity in the SFNF, and to analyze whether the design features and mitigations measures they intend to use are sufficient to prevent the establishment and spread of Ips beetle infestations.

Regarding design features, the Forest Service states in the Final EA:

> Design Features (Ips-1 and Ips-2 in Appendix C) have been incorporated into the proposed project to mitigate potential insect and disease issues resulting from treatments. These include the established slash management methods for management and monitoring for potential bark beetle infestation within burned areas, Ips-3 through Ips-5 (see Appendix C) and U.S. Forest Service Forest Health Protection will continue to monitor for bark beetle activity during annual aerial detection surveys.

Design Features and Mitigation measures clearly appear to be inadequate to avoid bark beetle outbreaks with a sufficient degree of certainty, and it is incumbent on the Forest Service to provide analysis that sufficiently supports that they do. Examples of the shortcomings of design features and mitigation measures to prevent the establishment and spread of Ips beetle infestations are:

> Ips-1 Slash would be treated promptly through lop/scatter, chipping, mastication, hand pile burning, or prescribed burning. Concentrations of chipped/masticated material would not be allowed to accumulate over 4 inches in depth on more that 20% of treatment unit. Chipped/masticated materials would be distributed on slopes where they would dry quickly.

Final EA Appendix C at 2. Bark beetles are able to establish themselves in slash that is over 3" in diameter. There is no instruction to reduce the size of slash to less than 3" in diameter. So material treated in accordance with this Design Feature would be susceptible to establishment of ips beetles:

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[19] Six, D.L., et al. 2018. Are Survivors Different? Genetic-Based Selection of Trees by Mountain Pine Beetle During a Climate Change-Driven Outbreak in a High-Elevation Pine Forest, Front. Plant. Sci. 9:993, doi: 10.3389/fpls.2018.00993 (provided with our EA comments).

[20] Six, D.L., E. Biber, E. Long. 2014. Management for Mountain Pine Beetle Outbreak Suppression: Does Relevant Science Support Current Policy? Forests, 5. (provided with our EA comments).

> Ips-2 Activity fuels would be disposed of as soon as possible and typically would not remain for more than two years depending on burn windows,

Final EA Appendix C at 2. Leaving activity fuels on the ground during the first dry season after thinning promotes bark beetle outbreak.

> Ips-3 When practical, activity slash would be created only between July through December unless the potential for Ips infestation is determined to be low.

Final EA Appendix C at 3. To prevent the establishment of ips beetle infestations, creating activity slash only between July through December is virtually mandatory. Any qualification, such as "when practical" may create a situation where ips outbreak may be more likely to occur.

> Ips-5 Mechanical damage would be avoided to residual trees and their root systems to reduce risk of attracting bark beetles.

Final EA Appendix C at 3. When working among trees with masticators, trucks, chain saws and other equipment, it is nearly impossible to substantially avoid damage to residual trees.

The SFNF, and most of New Mexico is experiencing an upswing in bark beetle infestation. During increasing infestation and bark beetle outbreaks is not the right time to be leaving slash scattered or in slash piles during the warm season, or to create disturbances in the forest that might draw bark beetle infestation. There should not be disturbances to either trees or soils such as occur during the implementation of thinning projects. According to the New Mexico EMNRD Forestry Division latest forest health report, NEW MEXICO FOREST HEALTH CONDITIONS 2021, "the number of acres of forest and woodlands mapped with insect, disease, and drought-stress damage increased by 240,000 acres across all land ownership types in New Mexico since 2020. Most of the increase was caused by a rise in bark beetle-caused piñon, ponderosa pine, and Douglas-fir mortality." NEW MEXICO FOREST HEALTH CONDITIONS 2021 at 1. Exhibit 16. It further stated, "The Forestry Division's Forest Health Specialist continued to observe increased bark beetle-induced piñon mortality around Santa Fe, Cuba, and within the communities of the East Mountains (e.g. Edgewood)." *Id*. at 1.

Regarding ponderosa pine bark beetle mortality, the report stated: "Approximately 116,000 acres of forests in the state were mapped with ponderosa mortality caused by this complex of bark beetle species, which was a substantial increase from 2020 levels." And "Bark beetle-induced ponderosa mortality throughout the state may continue to increase in 2022 due to on-going drought conditions and above average temperatures." *Id.* at 7. Regarding pinon ips, the report stated, "Piñon ips has been the most significant mortality agent of piñon in New Mexico and outbreaks of this species have been driven by prolonged drought conditions. In 2021, approximately 67,000 acres with bark beetle-killed piñon were mapped in the state, which was a substantial increase in acres since 2020 and the most mapped since 2013."

The report concluded that "The National Weather Service predicts drought conditions in New Mexico will persist well into 2022. As a result, continued drought and heat stress on trees coupled with increased defoliation may set the stage for increased bark beetle-related tree mortality in the next 1-3 years." *Id.* at # 15.

It is well-known that thinning can exacerbate bark infestations and precipitate outbreaks, both by creating a disturbance from the impacts of heavy machinery compacting soils and from direct impacts to residual trees, and as an effect of slash being left either in lop and scatter or in piles, especially if slash is over 3" in diameter. A bark beetle management guide from Arizona College of Agriculture and Life Sciences states:

> In the southwestern U.S., thinning is advocated by land managers as a means of reducing fuel loads, improving residual tree growth, and as a preventive measure for reducing subsequent amounts of bark beetle-caused tree mortality (DeGomez 2006a). The thinning prescriptions are quite diverse, and their application can result in significantly different stand structures. In most cases large amounts of downed material (i.e., slash) are created and left in the field, due to lack of developed markets for small diameter trees. This material, if left on the ground, has inherent value and ecological functions (e.g., nutrient cycling and wildlife habitat), while at the same time creates host material for many bark beetle species, specifically those in the genus Ips (hereafter referred to as ips). Forest managers and forest health specialists tend to agree that fresh slash left untreated on the forest floor increases risks from bark beetle infestations and eventually wildfire, but those who are managing for other forest attributes are prone to recommend leaving some of the slash untreated to serve as habitat for a variety of fauna that contribute to a healthy forest condition (Brown et al. 2003).

Managing Slash to Minimize Colonization of Residual Trees by Ips and Other Bark Beetle Species Following Thinning in Southwestern Ponderosa Pine at 1.[21] Exhibit 17. The density of the stand treated has a substantial impact on the likelihood of a bark beetle outbreak because more slash tends to increase bark beetle infestation. The Forest Service did not consider in their analysis the possibility of leaving an increased density of the treated areas, or of thinning in stages so impacts can be decreased. The bark beetle management guide goes on to state:

> Treatment of dense stands typically results in the creation of greater amounts of slash than treatment of less dense stands. Generally, the greater the amount of slash the greater the number of ips beetles emerging in a given area (Reid 1957). Once beetles emerge from slash, factors affecting the susceptibility of residual trees to bark beetle attack are of primary importance. Over stocked conditions, often defined as high stand density, basal

[21] Tom DeGomez, Christopher J. Fettig, Joel D. McMillin, John A. Anhold and Christopher Hayes. 2014. Managing Slash to Minimize Colonization of Residual Trees by Ips and Other Bark Beetle Species Following Thinning in Southwestern Ponderosa Pine. The University of Arizona Cooperative Extension, publication AZ1449.

> area or stand density index; tree diameter and host density are consistently identified as primary attributes associated with bark beetle infestations (Fettig et al. 2007).

Id. at 2. The time of year that slash is produced is critical for minimizing bark beetle outbreak. Ips-3 only states that "when practical" the Forest Service will limit creating activity slash to between July through December. The Forest Service must clarify what is meant by "when practical," and under which conditions they would choose to create activity slash outside of the July through December time period. The bark beetle management guide states:

> The time of year slash is created can have a significant impact on subsequent ips brood production, and top-kill of big trees and tree mortality rates (Hall 1947, Buckhorn 1957, Steed and Wagner 2004, Fettig et al. 2006a, Hayes et al. 2008, Fig. 7). For example, studies by Buckhorn (1957) demonstrated that ponderosa pine mortality caused by ips in Oregon was greatest when slash was generated between the period of February and July, as compared to August through January. Slash material produced from January through June is generally most optimal for ips colonization and brood production, and is considered the "hazardous period" for creating slash (Sartwell 1970). Conversely the "safe period" for producing slash is generally from July through December (Parker 1991). During this period, host material declines in suitability over time as phloem moisture is reduced. The drying of the phloem within the slash is thought to be a major factor in reducing the opportunity of attacking ips to successfully complete their lifecycle (Redmer et al. 2001).

Id. at 3. During the period from 2017-2020, in a WUI neighborhood in Canada de los Alamos, approximately ¼ mile from the SFNF, several residents thinned their forested properties with NRCS thinning grants under New Mexico Division of Forestry prescriptions. The thinning prescriptions were mostly the same, to thin to 40 BA, although a few residents chose not to thin to 40 BA and thinned to a somewhat higher BA, as high as approximately 60-80 BA. The thinning was done generally in late winter or very early spring. The prescriptions called for slash to be primarily lopped and scattered. Not surprisingly, a bark beetle outbreak ensued, and it was clear that the thinning slash was the source of the outbreak. It impacted the properties of residents who had not chosen to thin their properties. The New Mexico Division of Forestry entomologist came to the area to inspect the outbreak, and prepared a report dated July 13, 2018 (Exhibit 18) containing the following points:

> **Observations, Condition, and Management of the Ips Infested Trees in the Areas Around the NRCS Thinning on Cougar Ridge Road**
>
> • Observed numerous trees around the thinned area infested with Ips bark beetles (see pictures below)
>
> • Some green trees may be freshly attacked this year, but will not show signs (crowns fading from top down) until next year (will need to monitor trees next year for infestations)

• Current Ips infested trees are breeding grounds for thousands of offspring, which could cause a larger localized Ips outbreak in the community (especially if drought conditions worsen)

• Offspring development time for Ips spp. in ponderosa pine = 30-45 days, i.e. time is critical and trees need to be immediately felled/removed or felled/chopped into firewood to limit spread of the species in the community. All tree materials that are > 3'' in diameter need to be removed from the site or immediately cut into firewood pieces. All materials < 3'' in diameter can be cut into short sections and left on site.

• Other bark beetles (Dendroctonus spp.) may be attracted to the Ips attacked trees, which could lead to a larger bark beetle outbreak in the community (another reason to fell currently infested trees)

Considering the local climate is getting warmer and drier, and bark beetle is known to be on the increase, the Forest Service needs to consider stronger safeguards to protect the surrounding forest during fuels treatment activities. Thinning to a higher tree density, reducing the size of thinning treatments, and thinning in stages to reduce the amount of thinning slash that is produced at a time should be considered, within an EIS.

Alternative 2 requires prescribed burns to be implemented over 38,000 acres every 5-10 years. We provided evidence that burning every 5-10 years is too frequent and suppresses the understory growth in a manner that limits habitat for species that need this structural diversity. The Forest Service failed to take a hard look at the consequences from artificially suppressing the forest understory. The issue of historical fire rotations in the SFNF, upon which the Forest Service bases the frequency of prescribed burns to be implemented, is controversial and the Forest Service has not considered research that calls into question that the historical fire return averaged 5-15 years. Final EA at 1-5.. Also the Forest Service has not considered research that contradicts that fire intensities in the project area were necessarily predominantly low-severity.

The Forest service explains:

> "The dry conifer forests at the southern extent of the Rocky Mountains historically burned frequently. These fires were predominantly low in severity. This is similar to other dry conifer forests of the region (Swetnam and Baisan 1996) and across the West (Taylor and Skinner 2003; Brown et al. 2008). Fires occurred in consecutive years on multiple occasions, but usually in different locations, suggesting a fuel limitation immediately following fire that prevented reburning. Individual plots burned less frequently, on average (7- to 32-year median intervals). Widespread fires (those which burned at least half of the plots and crossed watersheds) occurred relatively frequently (e.g., 20-year intervals)."

Final EA at 3-28. Our comments include the following quote from conservation scientist Dr. Dominick DellaSala's SFMLRP scoping comments:

> A key fire-history study for the nearby Santa Fe watershed is Margolis and Balmat (2009). These researchers indicate that the historical low-severity fire rotation in the Santa Fe watershed for dry pine forests was estimated at 39.80 years. They define frequent fire as < 25 years. Using their definition means that the Santa Fe watershed would not qualify as a frequent-fire regime, as this is a sufficient mean number of years between surface fires to allow understory fuels including shrubs and small trees to accumulate levels that would certainly enable the occurrence of some mixed and high-severity fires over time. Moreover, this longer period corresponds with the paleo-record from charcoal sediments showing that when wet periods are followed by successive droughts, large fires, including patches of high severity, do indeed occur (Meyer 2010).
>
> It is important to accommodate this variability in fire return intervals as heterogeneity in the ensuing burn severity patches at the landscape scale results in high levels of biodiversity (i.e., pyrodiversity of fire severity patches begets biodiversity, DellaSala and Hanson 2015). Notably, even slight differences in fire-return intervals are consequential. Baker (2017) reports that understory fuels in dry forests recover after fires in 7-25 years. If mean fire-return intervals were <25 years, understory fuels would be limited. However, if the interval was >25 years, as reported by Margolis and Balmart (2009), then shrubs and small trees would recover across the landscape and excessive thinning to shift forest to more open-canopy forests with minimal shrub cover would be inappropriate at large spatial scales.
>
> The role of shrubs and understory vegetation is also a key ecosystem component in dry forests allowing for nutrient cycling and below-ground processes, water absorption and retention, provision of wildlife habitat, pollination and other ecosystem services. Spatial heterogeneity in fire-return intervals at landscape scales is a key indicator of resilience as it allows for both fire refugia (longer return intervals) and fire-mediated biodiversity (short return intervals). It is essential to manage for this variability to accommodate wildlife that require low, moderate and high fire severity classes. In other words, when it comes to fire, nature is complex while management tends for uniformity typically at the expense of fire-mediated biodiversity.
>
> The following Baker (2017) observations about fire interval estimators need to be addressed in the SFLMRP:
>
> > "Dry-forest landscapes until recently were thought to have historically been primarily old growth forests, with a history of frequent low-severity fire, across their extent (e.g. [72]), but this has been refuted by GLO reconstructions and

> early aerial photographs (Table 6), paleoecological evidence [24], and early forest-reserve reports and other evidence [63 , 73]. Even in Arizona, which had abundant old forests with frequent fire (Fig 3), denser forests and high severity fire were extensive at certain times and in certain places, as on Black Mesa and parts of the Mogollon Plateau [60 , 73]. It is sensible to restore low- severity fire to its former dominance in the parts of dry-forest landscapes with a history of primarily low-severity fire, historically averaging about 34% of western dry-forest landscapes (Table 6). Estimated mean PMFI/FRs [population mean fire interval/fire rotation] here provide a guide for restoration and management of low-severity fire in extant old-forest parts of landscapes. For most dry-forests today, which are not old, using frequent fire (PMFI/FR < 25 years) in restoration is not supported, and fuels do not need to be substantially reduced, because historical PMFI/FRs naturally allowed historical shrubs and small trees to fully recover after fires. Restoration of low-severity fire is still needed. The most appropriate approach, given likely long but uncertain mean rates of historical low-severity fire, is for most dry forests today to receive at most one prescribed fire, followed by managed fire for resource benefit, with the goal of mimicking mean historical PMFI/FRs."

We received no acknowledgement or response in the Final EA concerning this issue. The Forest Service did include a representative comment about historical fire return in the project area:

> The FS uses outmoded research justifying prescribed burns and thinning every 5-15 years, whereas more recent research argues that treatment should be applied only every 55 years. (Baker 2017) Intentionally burning forests this frequently creates dry, barren and sterile forests. lacking ecological integrity and diversity. Trees help cool the forest floor and retain moisture for a healthy forest ecosystem. Appendix G at 6.

However, they provide no response to this representative comment at all.

We see in previously thinned areas in and near the designated Santa Fe Fireshed area that thinned and prescribed burned forests from similar previous fuel treatment projects leave forest landscape virtually devoid of shrub understory. In some cases grasses grow, but generally little else as shown in this photo taken by the Santa Fe New Mexican of a fuel treated area within the Santa Fe watershed. This area has had prescribed fire applied to it twice.

Our comments also cited further remarks from conservation scientist Dominick DellaSala, who states in his SFMLRP scoping comments that:

> There is no ecological justification for thinning treatments in these [pinon-juniper] forest types and doing so may result in ecosystem type shifts and novel conditions. (DellaSala, SFMLRP scoping comments. 2019). Exhibit 6. With the warming climate, pinon-juniper is naturally thinning, and it should be determined if this natural process will be sufficient. Also prescribed burning can potentially be risky to pinon-juniper landscape. "The fire regime in piñon-juniper ecosystems is characterized by infrequent, stand replacing fires. Therefore, piñon-juniper tends to be less fire tolerant and take years to recover after a fire. The fuel structure is typically not conducive to a spreading, low‐severity fire that would consume fine fuels without killing the dominant trees or shrubs, because the fine fuels are usually discontinuous." Romme et al, 2008. Studies show that prescribed fire in piñon-juniper can allow for post-fire invasion of annual grasses such as cheatgrass, which can adversely impact pinon-juniper regeneration and increase the probability of fire.

There should be further analysis completed concerning the impacts of prescribed burns in pinon-juniper ecosystems, and to what degree thinning is already occurring naturally..

The Forest Service included a representative comment about historical fire return in the project area:

> The FS uses outmoded research justifying prescribed burns and thinning every 5-15 years, whereas more recent research argues that treatment should be applied only every 55 years. (Baker 2017) Intentionally burning forests frequently creates dry, barren and sterile forests. lacking ecological integrity and diversity. Trees help cool the forest floor and retain moisture for a healthy forest ecosystem. Final EA, Appendix G at 6.

The Forest Service did not respond to this comment at all, again being unresponsive to the important issue that the amount of prescribed fire planned may be much too frequent, to the detriment of forest health.

The Forest Service states that a goal of prescribed fire is to "Reduce risk and help to safely protect local communities from unplanned wildfire." We stated in our draft EA comments that: "It is well-established that communities (homes) are best protected from fire by fire-proofing structures, and judicious removal of fuels within the surrounding 100+ radius. Syphard et al. 2014, Cohen, 2000. The Forest Service needs to address the fact that addressing the home ignition zone will do more to protect people's property than the proposed action.

At an absolute minimum, these studies demonstrate that the proposed treatments are controversial, ill-supported, and have the potential for significant impacts requiring preparation of an EIS.

It is incumbent upon the Forest Service to analyze whether, despite the findings of Syphard and Cohen, that fuel treatments outside of the 100+ feet surrounding structures significantly helps to protect communities from fire.

G. Failure to analyze impacts on Visual Quality and Recreation

The Forest Service is required to analyze the impacts of the Selected Alternative on both visual quality and recreation. Santa Fe area residents visit the SFNF regularly and often, due to the close proximity to the City of Santa Fe and to surrounding towns. Due to its natural beauty and nearby mountains, Santa Fe attracts many visitors and tourists who utilize the nearby SFNF for recreation.

Our comments stated that the visual quality of the SFNF may be affected by the Proposed Action fuel treatments, and that "many people do not enjoy being in heavily thinned and repeatedly burned forests that appear human designed, as they experience that the area's naturalness is compromised, and do not experience such forests a genuine experience of nature." The Forest Service responds "Preferences for landscapes with large tees, openings, and varied spatial distribution for vegetation that provides views through the site and into the landscape were noted (Brown and Daniel 1984, 1986, 1987; Ryan 2005)." Final EA, Appendix G at 20. There is no literature cited about preferences for landscapes that are very open, appear relatively barren, contain little shrub understory and contain numerous tree stumps and tree trunks lying on the

ground, which is how similar projects appear to many members of the public. The Forest Service states “It is recognized that beyond these generalizations, individual preference varies widely and not everyone would see the restoration activities as a positive change long term. However, the risk of catastrophic fire with the No Action Alternative may mitigate some of the concerns over the potential alterations of forest aesthetics.” The Forest Service assumes, without addressing scientific controversy and uncertainty, that the risk of high intensity/high severity wildfire would be significantly less if fuel treatments occur, and arbitrarily speculates that “this may mitigate some of the public’s concerns over alterations of forest aesthetics.”

In fact, the Hermits Peak/Calf Canyon Fire, caused by two Forest Service prescribed burns, gives the public good reason to not feel their concerns over the potential alteration of forest aesthetics are mitigated when prescribed burns occur. Their concerns will likely be much greater. A substantial portion of the Hermits Peak Fire burned at high intensity, and dead and blackened trees are not considered to have good aesthetic quality by most of the public. Nor does such a landscape appear natural to many members of the public, even though it can be argued that wildfires are natural. However a wildfire caused by a so-called controlled burn that was set in the spring is not natural, as historically the fire season was in the summer.

The Forest Service again unrealistically relies on design features to mitigate damage from aggressive fuel treatments. They state “Design Features Rec-1, Rec-9 through Rec-13, and Scen-1 through Scen-10 will help reduce contrasts that detract from the natural appearance of the project area scenery (see Appendix C of the EA).“ They do acknowledge that fuel treatments detract from the natural appearance of the project area scenery. These design features offer only a minimal reduction in the impacts of the intensive thinning treatments in the Selected Alternative, and some only hide forest that is lacking in good visual quality. For example:

> “Rec-1. Create a 150-foot visual buffer around campgrounds and picnic areas where no thinning or piling would occur. Prescribed fire would be allowed to back into these areas. Final EA Appendix at C-3.
>
> “Rec-13. Activity-generated fuels created within 150 feet of National Forest System trails and roads would be piled and burned or removed within 2 years of operations and within 1 year for areas managed for a Visual Quality Objective of Retention. Where possible, leave a vegetative buffer of at least 33 feet alongside the trail. (C-4)Rec-1. Create a 150-foot visual buffer around campgrounds and picnic areas where no thinning or piling would occur. Prescribed fire would be allowed to back into these areas”.

Final EA, Appendix at C-4. Both of the above design features attempt to create a screen of natural appearing forest around campgrounds, picnic areas, trails and roads. As long as a forest visitor stays directly within these locations, this might create the illusion of being in a natural and intact forest. However while recreating in campgrounds, picnic areas, on trails and on roads, most forest visitors will go outside of these specific areas, Then they will encounter forest that

does not look natural, lacks visual quality and may not be an enjoyable place to recreate in. Since prescribed fire would be allowed to back into these areas, and prescribed burns would be repeated every 5-10 years, the shrub understory would not have time to substantially regrow. Since the shrub understory would be burned even within the 150 visual buffer, the buffer would likely not be very effective from many forest visitor's point of view.

> "Scen-9. No machine piles within the immediate foreground (300 feet) of sensitive viewpoints."

This design feature only provides a respite from machine piles for 300 feet of viewpoints. Generally when observing views, forest visitors will look far beyond the immediate 300 feet in front of them. Their views would be very impacted by machine piles that are not far outside the range of 300 feet from them.

> Scen–7. Stumps will be cut to a maximum of 8 inches within 150 feet of National Forest System roads, and as low as possible in all other distance zones." Draft DN at A-9.

Most people do not want to recreate in a field of even 8" stumps with scattered trees and tree groupings, because they find such landscapes to lack visual quality and to not appear natural. After they get past the 150 foot screen of illusion, then they likely would see higher stumps.

Suggested Resolution: The Forest Service must produce a detailed environmental analysis in an EIS that fully addresses the shortcomings detailed in this section, including disclosing missing information, providing robust, site-specific analysis, and providing supporting evidence for the agency's conclusions, especially in regards to the implementation and effectiveness of BMPs, design features and mitigation measures.

H. Failure to analyze and disclose the potential for escaped prescribed burns

The Hermits Peak/Calf Canyon Fire has demonstrated once again that prescribed burns can and do go out of control, and sometimes catastrophically. In the WildEarth Guardians and Defenders of Wildlife SFMLRP scoping comments, we stated:

> The Proposed Action states that up to 43,000 acres of the SFMLR Project area will be treated with prescribed fire.
>
> According to the 2005 report "Prescribed Fire Lessons Learned," posted on fs.fed.us, one in a hundred prescribed burns are either "near misses" or escaped control. While that is a good record of successful burns (99%), the impacts of out-of-control prescribed burns can be substantial. The Cerro Grande Fire is an example of a prescribed burn going out of control with tragic results. Every time a fire is started in the forest, there are risks of the

> fire spreading, especially in the SFNF where winds can arise quickly and sometimes unexpectedly.
>
> The Agency should evaluate the probability of a broadcast prescribed burn precipitating a fire in the SFNF. The Agency should also evaluate the effects of a substantially reduced amount of slash burned primarily in pile burns on fire safety, air quality and bark beetle risk.

Scoping comments provided by WildEarth Guardians and Defenders of Wildlife explain further:

> Prescribed fire and mechanical thinning can and does put WUI residents' homes and the public's enjoyment of the forest at risk due to the possibility of accidentally set wildfire. Two examples of this occurring in New Mexico in recent decades are the Cerro Grande Fire of 2000, precipitated by a prescribed burn (by the National Parks Service) which burned down more than 200 homes and burned 47,650 acres of the SFNF, and the Dog Head Fire of 2016 started by a spark from a Forest Service masticator which burned down 12 homes and burned 17,912 acres.
>
> The Forest Service must consider the best available science. The agency cannot cherry-pick the science and data to support its proposal while ignoring contrary, credible views and data. The agency may not ignore topics if the information is uncertain or unknown. Where information is lacking or uncertain, the Forest Service must make clear that the information is lacking, demonstrate the relevance of the lacking information to the evaluation of foreseeable significant adverse effects, summarize the existing science, and provide its own evaluation based on theoretical approaches. 40 C.F.R. § 1502.22."

Id. at 6. The Final EA provides no disclosure or analysis of the direct, indirect, or cumulative impacts of prescribed burns going out of control, nor analysis of the potential for escaped prescribed burns. Nor are any project-specific mitigations provided to prevent escaped prescribed burns, or to decrease the impacts of such escapes. In the Draft DN, it merely states "Almost all prescribed fires – 99.84 percent – go according to plan. However, we cannot eliminate all the risk, and the SFNF knows from experience how destructive an escaped prescribed fire can be." Draft DN at 17. Next the Forest Service states "We cannot guarantee that prescribed fires will never escape, but the alternative to using this proven tool is larger, more destructive wildfires, due to a combination of overgrown forests, climate change, a growing number of homes in the wildland-urban interface, and more than a century of fire suppression (USFS 2022)." *Id*. None of the above statements by the Forest Service can be construed as disclosing or analyzing the potential for an escaped prescribed burn, nor the impacts of an escaped prescribed burn.

The Forest Service provides some generalities on how the USFS intends to prevent escaped prescribed burns. They state that the recommendations were not absent in previous practices, but there is room to modernize and reevaluate them:

> The Chief's comprehensive review includes recommendations and directives that ensure that prescribed fire plans are (1) up to date with the most recent science, (2) key factors and conditions are closely evaluated on the day of a prescribed burn, (3) fire managers and agency administrators are in close contact with the National Weather Service before, during and after a prescribed burn, and (4) decision makers are engaged in real-time to determine whether to proceed. These recommendations were not absent in previous practices but there is room to modernize and reevaluate them.

Draft DN at 18. The Chief's Review was not specific to the SFMLR Project area, and is not subject to the NEPA analysis process for this project. The public, who would likely be greatly affected by further wildfires caused by escaped prescribed burns, has the right to be included in the analysis process in regards to preventing escaped prescribed burns.

After that statement, in the "Intensity" section of the Draft DN, the agency states:

> 2. The degree to which the action affects public health and safety.
>
> Due to the emphasis placed on safety in all federal fire management policies and the current NFS practice of using available resources to notify the public of fire management activities, Alternative 2 is not anticipated to impact public health and safety.

Draft DN at 20-21. Given that last year, the Forest Service ignited two burns that destroyed communities, were the indirect cause of three human deaths, and caused a major public health crisis with the heavy smoke from a hot and out-of-control wildfire near populated areas, the agency must explain why Alternative 2 is not anticipated to impact public health and safety. We believe that is not a realistic anticipation. In fact, the agency explains the following:

> During the public scoping process for the project, 7,426 scoping comments were received. All substantive scoping comments were addressed in the EA. In addition, 123 comment letters were received during the SFMLRP EA public review period. The U.S. Forest Service has determined that none of the comments provided during the public involvement process document a substantial dispute as to the environmental consequences of Alternative 2, the Selected Alternative (Appendix G of the EA). The conclusions in the EA analysis were drawn from scientific data and professional judgment of U.S. Forest Service subject matter experts, as documented in Chapter 3 of the EA.
>
> The SFNF agrees that concern is warranted for the inherent risks that come with planned prescribed fire treatments, as well as for wildfires in the current forest conditions. The September 2022 Chief's National Prescribed Fire Program Review (the Review) was prepared to address recent prescribed fire escapes by the Forest Service. It provides national direction for individual forests' prescribed burning programs, to ensure

> improved planning, analysis and implementation at the burn unit level (U.S. Forest Service, 2022d.) The Santa Fe National Forest is incorporating this direction into every prescribed burning project, with an emphasis on improved project unit planning and analysis per the direction in the Review, incorporating enhanced public and partner engagement.

Draft EA at 21. The Forest Service has determined that the public has reason to be concerned about the "inherent risks that come with planned prescribed fire treatments." However, they have also determined that none of the comments provided during the public involvement process document a substantial dispute as to the environmental consequences of Alternative 2. Many scoping and draft EA comments addressed the unacceptable risks of prescribed burns implemented without full analysis specific to the project area. The vast majority of comments urged the agency to complete an EIS for the project and provided a multitude of reasons and documentation as to why that is a necessity for the Project. The comment cited at the beginning of this section by WildEarth Guardians and Defenders of Wildlife constitutes a highly substantial dispute as to the environmental consequences of Alternative 2. We requested that the probability of a broadcast prescribed burn precipitating a wildfire in the SFNF be evaluated, and that the Agency should evaluate the effects of pile burns on fire safety and the potential for fire escape. The dispute is substantial because two separate prescribed burns went out of control during April of 2022, in an area of the SFNF almost adjoining the SFMLR Project area, and resulted in a wildfire, the Hermits Peak/Calf Canyon Fire, that burned 341,741 acres and several hundred homes. Entire communities were virtually destroyed in the fire, acequias filled with silt, the Las Vegas water supply contaminated, and three residents died in post-fire flooding.

The Forest Service has not in any way responded meaningfully to our comments cited above, A response requires much more than to state in the Draft DN that prescribed burns have inherent risks, or to provide a general outline of how prescribed burns will be managed on a national level, and the changes are mostly procedural. The National Prescribed Fire Program Review is not a replacement for analysis specific to the SFMLRP. Despite stating that "all substantive scoping comments were addressed in the EA," the agency did not respond to our SFMLRP scoping comment above at all in the Final EA, the draft DN or in Appendix F - Public Comment Period Content Analysis and Response.

These two fires were not the result of the "inherent risks that come with prescribed fire treatments." According to the Gallinas-Las Dispensas Prescribed Fire Declared Wildfire Review, they were instead the result of a litany of human error, lack of agency capacity, lack of equipment, lack of updated climate models, lack of communication, and problems with agency culture.

It is incumbent upon the Forest Service to disclose and analyze the direct, indirect and cumulative impacts of an escaped prescribed burn as a result of the SFMLRP, and to analyze the

potential for an escaped prescribed burn. This was done in the 2005 Environmental Assessment for the Gallinas Municipal Watershed Wildland-Urban Interface Project. This project area almost adjoins the SFMLR Project area, and is also within the Pecos/Las Vegas Ranger District. The potential for an escaped prescribed burn was identified as one of three "key issues" in the 2005 Gallinas Municipal Watershed WUI Project EA. Environmental Assessment for the Gallinas Municipal Watershed Wildland-Urban Interface Project at 9. Exhibit 19.

In the section of the EA titled "Potential for Escaped Fire" the Forest Service states, "The issue related to fire behavior is: Prescribed burns may escape control measures and threaten the water supply and resources in and around the Watershed. Burning unthinned stands may pose the highest risk of fire escape." *Id*. at 92. The SFMLRP proposal is to implement prescribed fire on up 20,000 acres for forest that is not previously thinned, which at least in the context of the Gallinas Municipal Watershed WUI Project EA was the definition of high risk. The Forest Service states in the EA, "Burning unthinned areas would pose the greatest risk for escape; therefore, the evaluation criteria for risk of escape is the number of acres to be broadcast burned without prior thinning. *Id.* at 92. The SFMLRP proposal is to implement prescribed burns on up to 38.000 acres of the project area, and to thin up to 18,000 of those acres. This means over half of the acres treated will be done in a manner that according to the Forest Service, poses the highest risk of escape. This EA was produced in 2005, when the climate was cooler and wetter. Now that the SFMLR Project area is drier and has a greater build-up of fuels, and the climate is warmer and drier, the additional risk that the Forest Service acknowledged in the Gallinas Municipal Watershed WUI Project EA in 2005, is not disclosed, acknowledged or analyzed in the SFMLRP EA. This EA was reinitiated after the Hermits Peak/Calf Canyon Fire occurred, yet the Agency has opted to go forward without the analysis of what was considered to be one of the three key issues in 1995, with full knowledge and experience of the potential catastrophic consequences of their proposed actions.

In 2023 and going forward, virtually all burning in the project area is high risk. We are not recommending more thinning, but that the Forest Service acknowledge and analyze the risks they are creating for forest resources and WUI communities. In the SFMLRP analysis, the Forest Service should be completing analysis far beyond what was done in 2005. That the Forest Service has not done this analysis in the reinitiated Final EA is gross negligence. The Forest Service must do a thorough and complete analysis that includes the full participation of the public, who will be the most impacted by a potential prescribed burn escape.

The disaster that was brought upon the local residents and the damage to forest resources are more than enough to require an EIS to be completed for the SFMLR Project, in order to "[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment." Ibid. It is entirely certain that such a wildfire, ignited as an unintended result of Forest Service fuels treatments, affects the quality of the human environment and also damages forest resources. It is highly probable that such prescribed burn escapes will occur again in the

SFMLRP Project area within the project time frame, given that the Project area is in close geographic proximity to where the Hermits Peak/Calf Canyon Fire ignited, has similar vegetation types, and similar topography. SFMLR Project prescribed burns would be partially implemented by the same Ranger District that implemented the Las Dispensas and Calf Canyon prescribed burns.

While USFS Chief Randy Moore states in the September 2022 National Prescribed Fire Program Review that 99.84% of prescribed burns "go according to plan," that percentage is nationwide. We do not either accept or reject that calculation, as we do not have sufficient information to understand how it was derived. In fact, the Forest Service failed to acknowledge or disclose how direction from the Forest Service Chief stemming from the National Prescribed Fire Program Review would affect implementation of Alternative 2. Regardless, there is a pattern of escaped prescribed burns in New Mexico, some with catastrophic consequences, and conditions are getting warmer and drier which increases the probability of escaped prescribed burns. In addition to considering the number of incidents, it's necessary to also consider the number of acres burned, the number of homes burned, and the extent to which livelihoods and communities have been impacted by escaped prescribed burns. It's also necessary to take into account the number of resulting human deaths.

The Hermits Peak Fire and the Calf Canyon Fire follows several other escaped prescribed burns that have occurred in New Mexico since the year 2000:

> – The prescribed burn that precipitated the Cerro Grande Fire, in May of 2000, was ignited by the National Park Service on Cerro Grande, a summit on the rim of the Valles Caldera. The conditions were potentially windy, and a report later stated that a Los Alamos National Laboratory fire official told a Bandelier supervisor not to proceed with a prescribed burn at that time because fuels were very dry. The prescribed burn was ignited anyway, high winds developed, and the result was a 43,000 acre wildfire that destroyed 235 homes and displaced 400 families. Buildings at the Los Alamos National Laboratory were also burned. The US General Accounting Office estimated total damages at $1 billion.
>
> – In late 2017, pile burns were implemented in the Gallinas Prescribed fire Project Area, not far from the location where the Las Dispensas prescribed burn was ignited. Fire began spreading away from the piles, but still within the project area. Then the fire crossed into an area where fire was "not desired" in December, and on December 29, suppression efforts commenced. The prescribed fire was converted to a wildfire on January 18, 2018. The scenario that started this wildfire was very similar to the scenario that started the Calf Canyon pile-burns ignited wildfire three years later, but it having occurred in January was clearly an advantage for containment..

– On April 9, 2018, the Redondo Prescribed burn, set by the US Forest Service in the Zuni Mountains of the Cibola National Forest, escaped control and became the 9,338 acre Diener Canyon wildfire. A high winds event was a primary factor in the spread of the wildfire.

– On April 6, 2022, the Bureau of Land Management ignited a prescribed burn in Chavez County, 10 miles SE of Roswell, NM, which became the 1,900 acre Overflow Fire. Officials said the prescribed burn became a wildfire when “fire whirls" started within the prescribed burn.

Following are the conditions and factors that cause another escaped prescribed burn to be highly probable to occur during the implementation of the SFMLRP:

– All the escaped burns, including the Hermits Peak/Calf Canyon Fire occurred in the spring and in most cases winds were a factor, except the 2018 fire in the Gallinas Prescribed Fire Project Area, which occurred in January and was fairly quickly contained. Yet, the Forest Service does not consider in the Final EA the time of year as a factor in designing and implementing prescribed burns. It is necessary to consider within an EIS if it is safe to ignite prescribed burns in the spring in SFMLR Project area, and if so, under which conditions and parameters. It is necessary to consider a number of factors in implementing pile burns, such as the timing of pile burns, the size of piles, how many piles are burned at one time and to develop specific monitoring requirements.

– In their recent wildfire strategy document “CONFRONTING THE WILDFIRE CRISIS,” the Forest Service stated “Accordingly, the Forest Service has established a strategy for confronting the wildfire crisis by dramatically increasing fuels and forest health treatments by up to four times current treatment levels in the West.“CONFRONTING THE WILDFIRE CRISIS, A Strategy for Protecting Communities and Improving Resilience in America’s Forests” at 26. The available windows for implementing prescribed burns are substantially decreasing due to climate warming. Since available safer windows for implementing burns are decreasing, and the Forest Service intends to greatly increase the amount and acreage of prescribed burns, it is inevitable that the risk of escaped burns will be much greater than before.

– In the National Prescribed Fire Program Review, the Forest Service states:

> “Given the current agency workforce and how it is used, Forest Service units lack the capacity to effectively conduct prescribed burning at the needed scale. In addition to looking at options for maximizing use of the existing workforce, the Forest Service is assessing additional capacity that will be needed for a successful prescribed burn program at scale and how the additional capacity should be defined. Where applicable, an all-hands, all-lands approach to support an

> interorganizational workforce should be considered." National Prescribed Fire Program Review at 16.

The Forest Service states unequivocally here that it does not have the capacity to effectively conduct prescribed burning at the scale it deems necessary. In terms of increasing their capacity to do so, it states that it is merely assessing additional capacity, not that it has determined how to obtain additional capacity and is doing so, or has done so. Yet the SFMLRP EA is proposing a great increase in the implementation of prescribed burns in the project area now, without stating where sufficient capacity will come from to do so. The SFNF has had ongoing staffing shortages and a very high rate of turnover.

– As noted above, pile burns were ignited in several units located in the Gallinas Prescribed Fire Project area in October of 2017. Low snowfall levels contributed to conditions that caused prescribed fire to spread away from the piles. After December 29, the Pecos/Las Vegas Ranger District maintained a strategy of suppressing the spreading fire until January 19, 2018, when the escaping prescribed fire was converted into a wildfire due to "unwanted fire effects."

In a press release dated May 27, 2022, the Forest Service stated that the Calf Canyon Fire was caused by a pile burn holdover from burns ignited in January. The press release states that smoke was first reported on April 9 and crews responded and monitored the fire over the next few days. Ten days later, on April 19, the Calf Canyon Fire "reignited" and escaped containment lines, and then the high wind event of April 22 caused significant fire spread. The Calf Canyon Fire then merged with the Hermits Peak Fire.

Bill Gabbert of Wildfire Today wrote a post about the ignition of the Calf Canyon Fire and stated:

> The term "reignited" is misleading. The burning piles were never completely put out. Wildfire Today found records showing that on April 8 fixed wing aircraft with thermal heat sensors began mapping the Hermits Peak Fire nearly every night the rest of the month. From imagery on April 8 at 9:30 p.m. MDT the Infrared Analyst noted two small heat sources both about 4 miles from the fire, one to the northwest and another almost due west which later became the Calf Canyon Fire. The heat to the northwest, 2.7 miles north of the Calf Canyon Fire, was not detected in subsequent mapping flights, indicating that it went out on its own or was successfully suppressed by firefighters.
>
> Here are the results, related to what became the Calf Canyon Fire, of the Hermits Peak Fire aerial fire mapping from April 8 through April 21, 2022 (times are CDT):

8 @ 9:30 p.m.: heat noted at the pile burning site

9: (firefighters constructed line around a 1.5-acre fire spreading at the pile burning site)

10 @ 3 a.m.: heat noted

10 @ 10 p.m.: mapping mission unable to be filled (UTF)

11 @ 8:45: heat noted

13 @ 2 a.m.: not noted

13 @ 7:30 p.m.: not noted

14 @ 8:15 p.m.: not noted

15 @ 7:30 p.m.: not noted

16 @ 10 p.m.: UTF

18 @ 1:45 a.m.: not noted

18 @ 10 p.m.: UTF

20 @ 1 a.m.: intense heat noted at two locations at the pile burning site which were separately mapped by the Infrared Analyst. (See the map above. Either the fire spotted about 0.4 miles out ahead, or a second area in the pile burning project began spreading)

21 @ 1:30 a.m.: had grown to about 220 acres; was approximately half a mile wide and one mile long)

Although there was a Prescribed Fire Declared Wildfire Review and a Facilitated Learning Analysis (FLA) generated after the 2017-2018 Gallinas Prescribed Fire Project escaped burn, which cited such issues as lack of resource availability, unexpected weather, lack of communication, and a need for clearer procedure, a very similar scenario appears to have been repeated, in a nearby location, 4 years later in 2022. In both cases, the amount of snowfall was identified as an issue. In the case of the 2018 prescribed burn ignited fire, it was stated that there was not enough snowfall. In the case of the Calf Canyon pile prescribed burn ignited fire, the snow led to smoldering occuring in the piles. Weather in the SFMLR Project Area is unpredictable, and this is a baseline condition that must be accounted for. It does not appear the agency has the capability to adequately do so at this point.

It is clear that the 2018 FLA was not enough to prevent virtually the same scenario from occurring, and cause the same result as before, only exponentially worse. It states in the header of the Wildland Fire Lessons Learned Center website that "A lesson is learned when we change our behavior." To change relevant behavior, a fundamental reshaping of fire and fuels treatment policy will be required, to change both procedure and outcomes. One aspect of such a behavior change is to absolutely require that prescribed burn parameters specific for the project area where prescribed burns are planned to be carried out to be analyzed within NEPA analysis. In the case of a project such as the SFMLRP which is potentially highly impactful to the human environment and forest resources, the analysis must be within an EIS. Without this specific analysis, another escaped burn is highly probable. This type of catastrophe cannot be visited on the people of Northern New Mexico yet again.

– The Potential Vegetation Thinning and Prescribed Fire treatment unit maps in the Final EA indicate that prescribed burns may be implemented right up to private property lines throughout the Wildland/Urban Interface surrounding the project area. That prescribed fire is being implemented in many cases within a very short distance from WUI residents' homes is a clear danger, as any escaped fire would only need to travel a very small distance in order to ignite a home on fire. Due to dry conditions, it is highly probable that sometime during the implementation of the SFMLRP, homes will be burned because even the most minor lack of prescribed fire containment would be enough to burn down a home.

After experiencing the Hermits Peak/Calf Canyon Fire there is a justifiable fear among the public that their homes and properties will be destroyed by a USFS escaped prescribed burn wildfire. The Forest Service does not have the right to finalize a project decision with lack of full disclosure of risks and impacts, and with such insufficient analysis of risk and impacts, that WUI residents, and even residents beyond the WUI, live in reasonable fear of their homes being ignited due to the implementation of a miscalculated and/or improperly implemented prescribed burn.

There is an increasing lack of trust by the public for the US Forest Service, due to the lack of disclosure, and lack of transparency on the part of the Forest Service. As noted above, starting on April 9, when smoke was reported in the area, the Forest Service began suppressing fire coming off of the piles from the Calf Canyon pile burns that were ignited in December of 2021. Although they hoped they had contained the piles, they continued aerial flights to monitor them. On April 20, intense heat was noted in two of the piles, and fire was spreading. Then on April 21, the escaped fire had grown to 220 acres, and it was declared a wildfire on April 22. This fire was listed as "under investigation" until the Forest Service issued the press release of May 27, describing the causes of the Calf Canyon Fire, that it was precipitated by yet another US Forest Service escaped prescribed burn. Clearly the cause was known with a high degree of certainty, at

least the overall picture, since they had been trying to contain the spreading pile fires since April 9. This lack of disclosure and transparency, during a time of community crisis caused by the other Forest Service escaped prescribed burn wildfire, was highly concerning and frightening to many members of the public.

CEQ regulations regarding consideration of indirect and cumulative impacts in the NEPA Process state “The EIS must identify all the indirect effects that are known, and make a good faith effort to explain the effects that are not known but are ”reasonably foreseeable.“ (40 CFR §1508.8(b)).

In addition to being highly probable that another prescribed burn will escape within the SFMLR Project area during the duration of the project, it is also reasonably foreseeable. The Final EA states “For the purpose of this analysis, “reasonably foreseeable” actions are considered where there is a Proposed Action or existing decision (e.g., draft NEPA document, Record of Decision, or issued permit), a commitment of resources or funding, or a formal proposal (e.g., a permit request).” It is very possible to foresee the possibility of events where there is not a Proposed Action, an existing decision, a commitment of resources or funding, or a formal proposal, and the possibility of impactful events outside of the Forest Service planning process must be considered. CEQ regulations regarding consideration of indirect and cumulative impacts in the NEPA process state “The EIS must identify all the indirect effects that are known, and make a good faith effort to explain the effects that are not known but are ”reasonably foreseeable.“ (40 CFR §1508.8(b)). The definition of “reasonably foreseeable” in 40 CFR § 1502.21 - “Incomplete or unavailable information” includes (d) “For the purposes of this section, ‘reasonably foreseeable’ includes impacts that have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.” The legal definition of reasonably foreseeable is “sufficiently likely to occur such that a person of ordinary prudence would take it into account in reaching a decision.”

That there is a reasonably foreseeable potential for an escaped prescribed burn in the SFMLRP. in a drying climate, with decreasingly safe burn windows, with an agency lacking capacity and yet intending to greatly increase the number of prescribed burns implemented, and with the experience of the two escaped prescribed burns that caused the Hermits Peak/Calf Canyon Fire, is abundantly clear. And certainly the consequences of a wildfire such as the Hermits Peak/Calf Canyon Fire is catastrophic.

The total number of acres burned by escaped prescribed burn wildfire in New Mexico since 2000, ignited by Federal land management agencies, including all the wildfires listed above, is approximately 400,000 acres, or 625 square miles – a truly spectacular amount of collateral damage caused by Federal land management agencies, primarily the US Forest Service. That includes almost 1,000 homes having been destroyed and three deaths (from post-fire flooding.) It

also includes communities that will never be the same, and people's lives that will never be the same. The probability the residents who lost everything in the Calf Canyon/Hermits Peak Fire will be "made whole" seems exceedingly low at this point. Respective of whatever compensation they receive, the forest around their homes will be blackened for generations. They will be struggling with flooding events for years. The cohesion of traditional rural communities has been damaged. All this must be taken into account when considering the potential, risks and impacts of escaped prescribed burns. What has been lost and could be lost going forward is too great for anything less than the completion of an EIS. It is an issue of environmental justice and compliance with Executive Order 12898 (1994).

An op-ed was published in the Santa Fe New Mexican during the Hermits Peak/Calf Canyon Fire, on May 7, 2022, "Our homeland is burning — now what?," by Paula Garcia, Executive Director of the New Mexico Acequia Association, and a local resident of Mora County. Exhibit 20. This op-ed was written before the Forest Service had informed the public that the Calf Canyon Fire was also caused by an escaped prescribed burn. She wrote about the severe impacts of the Hermits Peak/Calf Canyon Fire on her community in Mora County:

> "We will forever measure our lives as "before the fire" and "after the fire."
>
> The mountains that nurtured our communities for centuries and that gave us joy and belonging are being destroyed because of wildfires — one of which we know was a fire ignited by the U.S. Forest Service. The cause of the second remains unknown. Hermits Peak Fire, which was a prescribed burn, and the Calf Canyon Fire, cause to be determined, have become one. Our region is forever changed as a result.
>
> The people are devastated. We lost more than a beautiful landscape. We lost a place that will live only in our memories, and we lost a way of life.
>
> These mountains are the homeland of the families who live here and of a diaspora of generations who consider these valleys and mountains their ancestral home.
>
> The villages and small ranches of Mora and San Miguel counties are the last refuge of the rural poor. Many of the people affected by the fires live in modest, uninsured homes on lands inherited from past generations or small lots where until recently it was possible to carve out a place to survive as a low-income family.
>
> The loss is immeasurable.
>
> For many of us, our assets consist of mobile homes with additions for intergenerational families and freezers full of meat from our small herds of cattle or last season's hunt."

Regarding environmental justice, the Forest Service states in the Final EA:

> "Executive Order 12898 (1994) requires federal agencies to address environmental justice of their actions on minority and low-income populations. This analysis considers demographic, economic, and human health risk factors. A specific consideration of equity and fairness in resource decision-making is encompassed in the issue of environmental justice and civil rights. As required by law and Executive Order, all Federal actions should consider potentially disproportionate effects on minority or low-income communities. Potential impact or change to low-income or minority communities within the study area due to the proposed action should be considered. Where possible, measures should be taken to avoid negative impacts to these communities or mitigate the adverse effects."

Final EA at 3-1362. It also considers most of the communities adjacent or nearby the SFNF as minority and/or low-income populations. The Forest Service further states:

> "Communities surrounding the Santa Fe area would fall under the minority and/or low-income populations identified in the Environmental Justice Executive Order 12898. The areas of concern: Santa Fe County, Chupadero, Tesuque, Tesuque Pueblo, Cañada de Los Alamos, Cañoncito, Glorieta, and La Cueva. Areas of concern: San Miguel County, Pecos, Upper La Posada, and Lower La Posada. Generally, environmental justice is concerned with identifying these communities and ensuring that they are involved in and understand the potential effects of the proposed action. The people in the study area communities are interested in maintaining their historic and subsistence landscape."

Id. Many residents of such rural communities do now understand and fear the potential effects of the proposed action, and have substantial reason to believe there is a serious lack of disclosure and analysis by the Forest Service of the potential effects of the SFMLRP proposed action. Some of the communities of Mora and San Miguel Counties impacted by the Hermits Peak/Calf Canyon Fire have to a great extent lost their historic and subsistence landscape. The Forest Service should analyze the impacts and/or changes to low-income or minority communities that have occurred due to the Hermits Peak/Calf Canyon Fire, to assist in analyzing the potential impacts of another catastrophic prescribed burn escape occurring in the SFMLR Project area. Completing an EIS that considers the issues above in relation to the potential impacts to communities adjacent to the SFMLR Project area is basic due diligence.

Id. And finally, the Forest Service states:

> There might be short term impacts during implementation. These impacts include localized closures, limited access and possible smoke from prescribed fire. These impacts may be adverse but short in duration. The Forest Service will provide communication prior to implementation to the possible effected communities about timing and duration of the work. The long-term impacts are expected to outweigh the short-term impacts, as

> the potential negative impacts from the No Action Alternative have adverse long-term impacts.

Id. Here the Forest Service fails to disclose any potential long-term impacts from implementation of the SFMLRP, such as entire communities being burned out and communities going through a public health crisis due to the impacts of dense smoke at dangerous levels, from a nearby wildfire. That this is not disclosed, given that *it just happened last year from a wildfire ignited within the SFNF*, is again, gross negligence. The Forest Service appears to arbitrarily assume that all the issues that were factors in the ignition of the Calf Canyon/Hermits Peak Fire are now resolved, or will be soon enough, and there is no longer enough risk of long-term impacts from the proposed action to disclose in an EIS.

For these reasons, Executive Order 12898, and fundamental environmental justice require that the potential for an escaped prescribed burn be considered, disclosed and analyzed within an EIS, and mitigations provided.

The Forest Service should determine, utilizing assumptions that are based on a broad range of scientific research and are not scientifically controversial, what is the probability of a wildfire occurring within the SFMLR Project area per year, and also determine what is the probability that controlled burning may result in a wildfire. That an escaped prescribed burn may develop into a catastrophic wildfire is both reasonably foreseeable and highly probable. When prescribed burns are implemented in the spring, with potential spring winds, an escaped prescribed burn can turn into a fire with a large percentage of high intensity areas. The timing of prescribed burns should be included in the cost/benefit analysis.

A cost/benefit analysis is required to determine if the benefits of prescribed burns outweigh the risks, impacts and costs. Such an analysis must determine, using non-controversial and best available scientific assumptions, how many acres are likely to be prevented from burning at high severity vs. how many acres are burned at high severity due to escaped prescribed burns, specific to the SFMLR Project area. Without this fundamental analysis, there can be no justification for proceeding with the SFMLR Project Proposed Action, in relation to prescribed burns. The Forest Service must determine that more benefit than harm is done, in accordance to the project purpose and need. That is not at all clear, and the adverse consequences of being wrong are unacceptably severe.

VI. The Forest Service Fails to Comply with NEPA or the Roadless Area Conservation Rule.

Our comments explained at length the agency's requirements under NEPA to demonstrate compliance with the Roadless Rule. We explained that the Forest Service must provide detailed analysis of how its proposed actions fall under the Roadless Rule exemptions. We requested that

the agency identify which exemptions it considers to be applicable, and how those particular exemptions apply to the project. We also raised concerns about the agency's proposed use of roads and administrative cross country motorized travel within the IRAs. Finally, we explained that the Forest Service must demonstrate how its proposed action maintains or improves the nine characteristics established under the Roadless Rule. Ultimately, the Forest Service fails to respond to our comments, provide the requisite analysis NEPA mandates or demonstrate compliance with the Roadless Rule.

First, the agency appears to rely on the Roadless Rule timber removal exemption under 36 C.F.R. § 294.13(b)(1) (2001) that directs the following:

> Notwithstanding the prohibition in paragraph (a) of this section, timber may be cut, sold, or removed in inventoried roadless areas if the Responsible Official determines that one of the following circumstances exists. The cutting, sale, or removal of timber in these areas is expected to be infrequent.
>
> (1) The cutting, sale, or removal of generally small diameter timber is needed for one of the following purposes and will maintain or improve one or more of the roadless area characteristics as defined in § 294.11..

However, the Forest Service failed to disclose or discuss the precise Roadless Rule authorities it relies upon to authorize timber removal. Rather, in its decision the agency simply states "Impacts to the nine characteristics of Inventoried roadless areas (IRAs) vary depending upon the affected resource. While some short-term adverse impacts may occur, they are generally outweighed by the long- term benefits of the Selective Alternative, including the reduced risk for high-severity wildfire." DN at 17. Here the agency fails to include or address the overarching direction that "[t]he cutting, sale, or removal of timber in these areas is expected to be *infrequent*." 36 C.F.R. 294.13(b), emphasis added. The Forest Service also arbitrarily dismisses the short term impacts, which will likely overlap during the 10-15 year timeframe for project implementation, in favor of a hypothetical benefit that assumes a 100 percent probability that a high-intensity and high-severity wildfire will occur, and that the selected alternative will prevent the hypothetical wildfire from reducing roadless characteristics. The assumption is glaring since the agency fails to address the scientific controversy and uncertainty we explained above, and since many IRAs experienced what some would consider "uncharacteristic" wildfire events decades ago and now qualify as recommended wilderness. One need only look at the wildfires of 1910 in the Northern Rockies (eastern Idaho, western Montana) to see that forests recovered to wilderness quality conditions. Besides these considerations, the example in the Roadless Rule of allowing tree cutting or timber removal to reduce uncharacteristic wildfire has the important qualifying language of "within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period." 36 C.F.R. § 294.13(b)(1)(ii), 2001. As we explained at length in our comments and included in this objection, the Forest Service uses

desired conditions based on the historic range of variability that fall well outside of the current climatic period as the climate crisis is redefining natural disturbance regimes throughout the globe, and particularly with the southwest region. The Forest Service fails to consider or analyze these climate changes within the context of Roadless Rule compliance.

Further, the agency discloses "[t]here are a total of 8.23 miles of existing classified roads within the IRAs found in the Project area."[22] Final EA at 3-136. Our comments urged the agency to disclose the condition of these roads and how their use meets the Roadless Rule requirements, specifically that they do not require reconstruction. Our comments clarified that any action to open overgrown closed roads, or bring unauthorized roads to even a low-standard would constitute road reconstruction thereby violating the Roadless Rule. This was underscored by a 2020 U.S. District Court decision from Montana holding that the Helena-Lewis and Clark National Forest violated the Roadless Rule by failing to ensure that existing routes used for timber harvest in IRAs would not be effectively "reconstructed" under the guise of "maintenance." *Helena Hunters & Anglers Ass'n v. Marten*, 470 F. Supp. 3d 1151, 1169-72 (D. Mont. 2020). That decision requires the Forest Service to provide detailed, on-the-ground information concerning road use and "maintenance" to ensure compliance with the Roadless Rule, including but not limited to: which routes will be used, what condition each route is in now, the precise nature of the equipment needed to perform the timber harvest, and what road clearance and width such equipment will require. The Forest Service fails to address our comments or include any of this information in its analysis. Rather, the agency states "[n]o permanent or temporary roads would be constructed, but existing roads, trails, and routes may be used for access. Overland travel by vehicles that do not require roads to be constructed (e.g., masticators, UTVs) may occur (U.S. Forest Service 2021l)." Final EA at 3-154. Allowing use of unidentified "routes" and cross-country motorized travel within IRAs violates the Roadless Rule and the agency fails to provide any supporting analysis that would demonstrate otherwise.

Finally, the Forest Service provides cursory rationales for maintaining or restoring the nine roadless characteristics set for in the Roadless Rule, which lacks the requisite supporting NEPA analysis. For example, in regards to natural appearing landscapes with high scenic quality, our discussion above regarding visual quality applies here, and further the agency's assertions that the character will be improved lacks supporting evidence or discussion. Final EA at 3-157. Specifically, the Forest Service states the following:

> The proposed activities would improve the natural appearance of the landscape over the long term. The treatments would affect the short-term appearance during implementation, as a result of tree removal, slash piles, and burned vegetation. However, the IRAs would still appear natural.

[22] Please note that the Forest Service road definitions at 36 C.F.R. 212.1 does not include "classified roads" and use national forest system road or forest road instead.

Id. The agency defines short term within IRAs as being between 1-5 years. *Id. at 3-151.* Yet, the Selected Alternative will implement actions over a 10-15 timeframe, and it will take decades, if not longer, for thinned and burned areas to recover from the authorized activities. It is important to note here too that project activities may overlap and therefore it is likely that short term impacts will occur simultaneously throughout the IRAs. Even more concerning is the agency's assertion that actively managed landscapes have the same degree of naturalness as those without evidence of tree cutting or timber removal, signs of cross-country motorized travel or use of existing "routes," fire lines associated with prescribed burns, and all the other associated actions necessary to implement the Selected Alternative inside the IRAs. In fact, actively managed landscapes do not appear natural at all, and the agency's assertion otherwise is without merit and lacks any supporting evidence or analysis.

Given the Selected Alternative seeks to cut trees within IRAs over the next 10-15 years, which is essentially the life of a forest plan, the Forest Service cannot claim its actions will be infrequent. Further, the agency fails to clarify what constitutes "small diameter" trees for the purposes of Roadless Rule requirements or demonstrate that its 16 inch diameter limit meets any definition of small diameter trees. The agency's cursory discussion on roadless characteristics fails to demonstrate how the selected alternative complies with the Roadless Rule.

Suggested Resolution: The Forest Service must produce an EIS that fully addresses our concerns described herein, including detailing specific actions proposed in the IRA, clearly defining small diameter trees, providing a detailed analysis of the potential impacts to roadless characteristics and steps the agency will take to preserve or improve roadless character through removing system and non-system roads.

VII. Failure to demonstrate compliance with the Endangered Species Act

The Forest Service fails to demonstrate how this project complies with the ESA, especially due to the lack of detail regarding where, when, or how the authorized activities will be implemented in relation to listed species probable habitat and designated critical habitat, and in light of an indefinite timeline for implementation. The Forest Service notes that it consulted with the U.S. Fish and Wildlife Service, but fails to provide the resulting consultation documentation from those agencies, as we explained above. Further, the Mitigation Measures in Appendix A suggest actions that "would" be taken without definitively requiring them, such as direction to retain only "the most vigorous/healthy" trees. DN, Appendix a-17. Such direction ignores the best available science on the reversals that can occur when multiple factors and genetics are considered (for example, trees that are resistant to drought may not be those most resilient to beetles), potentially creating interactions that reduce the resiliency of listed species habitat. See Exhibits 21-23,Whitham et al. 2010, Bailey and Whitham 2006, and Gehring et al. 2014 for examples of such interactions). Additionally, without an integration across documents of what measures must and will be taken where, it is impossible to assess how well listed species and their habitats are

protected. For example, the decision document states the "Regional Mexican Spotted Owl Habitat Treatment and Implementation Guidance" would be complied with, while not providing or linking to the version that will be used and what it says. Similarly, the Forest Service's biological assessment and biological evaluation are not available on the project webpage or included in the decision document, so the public can only speculate regarding their conservation and mitigation measures. Thus, the agency's analysis is insufficient to demonstrate compliance with the ESA because it lacks the necessary information and detail to assess the project impacts. As just one example, the project design features (noted above) are vague, nonbinding, and highly uncertain to occur under the condition-based management approach. There is insufficient information for the FWS to determine which design features will apply, where, or how, and importantly, to what effect. As a result, assumptions as to the efficacy of MSO (and other ESA listed species) mitigation measures are arbitrary and capricious, and therefore so is the conclusion that the project may affect but is not likely to adversely affect MSO and MSO critical habitat, for example. Draft DN at 20.

Suggested Resolution: The Forest Service should be transparent about the consultation process and affirmatively post all consultation documents, including any letters seeking concurrence, and any responses or biological opinions from the Services. Without these records, we are unable to assess the agency's analysis of impacts to wildlife in light of Services' expert opinions. Providing this information will allow the public to view these critical documents, and other documents in the project record, without the need to submit a formal Freedom of Information Act request. Without this information being publicly available during the notice and comment period, we are unable to meaningfully comment on the agencies' determinations or analysis. The Forest Service should issue a new NEPA analysis (preferably a draft EIS) only after the agency completes consultation under the ESA.

CONCLUSION

WildEarth Guardians, The Forest Advocate and the Santa Fe Forest Coalition appreciate your consideration of the information and concerns raised in our comments and highlighted in this objection to the Santa Fe Mountains Landscape Resiliency Project. We request particularly that in light of the the catastrophic Hermits Peak/Calf Canyon wildfire, ignited by two Forest Service escaped prescribed burns, and impacting many square miles of forest and thousands of local residents, that the Forest Service resolve to do the highest level analysis possible of this project that is very near a populated area.

Cordially,

Adam Rissien
WildEarth Guardians

Sarah Hyden
The Forest Advocate

Sam Hitt
Santa Fe Forest Coalition

Exhibits

1. Wild Heritage, a Project of the Earth Island Institute, objection to the U.S. Forest Service's December 2022 draft decision notice ("Draft DN") finding of no significant impact ("FONSI") and Final Environmental Assessment ("Final EA") for the Santa Fe Mountains Landscape Resiliency Project (SFMLRP).
2. Santa Fe Forest Coalition objection to the U.S. Forest Service's December 2022 draft decision notice ("Draft DN") finding of no significant impact ("FONSI") and Final Environmental Assessment ("Final EA") for the Santa Fe Mountains Landscape Resiliency Project (SFMLRP).
3. Santa Fe National Forest email confirming acceptance of SFMLRP Draft EA comments submitted by WildEarth Guardians, Forest Avocate & the Santa Fe Forest Coalition
4. Greater Santa Fe Fireshed Coalition Operating Principles.
5. Board of Commissioners of Santa Fe County Resolution 2022-050
6. DellaSala et al., Have western USA fire suppression and megafire active management approaches become a contemporary Sisyphus? 268 Bio. Cons. 109499 (2022).
7. Mark E. Harmon et al., Combustion of Aboveground Wood from Live Trees in Megafires, CA, USA 13 Forests (2022).
8. Chad T. Hanson, Cumulative Severity of Thinned and Unthinned Forests in a Large California Wildfire 11 Land (2022).
9. Downing,William M., Human ignitions on private lands drive USFS cross-boundary wildfire transmission and community impacts in the western US. Sci Rep 12, 2624 (2022). https://doi.org/10.1038/s41598-022-06002-3.
10. Review of Wildfire Risk Assessment. Prepared for The Greater Santa Fe Fireshed Coalition by Steven Bassett
11. Dr. Dominick DellaSala, Luke Ruediger and Dr. Chad Hanson. 2020. A Science-based Critique of The Nature Conservancy's Forest and Fire Management Programs with a Focus on Case-study areas in Western Fire-Dependent Forests
12. Miller, C., Vogler, K.C., Scott,, J. H., and Thompson, M.P. Final Report: Can landscape fuel treatments enhance both protection and resource management objectives? Available at: https://www.firescience.gov/projects/17-1-01-4/project/17-1-01-4_final_report.pdf
13. David J. Mildrexler et al., Large Trees Dominate Carbon Storage in Forests East of the Cascade Crest in the United States Pacific Northwest Front. For. Glob. Change (2020).
14. Intergovernmental Panel on Climate Change, Climate Change 2022: Impacts, Adaptation and Vulnerability, Summary for Policymakers (2022).
15. Bond, M.L.; Chi, T.Y.; Bradley, C.M.; DellaSala, D.A. Forest Management, Barred Owls, and Wildfire in Northern Spotted Owl Territories. Forests 2022, 13, 1730. https://doi.org/10.3390/f13101730

16. New Mexico Forest Health Conditions 2021. Energy, Minerals, And Natural Resources Department Forestry Division.
17. Tom DeGomez, Christopher J. Fettig, Joel D. McMillin, John A. Anhold and Christopher Hayes. 2014. Managing Slash to Minimize Colonization of Residual Trees by Ips and Other Bark Beetle Species Following Thinning in Southwestern Ponderosa Pine. The University of Arizona Cooperative Extension, publication AZ1449.
18. John P. Formby, Ph.D. 2018. Observations, Condition, and Management of the Ips Infested Trees in the Areas Around the NRCS Thinning on Cougar Ridge Road. New Mexico Division of Forestry
19. USFS Santa Fe National Forest. 2006. Environmental Assessment for the Gallinas Municipal Watershed Wildland-Urban Interface Project Pecos/Las Vegas Ranger District.
20. Santa Fe New Mexican on May 7, 2022, "Our homeland is burning — now what?," by a local resident of Mora County, Paula Garcia.
21. Whitham, T.G., C.A. Gehring, L.M. Evans, C.J. LeRoy, R.K. Bangert, J.A. Schweitzer, G.J. Allan, R.C. Barbour, D.G. Fischer, B.M. Potts, and J.K. Bailey. 2010. A community and ecosystem genetics approach to conservation biology and management. Pages 50-73 in Molecular Approaches in Natural Resource Conservation and Management (A. DeWoody, J. Bickham, C. Michler, K. Nichols, G. Rhodes and K. Woeste, eds.). Cambridge University Press.
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24. WildEarth Guardians, The Forest Advocate and the Santa Fe Watershed Coalition Draft Environmental Assessment Comments, Exhibit 21 "Lee, D.E. Mexican Spotted Owl Supporting Literature Table 1." Copies of referenced articles submitted with our objection.

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