May 12, 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 March, 2022 draft decision notice ("Draft DN"), finding of no significant impact ("FONSI"), and the April 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 Santa Fe National Forest Supervisor, Debbie Cress.

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 March 31, 2022. The deadline to submit objections is thus May 12, 2022. We hereby incorporate by reference the objection filed by Defenders of Wildlife.

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. 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 comments as they do not appear in the list of letters under "Table B-1. Draft Environmental Assessment Comments Received." Final EA, Appendix G at 30. Unfortunately, that table lacks corresponding letter numbers that align with specific topics listed in Table 3.1 of the Final EA, Appendix G. 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. Further, our comments do not appear on the Forest Service SFMLRP webpage reading room[1]. Yet, we received the automated reply acknowledging our comment submission. Exhibit 1.

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

[1] *See* https://cara.fs2c.usda.gov/Public//ReadingRoom?Project=55088 (last visited 5/9/2022).

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 soon-to-be final 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.

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.

[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.

- 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 16. 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 17-18. 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 18. 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. Currently a wildfire is underway, the Hermits Peak/Calf Canyon Fire complex, which is now the second 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 much smaller Calf Canyon Fire. This fire complex has already 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. 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 is absolutely necessary and required, and an analysis of the cost/benefit of prescribed burns must be done in the context of an EIS. 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 18. 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 <u>related to other actions with cumulatively significant impacts</u>, 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 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:

  "According to the species sensitivities described in the 2012 MSO Recovery Plan (USFWS 2012), activities of the Proposed Action may affect MSO. Impact-causing elements of the Proposed Action 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 2021c)." EA at 93."

  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."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. See IV D.

- 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 3-147. 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 directs 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);
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> **(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."[3] 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 3-37. 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 determination "that no federal, state, or local laws, regulations, or requirements for protection of the environment will be violated with implementation of the Selected Alternative." Draft DN at 20. Yet, the biological assessment is only available as a project file. *Id.* 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). Yet, the webpage lacks the aforementioned modeling methods or results.

[3] 36 C.F.R. § 220.7(a).

- 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 3-9. 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 Exhibits 14 and 15).

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 define 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. The specialist reports were included with the Final EA, but there is not time to read and evaluate the reports thoroughly enough to substantially include them in objections.

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.

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 as we note above in Section I of our objection.

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 report 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 4. 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 1-5. 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 2021l)."

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 ranges of variability found in IRAs or Wilderness areas.

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 3.12 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 3-26. 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 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.[4] Exhibit 2. 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.[5] Exhibit 3. 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."[6] Exhibit 4. 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]."[7] Exhibit 5. 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

[4] *See* DellaSala et al., Have western USA fire suppression and megafire active management approaches become a contemporary Sisyphus? 268 Bio. Cons. 109499 (2022).
[5] Mark E. Harmon et al., Combustion of Aboveground Wood from Live Trees in Megafires, CA, USA 13 Forests (2022).
[6] Chad T. Hanson, Cumulative Severity of Thinned and Unthinned Forests in a Large California Wildfire 11 Land (2022).
[7] 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.

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:

> "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, and they continued to be utilized for the Forest Service's SFMLRP air quality analysis. These flawed assumptions render the ensuing analysis as virtually useless.

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 6. 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 7. 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 Menke24). 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.

III. 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 3-31. 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 8. 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 the size trees it will authorize to cut and where precisely it intends to cut them. Instead, the agency only 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. Finale EA at 1-20. As stated in our comments, that is an extremely non-specific statement, that could mean anything from a largely barren forest, to a sufficient number of trees for more open areas. We recognize that in Table 1.5 of the Final EA that the agency provides a percent of each seral state to achieve the desired condition for the Ponderosa pine ERU, but percents fail to replace the specificity NEPA requires that would disclose specific units where thinning would take place, and what basal area would result. Overall, the Final EA lacks this 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.[8] 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.

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

IV. 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 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 2-2. 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).
>
> --
>
> 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 3-103. 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. 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 3.20 at 3-39. We agree that large trees are those greater than 12 inch 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.

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").[9] Exhibit 9. 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)").[10] We provided the summary for policy makers as Exhibit 10. 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 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 3-154. 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

[9] 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).
[10] Intergovernmental Panel on Climate Change, Climate Change 2022: Impacts, Adaptation and Vulnerability, Summary for Policymakers (2022).

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 1-21, 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.[11] 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 1-25. 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 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

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

use on forest resources and the likelihood of illegal use continuing or expanding under each alternative.[12] 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 3-78. 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.

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.

[12] 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).

Final EA at 3-79. Here the agency assumes each of these measures would effectively minimize adverse effects to soil and watershed processes without evidence and then arbitrary 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. As just one example, the Forest Service fails 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. Yet throughout its limited analysis the Forest Service largely assumes that its proposed vegetation treatments within MSO PACs, critical 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 gaining towards recovery, trends in recovery habitat, PACs, or other MSO habitats. 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 include any survey results or disclose the survey methods, such as whether or not they occur when owls are actually active. Further, the Forest Service provides a table listing "known and modeled MSO habitat," and noted that since project scoping "a large effort has occurred within the Southwest Region (U.S. Forest Service Region 3) to identify and model MSO habitat outside of known PACs and designated critical habitat." Final EA at 3-37. However, modeling cannot serve as a baseline for actual MSO population status. Moreso, the Forest Service 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.[13] 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. 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

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

The Forest Service has failed to sufficiently analyze the impacts of fuel treatments on bark beetle populations. 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 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. 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.

> 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.

There is strong evidence that a large bark beetle outbreak may be developing in the SFNF and in other forested areas in New Mexico. A March 19, 2022 Santa Fe New Mexican article, "Bark beetle infestations could cause huge piñon die-off," written by Scott Wyland, stated: "Forested areas with beetle-infested trees have grown exponentially in the past two years, according to a state report due to be released in the coming week. The article provides several quotes by State

Forestry Division entomologist John Formby about the increase in bark beetle New Mexico, including the SFNF:

> "In all, beetles besieged about 240,000 acres more of forestland than in the previous year, Formby said.
>
> Beetles infested piñon trees on 67,000 acres last year, compared with 5,000 acres in 2020, he said, citing data from the report.
>
> Some of the increase was due to a larger area being surveyed in response to piñons dying, Formby said.
>
> He noted that when compiling the numbers, not all trees on every acre are affected.
>
> The infested patches of piñon pines in far-flung areas — Cuba, the Zuni Mountains and Sun and Moon mountains near Santa Fe — are eerily similar to images of the 2002 die-off, he said.
>
> Some arborists have said the piñons that survived might be a hardier breed that can better withstand drought-induced hardships. Formby doesn't necessarily agree.
>
> "They may have been more resilient back then, but it's hotter now," Formby said. "Heat does play a role in stressing trees."

The article also quotes Forest Service entomologist, Andrew Graves:

> "In an email, Andrew Graves, a U.S. Forest Service entomologist, said the agency's aerial and ground surveys did detect increased beetle-related tree deaths in many piñon-juniper stands throughout the state.
>
> Although Graves didn't speculate on whether the deadly infestations are a prelude to a huge die-off, he indicated they have the agency's attention.
>
> "Our plan is to continue to monitor this mortality event throughout the summer to better identify its severity and extent,' Graves wrote."

During a time of increased bark beetle activity in particular, there should not be disturbances to either trees or soils such as occur during the implementation of thinning projects. Also prescribed burns can scorch and weaken trees, which increases the probability of bark beetle outbreak. 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 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.

The Selected Alternative 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. 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 4. 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 3-27. 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." Final EA at 31.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.

As mentioned above, the Hermits Peak Fire has demonstrated once again that prescribed burns can and do go out of control. In the WildEarth Guardians and Defenders of Wildlife SFMLRP scoping comments, we stated:

> 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 Forest Service states:

> Analysis of natural fire regimes, Vegetation Condition Classes (VCCs), and the historical fire regimes in the Southern Sangre de Cristo Mountains, combined with current fuels, potential wildlife behavior, and fire danger shows that most of the SFMLRP area does not meet the Forest Plan's desired conditions for wildfire behavior. Current conditions may result in high-intensity, widespread, damaging wildfires.

Final EA at 3-19. The Forest Service provides no analysis of the probability of prescribed burns going out of control within the project area. A cost/benefit analysis is required to determine if the benefits of prescribed burns outweigh the costs. We have seen a cost of implementing prescribed burns this year that, so far, have been over 200,000 acres of both SFNF and private lands that have burned in a fire complex, the Hermits Peak/Calf Canyon Fire. As mentioned above, we acknowledge that the Calf Canyon Fire is considered to not be ignited from a prescribed burn. However the Hermits Peak Fire, the much larger fire when the two fires merged, was ignited by a prescribed burn by the Forest Service's own admission.

The Forest Service should determine, using assumptions that are based on a broad range of scientific research and are not controversial, what is the probability of a wildfire occurring within the project area per year, and also determine what is the probability of burning the approximately 4,000 acres they intend to burn per year resulting in an escaped prescribed burn. Draft DN at 16. That an escaped prescribed burn may develop into a catastrophic wildfire is clearly a significant probability and must be balanced with the benefits of prescribed burns. The resource damage

from an escaped burn must be considered. 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.

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 Fire, caused by a Forest Service prescribed burn, 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 appears to have 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 prescribed burn caused by a wildfire set in the spring is not natural, as historically the fire season was in the summer.

An editorial published in the Santa Fe New Mexican on May 7, 2022, “Our homeland is burning — now what?,” by a local resident of Mora County, Paula Garcia. She stated about the Hermits Peak/Calf Canyon Fire, intending to speak for many in her community:

> “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”.

Exhibit 11. 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.

V. **The Project Fails to Provide for the Diversity of White Pines, Disclose and Analyze Impacts to Unique White Pine Populations and Does Not Meet the Best Available Science Rule to Sustain White Pines.**

NEPA's implementing regulations impose a material duty on the Forest Service to respond to substantive comments from the general public and other federal and state agencies. 40 CFR § 1503.4.

In particular, agencies "shall respond by one or more" of the following: 1) modify alternatives including the proposed action; 2) develop and evaluate alternatives not previously given serious consideration by the agency; 3) supplement, improve, or modify its analyses; 4) make factual corrections and 5) explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response. 40 CFR § 1503.4 (a)(1)-(5).

In this case, the Forest Service failed to respond to substantive and detailed comments and concerns related to white pine conservation raised by objectors (see pp. 29-34 of our comments). Table 1.6, Issues Addressed of Final EA, does not mention white pine conservation (see Final EA p. 26)[14].

White pine conservation is mentioned in passing only twice in the voluminous project record. In neither case did the agency employ the means detailed above to respond to a host of issues concerning white pine conservation raised by the objectors.

The first mention of white pine is in relation to white pine blister:

> White pine blister rust (*Cronartium ribicola*) is an introduced fungal disease that can affect the southwestern white pine within the project area. The fungus can cause top kill or tree mortality by girdling the stem and can affect pine of any size. Management 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 p. 6. The second mention suggests vague and conditional reasons for retaining white pine genetic diversity:

> Given the philosophy of retaining all Southwestern white pine for the purpose of retaining genetic diversity, removal of Southwestern white pine is to be explicitly avoided. However, situations may arise; such as safety, operational necessity, or for the overall improvement of stand health; where removal may be required.

Vegetation Report at p. 19. For the following reasons, these references do not respond to the substantive comments of the objectors.

First, the information presented is inaccurate. White pine blister rust (*Cronartium ribicola*) is a devastating fungal disease of not only Southwestern white pine (*Pinus strobiformis*) but also limber pine (*Pinus flexilis*) populations found in the project area. The disease also likely impacts the hybrids resulting from the overlapping populations of Southwestern white pine and limber pine in northern New Mexico. A major omission in this analysis is the failure to disclose and analyze the impacts of clearing and burning in this genetically unique hybrid zone. (see objectors comments pp. 30-31).

Second, the Forest Service does not acknowledge that retention of white pine genetic diversity is, according to its own experts, the best available scientific information and not an undefined "philosophy." This failure to distinguish between fact and opinion allows exemptions that permit

[14] The Final EA on p. 26 refers to section 3.2 Vegetation Communities for the issue of how the proposed treatments would address forest health. See below for why the brief mention of white pine blister rust in this section is an inadequate response to objectors comments concerning white pine conservation strategies.

cutting and burning at the discretion of project managers.[15] Together with the unjustified presumption of scientific uncertainty, this undercuts meaningful conservation of white pine populations in violation of NFMA mandating "steps to be taken to preserve the diversity of tree species." 16 U.S.C. §1604(g)(3)(B).

Third, there is no connection between the stated need to retain white pine genetic diversity (as recommended by Forest Service researchers based on the best available science) and the integrated design features (IDFs) listed in Appendix C of the EA. IDFs are critically important for they determine "how project activities under the proposed action alternative would be implemented" (App. C-1). There are no design features, mitigation measures or best management practices proposed to retain and preserve white pine genetic diversity in the project record. Therefore, there is no way, for example, a manager could rationally determine how to resolve a conflict between preservation of white pine diversity and "overall improvement of stand health" (Vegetation Report, p. 19). The vague language about retaining white pine genetic diversity clearly lacks regulatory authority.[16]

Fourth, the Forest Service typically characterizes "overly dense forests (as) particularly vulnerable to the spread of insect and disease outbreaks" (SFMLR Project Scoping issues addressed, p. 15). Regardless of the problem, the remedy is always clearing and burning. However, extensive clearing and burning encourages the growth *Ribes* species which is an alternative host for white pine blister rust (see objectors comments, p. 33). Dense forest conditions limit not only *Ribes*, but also dispersal of rust spores. Therefore generic measures that may be effective in controlling other insect and disease outbreaks have the opposite effect with white pines. This concern was ignored in response to our comments.

The Forest Service failed to monitor white pine blister rust

Forest Service pathologists strongly recommend monitoring for white pine blister trust.[17] However, both the Forest Service and multi-party monitoring plans are silent on the question of white pine blister rust monitoring in the project area. Absent from the project record is documentation of how the best available scientific information was used to inform the monitoring program, including justification for <u>not</u> monitoring for the presence of white pine blister rust (36 C.F.R.§ 219.3).

A Forest Pathologist is not listed as being a member of either monitoring effort. Detection of an early white pine blister infection is not possible via the annual Forest Health Protection aerial

[15] This is accomplished by allowing mangers to use of broad and undefined categories such as "operational necessity" and "the overall improvement of stand health" as excuses to cut white pines (Vegetation Report. p. 19).

[16] Vague, voluntary, speculative and unenforceable measures are not considered sufficient regulatory mechanisms. See, e.g., *Oregon Natural Resources Council v Daley*, 6. F Supp. 2d. 139, 1153-56, 29 ELR. 20514 (D. Ore 1998) .

[17] "The importance of monitoring stands for WPBR impacts cannot be emphasized enough." Schwandt et al. 2013. White Pine Blister Rust General Ecology and Management, Insect and Disease Management Series, 14.2. WEB 2013. Insect and Disease Management Series. Forest Health Protection USDA Forest Service. p. 14

surveys. This requires specialized knowledge and on-the-ground experience of a qualified professional.

The Forest Service failed to disclose and analyze significant impacts to white pine genetic diversity

There are no protection standards[18] to preserve white pine genetic diversity in the 11 clearing and burning projects[19] totaling 34,491 acres surrounding the project area. The work order for the Hyde Park Wildland Urban Interface Project specifically targets southwestern white pines for removal:

> Cut all ponderosa pine and southwestern white pine that are less than or equal to 9 inches DBH and taller than 3 feet. Cut all white fir and Douglas-fir trees that are less than or equal to 11 inches DBH and taller than 3 feet.

Hyde Park WUI Project work order, p. 1, Ex. 10 in objectors comments. The direct, indirect and cumulative impacts of unregulated clearing and burning on white pine genetic diversity, coupled with vague and discretionary language in this analysis, are plainly significant and therefore require analysis and disclosure in a comprehensive Environmental Impact Statement. 40 C.F.R. 1508.27(b)(7).

Suggested Resolution: Produce an EIS that addresses our comments and takes the requisite hard look at potential impacts to white pine from the proposed actions.

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.

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[18] Protection standards may include design features, mitigation measures or best management practices that would retain and preserve white pine genetic diversity during project activities.

[19] They are: Pacheco Canyon Forest Resilience Project, La Cueva Fuelbreak Project, County Line Fuel Wood Treatments, Southern Rowe Mesa Restoration Project, Hyde Park Wildland Urban Interface Project, Santa Fe Municipal Watershed, Santa Fe Municipal Watershed Pecos Wilderness Prescribed Burn Project, Aztec Springs Phase 2 & 3, Aspen Ranch, Vigil Grant and Hyde Memorial State Park. See Table 3.1. Actions that May Have Cumulative Impacts to Resources Analyzed in this EA, p. 53

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

> 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 3-147. 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. 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.

"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." Draft DN at 17. Here the agency 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 high-intensity and high-severity wildfire will 100 percent occur. Within this assumption is the irretrievable loss of roadless characteristics that the Forest Service implies but never actually states, let alone analyzes. The omission is glaring 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). 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."[20] Final EA at 3-147. 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.

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

[20] 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.

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.

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 (whether a letter, biological opinion, or something else). The Forest Service's biological assessment and biological evaluation that are not available on the project webpage and the agency's analysis is insufficient to demonstrate compliance with the ESA because they lack 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. Assumptions as to the efficacy of MSO 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. 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 recent Las Dispensas prescribed burn that developed into the catastrophic Hermits Peak wildfire, 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	Sarah Hyden	Sam Hitt
WildEarth Guardians	The Forest Advocate	Santa Fe Forest Coalition

Exhibits

1. Santa Fe National Forest email confirming acceptance of SFMLRP Draft EA comments submitted by WildEarth Guardians, Forest Avocate & the Santa Fe Forest Coalition
2. DellaSala et al., Have western USA fire suppression and megafire active management approaches become a contemporary Sisyphus? 268 Bio. Cons. 109499 (2022).
3. Mark E. Harmon et al., Combustion of Aboveground Wood from Live Trees in Megafires, CA, USA 13 Forests (2022).
4. Chad T. Hanson, Cumulative Severity of Thinned and Unthinned Forests in a Large California Wildfire 11 Land (2022).
5. 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.
6. Review of Wildfire Risk Assessment. Prepared for The Greater Santa Fe Fireshed Coalition by Steven Bassett
7. 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

8. 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
9. 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).
10. Intergovernmental Panel on Climate Change, Climate Change 2022: Impacts, Adaptation and Vulnerability, Summary for Policymakers (2022).
11. Santa Fe New Mexican on May 7, 2022, "Our homeland is burning — now what?," by a local resident of Mora County, Paula Garcia.