USDA United States Department of Agriculture
Forest Service
Southwestern Region
Regional Office
333 Broadway SE
Albuquerque, NM 87102
505-842-3292
Fax: 505-842-3800

File Code: 1570
Date: July 18, 2022

Alicyn Gitlin
Grand Canyon Program Manager
Sierra Club - Grand Canyon Chapter
318 W. Birch Ave. #8
Flagstaff, AZ 86001

Dear Ms. Gitlin:

On behalf of the Apache-Sitgreaves, Coconino, and Tonto National Forests, I would like to thank you for your involvement in the 4FRI Rim Country Project. This letter is in response to the objection you filed on the Final Environmental Impact Statement (EIS) and draft Record of Decision (ROD). I have read your objection, reviewed the project record and Final EIS, including the environmental effects. My review of your objection was conducted in accordance with the administrative review procedures found at 36 CFR 218, Subparts A and B.

The legal notice for the objection filing period was published on March 18, 2022. Your timely objection (22-03-00-0005-O218) was received on May 2, 2022 and was considered pursuant to the regulations at 36 CFR 218. With the letter you received to acknowledge your objection, dated May 12, 2022, I notified you that I would be extending the review timeframe. This allowed us the opportunity to meet in an objection resolution meeting on July 6, 2022 in order to discuss issues you raised in your objection. We discussed your concerns related to site-specificity around roads, Mexican spotted owl (MSO) and other wildlife, use of the Condition-Based Management (CBM) approach, old and large trees, treatments on steep slopes (including potential for helicopter logging), and fencing for protection of aspen. This letter, including direction to the Responsible Officials to clarify some information in the project record, is my written response to your objections. The "Contention" labels are summaries of your objection concerns while the "Response" labels are our response to those contentions.

ISSUE 1: The Rim Country Project's site-specific information and NEPA's hard look requirement.

Contention 1a: You contend that the Forest Service failed to identify the minimum road system (MRS) needed for safe and efficient travel (36 CFR 212.5(b)). In response to your comments to the DEIS, the Forest Service states that it considered the travel analysis and mis-states the regulation as requiring the Forest Service to "maintain a minimum road system". The analysis fails to identify a MRS and explain how the road work proposed for the project will work toward achieving that MRS. As a result, the Forest Service continues to delay complying with its own rules. [Objection, pp. 4-5]

Response: Regulations at 36 CFR 212.5(b)(1) require the responsible official to identify the MRS needed for safe and efficient travel and for administration, utilization, and protection of

National Forest System (NFS) Lands. Agency policy in FSM 7700 requires forests to use a science-based travel analysis described in FSH 7709.55 Chapter 20 to identify the Minimum Road System (MRS) and to inform travel management decisions using the travel analysis process described in FSH 7709.55, Chapter 20 [FSM 7710.3, FSM 7712].

The Apache-Sitgreaves (A-S), Coconino, and Tonto National Forests completed Travel Analysis Reports (TARs) between 2008-2011. All three reports incorporated the science-based travel analysis process described in FSH 7709.55 Chapter 20 [PR 9, PR 11, PR 15]. These TARs were completed as part of Travel Management Rule (TMR) implementation, i.e., 36 C.F.R. Part 212, Subpart B. They meet agency policy and guidance in FSM 7700 and FSH 7709.55 in that they are science based, identify issues, and assess benefits, problems, and risks and meet the requirements to identify the MRS per 36 C.F.R. 212.59(b)(1).

The recommended MRS for the Coconino and Tonto National Forests are displayed in the TARs [PR 11, pp. 794-796; PR 15, pp. 178-179]. The reports also provide specific recommendations for changes to get to the MRS. These changes include closing high clearance roads, converting passenger car roads to high clearance roads, converting roads to trails, and decommissioning system roads. The TAR completed by the A-S National Forest displays existing roads open to the public and provides road specific recommendations for decommissioning and other changes that will get to the MRS [PR 9, pp. 156-164].

Agency policy in FSM 7700 requires that travel management decisions (such as those that are part of the Rim Country Project) and environmental analysis be informed by a travel analysis and allows for TARs to be incorporated in environmental documentation by reference to avoid duplications in accordance with 40 CFR 1502.21 [FSM 7715.4]. Additionally, travel management decisions do not need to be at the same scale as the travel analysis that informs those decisions [FSM 7715.2]. The Rim Country FEIS incorporated the travel analyses that were completed for TMR implementation.

By incorporating the previously completed travel analysis into the Rim Country Project environmental analysis, the requirements in regulation and agency policy for identifying the MRS are met.

The need to “improve the motorized transportation system and provide for a more sustainable road system where poorly located roads are relocated or decommissioned” is part of the 4FRI Rim Project purpose [PR 685, p. 21]. While the project’s purpose does not specifically identify the need to achieve the MRS, you are correct that the project should move the Apache-Sitgreaves, Coconino, and Tonto National Forests towards the MRS as each of the three Land Management Plans contain direction to minimize roads and reduce their impacts to natural resources [PR 684, pp. 3-9].

Based on recommendations in the TARs, the primary activities for achieving the recommended MRS are through road decommissioning and converting roads to motorized trails [PR 11, p. 19; PR 15, p. 204; PR 9, pp. 156-164]. The two action alternatives in the FEIS would decommission 490 miles of system roads [PR 686, p. x].

The TARs for the three Forests identify the MRS and make specific recommendations to decommission roads in order the achieve the recommended MRS. The action alternatives in the Rim Country Project will move the forests towards the recommended MRS.

Contention 1b: You contend the Forest Service fails to provide site-specific information about proposed road work. Without those specifics, the agency has not taken a hard look or provided an opportunity for meaningful public comment under NEPA. You contend that the analysis fails to consider road density before, during, and after the project within the project area, and so fails to consider direct, indirect, and cumulative impacts. Including (as examples): Failure to disclose or analyze impacts from proposed road work to aquatic macroinvertebrates; Risk of wildfire from human-caused fires where access is facilitated by system and non-system roads (including temporary and unauthorized); Reasonably foreseeable impacts from the spread of noxious weeds; Effects of new road activities (bulldozing) may exacerbate climate change and local microclimate conditions; and, Without site-specific information about proposed roads, it is impossible for the public to assess impacts from roads to water quality. [Objection, pp. 5-6]

Response: The Rim Country Project would decommission up to 490 miles of existing system roads and 800 miles of unauthorized roads, and relocate and reconstruct existing open roads adversely affecting water quality and natural resources, or existing open roads of concern to human safety [PR 686, p. 49]. Alternative 2 would construct or improve approximately 330 miles of temporary roads (new and/or existing unauthorized roads) to facilitate mechanical treatments and decommission all temporary roads when restoration treatments are completed [PR 686, p. 57]. Alternative 3 would construct or improve approximately 170 miles of temporary roads (new and/or existing unauthorized roads) to facilitate mechanical treatments and decommission all temporary roads when restoration treatments are completed [PR 686, p. 61]. Temporary road needs were determined based on areas of ponderosa pine forest with a minimum of 100 square feet of basal area per acre. These areas would need adequate road access to remove forest products [PR 684, p. 12].

Road-related activities, including use of existing roads, maintenance, decommissioning, and temporary roads, are identified as a necessary component of meeting the project's purpose and need [PR 686, p. 23]. Recognizing that roads may have negative resource impacts, the FEIS identified these impacts as a significant issue and developed Alternative 3, which contains fewer temporary roads than the proposed action [PR 686, p. 30]. Additionally, road activities will require concurrent implementation of design features, best management practices, and mitigation and conservation measures [PR 687, pp. 261-311; see, specifically, SW013, SW021, SW048, SW056, SW057, SW059, SW063, SW069, AQ014, AQ019, BT008, CT001, CT010, NW001-NW008, RM001, RM003, RS001-RS002, RS004-RS006, RS010, RS013, SW017, SW031, SW039, SW040, SW058, SW060, SW062, SW065, SW080, TR001-TR013, WL006, WL010, WL016, WL022, WL025]. Although the location of each mile of road activity is not identified in the FEIS, application of these measures will ensure site-specific effects are minimized. In turn, these effects, which can reasonably be anticipated based on extensive literature and agency experience in roads management without the specific location of each mile of road being identified up front, are analyzed in the FEIS, with differing effects of alternatives compared when appropriate [PR 686, water and riparian: pp. 113-14, 117-18, 120-22, 124; soils and watershed: 130, 134-36, 138, 140-43; fire risk: 240, 246; noxious and invasive weeds: 262-64; wildlife: 300, 307-09, 321, 330-31, 337-39, 343-44, 348, 350-51, 362, 364, 365; aquatics,

including aquatic macroinvertebrates: 366, 370-71, 373-74, 376-81, 386-89, 392, 401-03, 405, 407-16; rare plants: 420, 424-25, 427-33; PR 687, vehicle emissions: 24; cultural resources: 47-53; tribal relations; 58-62; socioeconomics: 72-74; lands and minerals: 82-83; range: 88; transportation: 90-100; recreation: 107-118; scenery: 124, 133, 139, 141-43; inventoried roadless areas: 161, 165-66; irreversible and irretrievable commitments of resources: 181].

The 4FRI Rim Country Project does not consider road density in the effects analysis. Increases in road densities due to temporary road construction during project implementation would only be temporary and then convert back to existing conditions when they are decommissioned [PR 688, p. 346]. The miles of roads to be decommissioned is common to all action alternatives. Additionally, this proposed amount of decommissioning is not guaranteed to happen quickly. As funding becomes available implementation would be completed.

Although the Rim Country Project does not identify the specific location of each mile of road-related activity, the effects of these activities can nevertheless reasonably be anticipated and communicated to the public based on extensive literature and agency experience in roads management. The project includes measures to ensure the effects of these activities are minimized, and includes an alternative developed, in part, to specifically address the issue of effects caused by roads. The analysis, which was made available for public review, discloses the effects of road-related activities, including differing effects by alternative. This approach provides the decision makers with the "hard look" needed to make an informed decision, in compliance with NEPA.

Please see instruction related to this Contention in the Conclusion section below.

Contention 1c: You contend without site-specific information about proposed road work, how proposed road work may impact or affect cultural resources cannot be analyzed. Therefore, the document cannot display compliance with NHPA. You contend that reliance on a Programmatic Agreement does not eliminate a duty to demonstrate compliance with the NHPA before issuing a final decision under NEPA. [Objection, p. 6]

Response: You do not have standing on this contention. Per 36 CFR 218.8(c), issues raised in objections must be based on previous specific written comments related to the proposed project unless based on new information. The IDT did not receive comments related to this issue during an opportunity for comment to establish standing or demonstration of how this issue constitutes new information.

Contention 1d: You contend that without site-specific information, especially in regard to roads, the analysis fails to demonstrate how the project will comply with the Clean Water Act (CWA). The project proposal lacks sufficient detail, and references lists of design criteria or BMPs without identifying which would be applied where, to evaluate compliance with the CWA. [Objection, pp. 6-7]

Response: The Rim Country Project applies a condition-based management (CBM) approach for implementation and road treatments, including temporary roads and roads to be decommissioned. The FEIS provides appropriate restoration methods for road treatments [PR 687, p. 355, Table D12, p. 358, Table D14]. Design features, best management practices,

mitigation, and conservation measures, many of which are related to road treatments, are required to minimize or avoid effects to water quality [PR 687, Appendix C, pp. 261-311]. Site-specific treatments, design features, best management practices, and conservation measures to ensure compliance with the Clean Water Act will be determined during implementation of different phases of the project based on existing resource conditions.

The effects of road treatments are analyzed and disclosed throughout Chapter 3 of the FEIS, including impacts to water quality [PR 686, pp. 111, 115, 117, 166]. This approach yields an analysis that considers site-specific activities, particularly given the scale of the project, that supports a "hard look" at effects and an informed decision, as required by NEPA. An Aquatic Restoration Review Team [PR 686, pp. 341-360] will be established to guide restoration priorities and review all site-specific aquatic and restoration proposals submitted. This team will utilize appropriate restoration methods based on existing conditions, resource issues, and concerns.

Contention 1e: You support the commitment to decommission 490 miles of existing system roads and 800 miles of unauthorized roads. However, in the draft ROD, the commitment includes "up to" these figures and fails to commit to where, when, or how this will be accomplished. Without knowing the actual numbers, the public is left to speculate about possible impacts and whether decommissioning will actually occur. The Forest Service asserts in the purpose and need statement that the project will improve the motorized transportation system by providing a more sustainable road system (Draft ROD, p. 2), yet also states that "[n]o roads designated for public motorized use would be decommissioned without additional decision making in accordance with the Travel Management Rule (Draft ROD, p. 15). You contend that all analysis under the Travel Management Rule belongs in this FEIS, and because there is no commitment to complete the decommissioning, the conclusion that the selected alternative will provide an improved and more sustainable transportation system is not based on the record or the analysis. This lack of commitment to decommission roads is also inconsistent with the forest plans that each include direction to reduce roads to a minimum amount, in violation of NFMA. [Objection, pp. 7-8]

Response: The Rim Country Project analysis is based on a CBM approach which also applies to road related actions of the project [PR 688, p. 186; PR 688, p. 344]. Before implementation, a review of the forest conditions and site-specific conditions would occur to inform the CBM approach. Field reviews will inform how project specifics, such as road use, temporary road construction, road decommissioning, mechanical treatments, and comprehensive restoration activities would impact resources and ensure they are within the effects analyzed [PR 688, p. 199]. Some locations for road decommissioning have been identified on the Tonto National Forest and the rest of the project area would follow the travel analysis process for each respective forest. Other road decommissioning locations would be determined when deciding and prioritizing roads for decommissioning at a later date during implementation [PR 688, p. 343]. The use of CBM for road activities is consistent with the NEPA [PR 688, p. 199].

The 800 miles of unauthorized road decommissioning are based on extrapolating road decommissioning needs on recent projects on the Apache-Sitgreaves National Forest to the full Rim Country project area [PR 241, p. 1]. Two environmental assessments totaling 61,101 acres, recently analyzed for transportation needs for mechanical thinning and also for road

decommissioning. They are Larson Environmental Assessment and Upper Rocky Arroyo Environmental Assessment, both on the Apache-Sitgreaves National Forest. No additional transportation analysis was conducted in these areas within the Rim Country EIS project area [PR 266, p. 13]. Road decommissioning will be analyzed for on 1,080,341 acres within the Rim Country EIS project area. This represents the entire project area outside of the Larson and Upper Rocky Arroyo analysis area Arroyo analysis areas, which have already been analyzed for road decommissioning in previous analyses [PR 266, p. 13].

The 490 miles of system road decommissioning are based on the travel analysis processes on the three national forests [PR 688, p. 343]. Road decommissioning would be completed as funding allows [PR 688, p. 346]. The specific locations of road decommissioning would be determined using the CBM process [PR 686, p. 51; PR 688, p. 344]. The FEIS analyzed the effects of decommissioning the full mileages of roads proposed [PR 684, p. 17]. Resource protection measures would be applied to minimize effects [PR 687, pp. 261-311]. The DEIS transportation specialist report provides the factors for prioritizing road decommissioning within the Rim Country Project. They include watershed condition (soil productivity, riparian areas, meadows, poor road locations, wildlife, fish and plants (threatened habitats), social and cultural values [PR 266, pp. 7-8]. The transportation design features in Table 2 of the same report describe how categories of roads will be decommissioned [PR 288, pp. 14-17]. For example, "roads causing damage to hydrological resources, cultural resources or threatened endangered, and sensitive species habitat are a priority for decommissioning" [PR 266, p. 16]. Decommissioning methods are described in design feature T8 [PR 288, p. 15].

The public had opportunity to review and comment on the proposed road decommissioning, as described in the Aquatic and Watershed CBM approach in Appendix D [PR 688, pp. 347-348], the Transportation Specialist Report for the DEIS, the CBM approach, and associated environmental effects in the DEIS [PR 311, 312, 315, 316]. Tools for implementation for decommissioning are also outlined in Appendix D [PR 688, pp. 352, 356, 358]. See also response to Contention 1b.

Agency policy allows road decommissioning through any one of or a combination of five treatments: 1) blocking the entrance, 2) revegetation and water barring, 3) removing fills and culverts, 4) establishing drainageways and removing unstable road shoulders, and 5) full obliteration recontouring and restoring natural slopes [FSM 7734.1]. Road decommissioning within the Rim Country Project will be implemented with these five treatments levels which provide a wide range of options to stabilize and restore unneeded roads. Depending on ground conditions and road location, restoration may be achieved by either blocking the entrance, full obliteration, or a combination of the treatments listed [PR 684, p. 17].

FEIS Chapter 2 specifies that the project would construct or improve new temporary roads or use existing unauthorized roads to facilitate mechanical treatments. All of these roads would be decommissioned when restoration treatments are completed [PR 686, p. 57]. The FEIS' Appendix C has a Design Feature (TR008) for temporary roads. It states, "As a condition of approval for use of a temporary road…temporary roads would be decommissioned…immediately after mechanical treatments and restoration work are completed" [PR 687, p. 304]. Because the proposed unauthorized road decommissioning mileage is based on an estimate and the system road decommissioning mileage is contingent on funding availability,

and specific road decommissioning would be identified through CBM, there is uncertainty about the exact mileage of roads that would be decommissioned. It is therefore reasonable for the proposal to use the words "up to." Despite this phrasing, the proposed mileage has a rational basis, and the magnitude of the commitment is clear. As described in response to Contention 1b, though mileages are not exact, the effects of road decommissioning can reasonably be anticipated and understood by the public. This approach provides the decision makers with the "hard look" needed to make an informed decision, in compliance with NEPA.

The TMR has two parts. Subpart A requires responsible officials to incorporate a science-based analysis to identify the MRS and to identify unneeded roads. Subpart B requires responsible officials to designate a system of national forest system roads, trails, and areas for motor vehicle use [36 CFR 212.5]. The Coconino National Forest established its TMR motor vehicle use designations in 2011; the Tonto National Forest published its final Record of Decision for TMR designations in 2021; and the Apache-Sitgreaves National Forests is expected to release the Draft Record of Decision for TMR designations in 2022 [PR 686, p.16]. The three forests completed Subpart A of the TMR; Travel Analysis Reports for Apache-Sitgreaves, Coconino, and Tonto National Forests were completed between 2008-2011 [PR 9; PR 11; PR 15]. The reports also provide specific recommendations for changes to get to the MRS. These changes include closing high clearance roads, converting passenger car roads to high clearance roads, converting roads to trails, and decommissioning roads. The travel analysis report completed by the Apache-Sitgreaves National Forest displays existing roads open to the public and provides road specific recommendations for decommissioning and other changes that will get to the MRS [PR 9, pp. 156-164].

You contend that all analysis under the TMR belongs in the Rim County Project FEIS. The Rim Country Project and TMR have very different purposes and incorporating the TMR analysis into this FEIS would not meet the purpose and need of the Rim County project described in Chapter 1 of the FEIS. However, the Rim Country Project analysis and the previous TMR analyses on the Coconino and Tonto National Forests analyze opportunities to decommission unneeded roads where such action contributes to the project's purpose. Roads within the Rim Country Project boundary identified for decommissioning in the Tonto National Forest and Coconino National Forest TMR analyses are incorporated into Alternatives 2 and 3 of the Rim Country Project FEIS [PR 241].

Agency policy allows responsible officials to "integrate road decommissioning, reconstruction, and construction with other land management activities" [FSM 7710.45]. Travel management decisions such as adding a route to or removing a route from the forest transportation system, constructing an NFS road or NFS trail, acquiring an NFS route through a land purchase or exchange, and decommissioning a route, may be incorporated into decisions for larger projects. [FSM 7715; FSM 7715.2].

Incorporating TMR road decommissioning recommendations and decisions in this project's analysis is in line with agency policy.

Agency policy in FSM 7703 states that "Responsible Officials shall provide a forest transportation system that best achieves the desired conditions identified in the applicable land management plan" and that "the forest transportation system should provide access to NFS lands

for both motorized and non-motorized uses in a manner that is socially, environmentally, and economically sustainable over the long term, enhances public enjoyment of NFS lands, and maintains other important values and uses."

The purpose of the Rim Country Project includes improving the motorized transportation system to provide for a more sustainable road system, where poorly located roads are relocated or obliterated [PR 686, p. vii], is in line with agency policy in FSM 7703 to provide a more sustainable road system over time. This purpose also aligns with the Subpart A of the TMR to provide a more sustainable road system through the identification of the MRS and unneeded roads [36 CFR 212.5].

The Rim Country Project and TMR analyzed opportunities to decommission unneeded roads where such action contributes to the project's purpose. Roads within the Rim Country Project boundary identified for decommissioning in the Tonto and Coconino National Forests' TMR analyses are incorporated into Alternatives 2 and 3 of the Rim Country Project FEIS [PR 241]. Both alternatives will decommission 490 miles of existing roads and 800 miles of unauthorized roads which will contribute to the purpose of the Rim Country Project to provide for a more sustainable road system by decommissioning roads that are poorly located.

The purpose of Rim Country is to provide a more sustainable road system through road improvements and decommissioning of unneeded poorly located roads. Incorporating TMR road decommissioning analysis in the Rim Country project contributes to that purpose and is in line with agency policy in FSM 7703 to provide a more sustainable road system over time.

The Coconino (2018) and Apache-Sitgreaves (2015) and revised Tonto Land Management Plans (LMPs) have objectives for road decommissioning. Both the Apache-Sitgreaves and Coconino LMPs explain that objectives may be exceeded or not fully achieved based on changes in environmental conditions, budgets, and other factors and that the LMPs do not include project and activity decisions. The Coconino LMP specifically states that not all projects or activities would contribute to all desired conditions, or objectives and that "road decommissioning may be done in coordination with other management activities, such as the Four Forest Restoration Initiative." None of the applicable Land Management Plans contain any commitment or requirement to reduce roads by any specific minimum amount, nor for any specific project. Therefore, the Rim Country Project's lack of a minimum amount of road decommissioning is not in violation of NFMA.

Please see instruction related to this Contention in the Conclusion section below.

Contention 1f: The Forest Service proposes to construct or improve approximately 330 miles of temporary roads, including both new and the use of existing unauthorized routes. You contend the Forest Service must assess and disclose the existing conditions of those existing unauthorized roads and assess the impacts of those roads. The agency states it will decommission all roads "as restoration treatments are completed", yet there is no bounded timeframe for completing the restoration work or the project as a whole. You contend the Forest Service's failure to make any commitment to address temporary roads within a date-certain or even within a reasonable estimated timeframe violates the NFMA's limit on temporary roads on the landscape for no more than 10 years (16 USC 1608(b)). [Objection, pp. 8-9]

Response: The Purpose and Need for Action section in the FEIS specifically makes the commitment to decommission temporary roads "once project activities are completed" [PR 686, p. 19]. Methods and timing of temporary road decommissioning are addressed in the Transportation Report [PR 684, pp. 17- 23] and the FEIS [PR 686, p. 121].

The Transportation Report cites two laws and regulations relevant to the decommissioning of temporary roads: The Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1601, Pub. L. 93-378) as amended by the National Forest Management Act of 1976 (16 U.S.C. 1608, Pub. L. 94-588) and The Sale and Disposal of National Forest System Timber (36 CFR Part 223 Subpart B) [PR 684, p. 2]. The Forest and Rangeland Renewable Resources Planning Act of 1974, states that "any road constructed on land of the National Forest System in connection with a timber contract or other permit or lease shall be designed with the goal of reestablishing vegetative cover on the roadway and areas where the vegetative cover has been disturbed by the construction of the road, within ten years after the termination of the contract, permit, or lease either." 36 CFR 223.37 states that treatments to reestablish vegetation on roadways or areas disturbed by construction or use of roads, shall be "designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract."

Restoration treatments on the Rim Country projects will be accomplished through mechanical thinning as well as prescribed fire [PR 686, p. 42]. Mechanical treatments would be implemented through contracts [PR 686, p. 42]. Under the two action alternatives 2 and 3, temporary roads would be constructed to facilitate mechanical treatments [PR 686, pp. 21, 23] and would be decommissioned as soon as thinning and related restoration work is completed in the areas that they access after project close-out [PR 684, pp. 21-23; PR 686, p. 121; PR 687, p. 304; PR 688, p. 206].

Setting date specific timeframes for decommissioning of temporary roads before restoration activities are fully planned is not practicable and could be detrimental to restoration goals of the project. Decommissioning temporary roads as soon as thinning and related restoration work is completed complies with the requirements of NFMA and 36 CFR 223.37 to decommission temporary roads within 10 years of the termination of contract or as soon as practicable.

The statute you referred to is from the Forest and Rangeland Renewable Resources Planning Act of 1974 (language provided above). This language specifically refers to the contract or permit, not the planning document. As such, the timing for naturalizing temporary roads would be dependent upon the end date of the contracts, which is currently unknown.

Please see instruction related to this Contention in the Conclusion section below.

ISSUE 2: The Rim Country Project's Mexican spotted owl and designated critical habitat and other wildlife and wildlife habitat.

Contention 2a: You contend the analysis lacks a sufficient baseline against which to measure impacts of the project on MSO or its critical habitat. It is necessary to determine the current status of MSO populations. In order to understand the reasonably foreseeable impacts, you contend that site-specific information is needed. Lack of detail prevents meaningful or informed

public comment about the project's impacts to MSO or its critical habitat. [Objection, pp. 9-10, 12]

Response: For federally threatened and endangered species, the standard of review applied is whether or not the forest analyzed and consulted on effects to listed species with U.S. Fish and Wildlife Service (USFWS) in compliance with the Endangered Species Act (ESA) Section 7(a)(2). The terrestrial wildlife biologist prepared a Biological Assessment (BA) for consultation on listed species and critical habitat affected by the project, including the federally threatened Mexican spotted owl (MSO) [PR 541, pp. 161-212, 232-272]. The BA includes treatments proposed in MSO Protected Activity Centers (PACs) with descriptions and locations shared with USFWS. An analysis of the environmental baseline was included in the BA and used by the USFWS to determine in the biological opinion (BO) that the project's level of anticipated take is not likely to result in jeopardy to the MSO [PR 648, pp. 100-104]. A summary of the analysis of effects by alternatives to MSO and its critical habitat is included in the FEIS [PR 686, pp. 265-275, 287-324] and Terrestrial Wildlife Specialist Report [PR 683, pp. 8-14, 33-115]. The FEIS includes the required analysis from reasonably foreseeable impacts by all alternatives [PR 683, pp. 323-324].

Please see instruction related to this Contention in the Conclusion section below.

Contention 2b: The analysis fails to consider and disclose direct, indirect, and cumulative impacts to MSO survival and recovery, and its habitat, including the key factor of how prescribed fire to improve MSO habitat conditions is highly risky, uncertain, and controversial. Instead, the Forest Service largely assumes that proposed vegetation treatments within MSO PACs and recovery habitat will achieve more resilient forests and ultimately improve conditions for MSO. Another example is the failure of the Forest Service to take a hard look at the impacts to MSO and its critical habitat of proposed steep-slope cable logging despite the information in the 2012 Recovery Plan (at VIII). The Forest Service also creates exceptions to the timber parameters in the 2012 Recovery Plan, without explaining how these exceptions for cable corridors are acceptable despite best available science to the contrary (see, e.g., FEIS Vol. 1, pp. 300-301). Without details and site-specific information, you are also concerned that helicopter logging will be used, and these impacts have not been considered or disclosed in this analysis or ESA consultation. [Objection, pp. 10-12]

Response: An analysis of direct, indirect, and cumulative impacts by alternative forest treatments to MSO and its critical habitat are disclosed in the FEIS [PR 686, pp. 265-275, 287-324] and Terrestrial Wildlife Specialist Report [PR 683, pp. 8-14, 33-115], and includes impacts from prescribed fire and steep-slope cable logging. The intent of an EIS is to analyze alternatives and choose the preferred alternative that meets the desired conditions and purpose and need of the project that includes that "proposed vegetation treatments within MSO PACs and recovery habitat will achieve more resilient forests and ultimately improve conditions for MSO."

Fire effects including surface fuel loading, fire hazard index, risk of crown fire and other habitat effects were analyzed as they relate to MSO. This analysis discloses that the current condition is not likely to be sustainable as MSO habitat over time without restoration treatments. This conclusion is also supported by habitat trend mapping over the past 35 years, that shows the effects of wildfire and restoration treatments on sustainability of MSO habitats [PR 487, pp. 1-7].

Effects to listed species were analyzed and consulted on with USFWS in compliance with the ESA Section 7(a)(2). The terrestrial wildlife biologist prepared a BA for consultation on listed species and critical habitat affected by the project, including the federally threatened MSO [PR 541, pp. 161-212, 232-272]. The BA includes treatments proposed in MSO Protected Activity Centers (PACs) with descriptions and locations shared with USFWS. USFWS's BO determined the project's level of anticipated take, which includes effects from steep-slope prescribed fire and cable-logging, is not likely to result in jeopardy to the MSO [PR 648, pp. 100-104].

Treatment methods were expanded upon in the FEIS to clarify the types of equipment that could be used to conduct treatments; these treatment methods do not include helicopter logging. "Mechanical thinning methods include conventional ground-based harvest, cable operations, and hand thinning. . . Cable operations is a system of transporting logs from stump to landing by means of suspended steel cables. This method is usually preferred on steep slopes where conventional ground-based harvesting cannot be carried out effectively or would cause soil disturbance. Cable operations generally reduce the need for the construction of temporary roads. . . Methods and equipment used would depend on the final decision, limitations from design features, and the contractor procured during implementation [PR 686, p. 42].

Concerns were raised during stakeholder FEIS workgroup meetings on the use of helicopter logging in the Rim Country Project and the Forest Service responded that helicopter logging is not part of the proposed action [PR 626, p. 6; PR 714, p. 1]. However, the USFWS's BO did include helicopter logging in an action that was batched with the Rim Country project and explicitly states "[s]eparately from the Rim Country NEPA, but analyzed in this biological opinion, the Tonto National Forest would conduct helicopter logging within Pine Canyon" [PR 648, p. 13]. USFWS can include additional actions and issue opinions in the same BO that are outside the Rim Country NEPA to cover the compliance with the ESA, as they did in this example with helicopter logging actions on the Tonto National Forest. However, helicopter logging on the Tonto National Forest would require separate NEPA analysis.

Please see instruction related to this Contention in the Conclusion section below.

Contention 2c: You contend the analysis fails to respond to opposing scientific viewpoints in violation of NEPA's requirement that agencies disclose, discuss, and respond to "any responsible opposing view" and provide a rationale for choosing one approach over the other (40 CFR 1502.9(b)). 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 and an alternative that is more conservative in active management and possibly more protective of MSO and its critical habitat. [Objection, pp. 9-12]

Response: Regarding opposing science, CEQ NEPA regulations state that agencies are to discuss responsible opposing views in the final statement (40 CFR 1502.9(b). Regarding alternative consideration, CEQ NEPA regulations state that agencies are to develop alternatives to address unresolved conflicts concerning alternative uses of available resources (40 CFR 1501.2(c)). Forest Service regulations state that an alternative should meet the purpose and need and address one or more significant issues related to the proposed action (36 CFR 220.5(e)).

The FEIS Appendix H, Response to Comments, addresses the concern about opposing scientific viewpoints regarding MSO habitat, stating that the Forest Service has monitored MSO PACs before and after implementation, in the first 4FRI project area and Flagstaff Watershed Protection Plan project area. This monitoring should show whether thinning and prescribed burning are beneficial to MSO habitat. The FEIS, Chapter 3, describes the expected effects to MSO: improved structure and reduced risk of fire [PR 686, p. 299]. Effects were also modeled and showed that vegetation would exceed minimum MSO Recovery Plan recommendations of 12 trees greater than 18 inches in diameter at breast height per acre [PR 686, pp. 301-302]. The Forest Service consulted with USFWS on Rim Country treatments in PACs and Recovery Habitat [PR 688, pp. 387-388].

The Forest prepared a Terrestrial Wildlife Specialist Report that analyzes effects of the alternatives to listed species and critical habitat affected by the project, including the federally threatened MSO [PR 683, pp. 8-14, 33-115]. A summary of the analysis of effects to MSO and its critical habitat by alternatives is included in the FEIS [PR 686, pp. 265-275, 287-324]. Effects to listed species were analyzed and consulted on with USFWS in compliance with the ESA Section 7(a)(2). The terrestrial wildlife biologist prepared a BA for consultation on listed species and critical habitat affected by the project, including the federally threatened MSO [PR 541, pp. 161-212, 232-272]. The BA includes treatments proposed in MSO PACs with descriptions and locations shared with USFWS [PR 534, pp. 1-416]. USFWS's BO determined the project's level of anticipated take is not likely to result in jeopardy to the MSO [PR 648, pp. 100-104]. A summary of the analysis of effects to MSO and its critical habitat by alternatives is included in the FEIS [PR 686, pp. 265-275, 287-324].

The two action alternatives analyzed in detail consider a broader range of actions that more fully meet the purpose and need [PR 688, p. 282]. Chapter 2 of the FEIS describes several alternatives, including the Strategic Treatments for Fire Use Alternative, that were considered and eliminated from detailed study. The Strategic Treatments for Fire Use Alternative meets the purpose and need but not as well as alternative 2. The STFU Alternative results in the potential for additional air quality impacts compared to alternative 3 because it relies on a broader use of fire to achieve restoration objectives. Some of the concepts proposed in this STFU alternative were incorporated into alternatives 2 and 3, such as prioritizing treatments around non-Forest Service land with structures and critical infrastructure [PR 686, pp. 67-70]. Another alternative suggested eliminating the use of prescribed fire. The 4FRI Responsible Officials concluded that this alternative would not meet elements of the purpose and need and would not move the project area towards the desired conditions in the Land Management Plans. Using fuel reduction methods in lieu of prescribed fire could reduce some surface fuels but would not meet the ecological need for a fire-dependent landscape [PR 686, pp. 64-66]. Another alternative suggested returning the forest to historic reference conditions, which would have met the purpose and need to increase ecosystem resiliency and sustainability, would be compliant with Land Management Plans, ESA, and other species preservation direction; however, the IDT dropped it from detailed study because it did not meet the purpose and need for supporting sustainable forest product industries and the projection for treatments did not vary from the other action alternatives [PR 686, pp. 66-67].

The FEIS adequately considers opposing scientific viewpoints and considers an adequate range of alternatives.

Contention 2d: The FEIS fails to display the required hard look at impacts to other terrestrial and aquatic wildlife or consider alternatives to achieve the stated purpose and need that would result in lesser adverse impacts to terrestrial and aquatic wildlife. This includes ESA-listed species and Forest Service sensitive species. Site-specific information is necessary because understanding the timing, location, and nature of treatments is essential to determining the reasonably foreseeable impacts and allowing for meaningful and informed public comment. For example, the FEIS summarily states that acres of treatment under Alternative 2 ranges from 2 to 12,616 acres within the project area. This information is so vague as to be meaningless for assessing impacts. [Objection, pp. 25-26]

Response: According to CEQ, the environmental consequences section of an EIS should include the environmental impacts of the alternatives, any unavoidable adverse environmental effects, the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources (40 CFR 1502.16).

Regarding consideration of alternatives that result in lesser adverse impacts to wildlife, the FEIS Appendix H, Response to Comments states that the FEIS analyzes three alternatives: the no-action alternative, the modified proposed action or preferred alternative, and the focused restoration alternative. The alternatives were ultimately analyzed in detail because they considered a range of actions that best met the purpose and need. These represent a range of reasonable alternatives for analysis, with the modified proposed action alternative analyzing the highest treatment acreage and the focused based restoration alternative analyzing the lowest treatment acreage. Both action alternatives propose consensus-based treatments as developed with stakeholders through the collaboration process. The No Action alternative would not treat any acres within the project area [PR 688, p. 282].

The FEIS discloses that the No Action Alternative would have the least short-term effects on wildlife, while moving the project area towards desired conditions at a slower pace than the action alternatives. Many of the actions proposed under Alternatives 2 and 3, such as grassland and meadow restoration, stream habitat restoration, and aspen restoration, would benefit wildlife. Short-term effects from disturbance would be reduced in Alternative 3, but the long-term effects and risk of habitat degradation from stand-altering wildfire or insect infestations would be greater than under Alternative 2 [PR 686, p. 84].

For site specificity, please see the response to Contention 4a.

The project analyzed and consulted on effects to listed species with USFWS in compliance with the ESA Section 7(a)(2). The terrestrial and aquatic wildlife biologists prepared a BA for consultation on threatened and endangered aquatic and terrestrial species and critical habitat affected by the project [PR 541, pp. 1-278]. USFWS's BO determined the project's level of anticipated take is not likely to jeopardize the continued existence of the MSO, Little Colorado spinedace, Chiricahua leopard frog, Gila trout, narrow-headed gartersnake, and western yellow-billed cuckoo; and is not likely to destroy or adversely modify designated critical habitat for the

owl, spinedace, frog, and gartersnake [PR 648, pp. 97-98].

For Regional Forester's Sensitive Species (RFSS), the standard for analysis of sensitive species is FSM 2672.4, which requires preparation of a biological evaluation (BE). The specific standards and required content for a BE are in FSM 2672.42. The terrestrial and aquatic wildlife biologists satisfied this standard by including the BE analysis in the Terrestrial Wildlife Specialist Report [PR 683, pp. 120-161] and the Aquatics Specialist Report [PR 670, pp. 38-50, 66-111]. The terrestrial and aquatic wildlife biologists determined that the direct, indirect, and cumulative effects of all alternatives, either have "no effect" or "may affect" RFSS, but is not likely to cause a trend toward federal listing or loss of viability**.**

A summary of the analysis of effects by alternatives to ESA-listed and Forest Service sensitive species is included in the FEIS [PR 686, pp. 265-353, 368-417].

The FEIS took an adequate hard look at impacts to wildlife.

Contention 2e: You contend that this project is not consistent with Forest Service commitments set forth in its October 26, 2020, settlement letter to WildEarth Guardians. These commitments apply to projects within the Apache-Sitgreaves and Coconino National Forests, but you contend that based on best available science and the 2012 Recovery Plan direction, the commitments should apply to the Tonto National Forest, as well. You specifically call out: Monitoring; Protocol occupancy surveys or assume presence for areas not surveyed; Adaptive management framework outside of PAC core areas based on rigorous and quality-controlled management experiments. You note great concern that the effects of prior projects do not appear to inform the proposed actions of this project. Instead, a different study design for the Rim Country project is proposed to meet the objective. You contend this displays no intention of using a methodical, scientific approach to adaptive management, but rather an intention to monitor to achieve the claimed outcomes. [Objection, pp. 12-14]

Response: The project-specific amendment to the 1985 Tonto National Forest Land Management Plan for the Rim Country project is necessary to be consistent with the 2012 MSO Recovery Plan; the Apache-Sitgreaves and Coconino National Forests Land Management Plans already align with the 2012 MSO Recovery Plan. The amendment would specifically implement the monitoring described in the BO [PR 661, p. 243].

The Forest Service is required to comply with the Stipulation of Voluntary Dismissal commitments with WildEarth Guardians (which you described as the "settlement letter" in your objection) and this applies to the proposed Rim Country Project [PR 486, pp. 1-11]. Compliance with Stipulation of Voluntary Dismissal led to the development of the Region 3 Mexican Spotted Owl Management Strategy, a requirement for all forests in the Southwestern Region [PR 509, pp. 3-4]. The Management Strategy describes six measures grounded in the implementation of the 2012 MSO Recovery Plan, including discussion of past, ongoing, and future monitoring planned. As stated in the Stipulation of Voluntary Dismissal, the Forest Service continues to monitor the region-wide owl population trend with Bird Conservancy of the Rockies [PR 486, p. 6]; this is not project-specific for Rim Country. The Forest Service, in coordination with USFWS, developed several tools to assist the Forests to align with the Strategy [PR 509, pp. 3-4]. These tools include habitat management checklists and guidance for environmental analysis

and implementation, which are included in the FEIS, Appendix F is the MSO Conservation Recovery Framework [PR 666, pp. 116-139]:

1. The Southwest Region step by step MSO Habitat Treatment and Implementation Guidance.

2. Guidelines for Forest Vegetation Data Collection within Mexican Spotted Owl Habitat

3. Pre-implementation Compliance Review for the Regional Mexican Spotted Owl Recovery Strategy, August 6. 2021.

4. Mexican Spotted Owl Habitat Environmental Analysis Project Checklist, June 7, 2021

Additional monitoring efforts in the Rim Country Project and Terms and Conditions for MSO in the BO address some of your concerns for survey, coordination with USFWS, and monitoring to inform adaptive management for Rim Country treatments [PR 647, pp. 102-104].

The USFWS's BO includes a reasonable and prudent measure to "[m]onitor the effects of mechanical thinning, prescribed burning, and comprehensive restoration actions to the Mexican spotted owl from the Rim Country Project" [PR 648, pp. 102]. The terms and conditions for the reasonable and prudent measure include implementing a study to examine mechanical thinning and prescribed burning treatments in owl habitats using GPS tracking, monitoring and annually reporting incidental take, and annual reporting of Rim Country Project actions taken and effects to the owl and its critical habitat [PR 648, pp. 103-104].

The USFWS wrote the required MSO Monitoring Plan that is included in the BO [PR 648, pp. 151-152] and is referenced in the FEIS [PR 688, p. 13]. This MSO Monitoring Plan was proposed with a different study design than the first 4FRI to improve upon the lessons learned from previous management experiments, particularly the need to increase knowledge of treatment effects to owls and owl habitat with fine-scale data collected more efficiently to meet conservation goals in the 2012 MSO Recovery Plan [PR 648, pp. 151-152]. The Forest Service continues to implement the 1st 4FRI EIS MSO management experiment and makes the monitoring data publicly available [PR 53, pp. 1-6; PR 133, pp. 1-6; PR 206, pp. 1-7; PR 254, pp. 1-6; PR 362, p. 1-6; PR 494, pp. 1-5].

In addition, as part of the Mexican Spotted Owl Management Strategy, the Forest Service has developed a "regionwide habitat monitoring program" for MSO in the "Mexican Spotted Owl Map Application" (Living Map). The Living Map estimates MSO habitat trends from approximately the last 35 years and will be updated annually [PR 487, pp. 1-7].

Design Features in Appendix C of the FEIS require following MSO Recovery Plan Recommendations, including: "Survey all potential Mexican spotted owl areas including protected and recovery nest/roost, within the implementation area plus the area 0.5 mile to all habitat up to 0.5 mile beyond the perimeter of the proposed treatment area. Surveys should be conducted for two years, with the second-year survey either the year before or the year of (but prior to) project implementation. If more than five years have elapsed between the last survey year and the initiation of the proposed action, then one additional year of survey will be conducted prior to project implementation" [PR 687, pp. 305, 307]. Another reasonable and

prudent measure and term and condition of the BO requires the Forest Service to develop a process for the review/ground-truthing and tracking of stands identified as nest/roost replacement habitat by December 31, 2022, to design the least impactful mechanical treatments [PR 648, p. 103].

The project is consistent with the commitments in the Stipulation of Voluntary Dismissal with WildEarth Guardians that applies to all Region 3 forests, includes monitoring that improves on previous lessons learned from the first 4FRI, and incorporates the best available science by following the 2012 MSO Recovery Plan.

Please see instruction related to this Contention in the Conclusion section below.

Contention 2f: You contend the Forest Service has an independent duty to demonstrate compliance with the ESA. For MSO, the Forest Service has a duty to demonstrate how this project complies with the ESA and is consistent with the programmatic BOs for each of the forests. The Forest Service may not rely on a flawed BO and to do so violates the ESA. The Forest Service determined the project is likely to adversely affect MSO and its designated critical habitat, in its April 2021 BA. In its March 4, 2022, BO, FWS concluded the project is not likely to jeopardize the continued existence of MSO and that it would affect, would continue to serve the function and conservation role of critical habitat. You contend the FWS's 2022 BO is legally flawed, especially as it relates to assessing impacts to MSO and its critical habitat for numerous reasons, including but not limited to those outlined in the objection. You contend the project will have "massive" impacts to MSO and its critical habitat, but these are not disclosed because of the lack of site-specific details under a CBM approach. The FWS adopts the assumptions that proposed vegetation treatments will have the intended effect while admitting there is uncertainty whether the claimed results will be achieved. You contend there is a disconnect between the uncertainty around proposed treatments and lack of site-specific information, and the FWS conclusions, especially in the context of a changing landscape due to climate change and opposing scientific viewpoints. The no jeopardy and no adverse modification determinations are not based on the best scientific and commercial data available. You contend the FWS's 2022 BO improperly relies on vague information because the Forest Service fails to provide site-specific information about where, when, or how it will implement the various desired conditions and design features, instead proposing to make those decisions in the future. You contend that information and the coordination and consultation about impacts must occur before the final decision is signed. Additionally, the monitoring plan is inadequate because it does not track implementation (e.g., lacking an implementation plan or monitoring schedule) or the impact of treatments to MSO critical habitat. [Objection, pp. 14-18]

Response: In order to place the right treatment in the right location to meet the desired condition most effectively, the Rim Country Project will use a CBM approach for treatment allocation. This type of approach does not assign specific treatments to specific acres, but rather assigns treatments to a set of conditions that occur on the landscape.

Locations, methods, and probable effects of proposed thinning treatments are disclosed in static maps, as an interactive online storymap, and in analysis. Treatments are designed to comply with the land management plans (with amendments) and the implementation plan acts as secondary compliance check. The Forest Service committed to and is working on a treatment tracking

process as described in Appendix D to ensure that changes made under condition-based management stay within effects analyzed [PR 663, pp. 326-349].

The terrestrial wildlife biologist prepared a BA for consultation on listed species and critical habitat affected by the project, including the federally threatened MSO [PR 541, pp. 161-212, 232-272]. The BA includes treatments proposed in MSO PACs (PAC Atlas) with descriptions and locations shared with USFWS [PR 534, pp. 1-416]. USFWS's BO determined the project's level of anticipated take is not likely to result in jeopardy to the MSO [PR 648, pp. 100-104]. A summary of the analysis of effects to MSO and its critical habitat by alternatives is included in the FEIS [PR 686, pp. 265-275, 287-324].

The primary plan direction for managing for MSO are guidelines in the Land Management Plans (LMPs) that incorporate the 2012 MSO Recovery Plan [PR 22]. The Coconino LMP guideline states "Habitat management objectives and species protection measures from approved recovery plans should be applied to activities occurring within federally listed species habitat to promote recovery of the species" [PR 225, p. 80; PR 697, p. 2]. The Apache-Sitgreaves LMP guideline states "Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans" [PR 41, p. 26; PR 697, p. 41]. Because the 1985 Tonto National Forest LMP references the 1995 MSO Recovery Plan, a project-specific amendment exception to the 1985 Tonto National Forest LMP for the Rim Country project [PR 661] was necessary to be consistent with the 2012 MSO Recovery Plan [PR 522, pp. 2-3]. These all relate to the BA/BO consultation process with USFWS to ensure project consistency with the 2012 MSO Recovery Plan and LMPs to provide for the needs of MSO.

Compliance with the non-discretionary Reasonable and Prudent Measures and their Terms and Conditions as part of each forest's land management plan BO is reported annually to the USFWS. All of these Terms and Conditions are either incorporated in the Rim Country BO Terms and Conditions [PR 648, pp. 102-110] or will be followed through design features identified in the FEIS, Appendix C [PR 662, pp. 305-311].

Additional Terms and Conditions in the BO address your concerns for coordination with USFWS prior to implementation. Forest Service activities for the Rim Country project will be carefully planned and coordinated with the USFWS to minimize adverse effects to owls and owl habitat. Terms and Conditions in the BO state the "Forest Service management activities within PACs and nest/roost replacement recovery habitat shall be coordinated with FWS staff through an IDT and implemented to reduce potential disturbance to Mexican spotted owls" and the "Forest Service shall coordinate timing of management activities (e.g., thinning, burning, comprehensive restoration, etc.) within PACs and nest/roost replacement recovery habitat in order to reduce effects to habitat from multiple entries that result in adverse effects to habitat" [PR 648, pp. 102-103]. The Terms and Conditions are included in the implementation monitoring for MSO in the FEIS, Appendix E [PR 664, p. 17].

Monitoring efforts for MSO in the Rim Country FEIS and supporting documents address your concerns for the adequacy of monitoring treatments [PR 688, p. 13]. The Region 3 Mexican Spotted Owl Management Strategy discusses all of the past, ongoing, and future monitoring planned and is a requirement for the Rim Country project [PR 509, pp. 3-4]. The Forest Service,

in coordination with USFWS, developed several tools to assist the Forests to align with the Strategy [PR 509, pp. 3-4]. These tools include habitat management checklists and guidance for environmental analysis and implementation, which are included in the FEIS, Appendix F as the MSO Conservation Recovery Framework [PR 666, pp. 116-139].

1. The Southwest Region step by step MSO Habitat Treatment and Implementation Guidance.

2. Guidelines for Forest Vegetation Data Collection within Mexican Spotted Owl Habitat

3. Pre-implementation Compliance Review for the Regional Mexican Spotted Owl Recovery Strategy, August 6. 2021.

4. Mexican Spotted Owl Habitat Environmental Analysis Project Checklist, June 7, 2021

As part of the Region 3 Mexican Spotted Owl Management Strategy, the Forest Service developed a "regionwide habitat monitoring program" for MSO in the "Mexican Spotted Owl Map Application" (Living Map). The Living Map estimates MSO habitat trends from approximately the last 35 years and will be updated annually [PR 487, pp. 1-7].

The MSO Monitoring Plan included in the BO [PR 648, pp. 151-152] was proposed by USFWS with a different study design to improve upon the lessons learned from previous management experiments, particularly the need to increase knowledge of treatment effects to owls and owl habitat with fine-scale data collected more efficiently to meet conservation goals in the 2012 MSO Recovery Plan [PR 648, pp. 151-152].

Contention 2g: You contend that the Forest Service has a duty to demonstrate compliance with ESA for other ESA-listed species and critical habitat and there is insufficient information to support the agency's conclusions. In addition, without site-specific information about the location, timing, and nature of vegetation treatments, there is insufficient information to support a determination that the proposed action would have no effect on a listed species, and consultation is required. [Objection, pp. 26-28]

Response: The terrestrial and aquatics wildlife biologists analyzed and consulted on effects to listed species with USFWS in compliance with the ESA Section 7(a)(2). The terrestrial and aquatics wildlife biologists prepared a BA for consultation on threatened and endangered aquatic and terrestrial species and critical habitat affected by the project [PR 541, pp. 1-278]. The BA included "no effect" determinations to loach minnow, Gila chub and its critical habitat, and Western yellow-billed cuckoo proposed critical habitat [PR 541, pp. 34, 44, 217]. Species and critical habitat with "no effect" determinations do not require USFWS review [PR 648, p. 2].

As required by USFWS, treatments were planned and mapped in all Rim Country PACs. Before implementation, an IDT will still need to verify that treatments are needed to improve habitat characteristics important to MSOs and to reduce the risk of high severity wildfire in the PACs, core areas, and in the MSO recovery habitat. The BA includes treatments proposed in MSO PACs with descriptions and locations shared with USFWS [PR 534, pp. 1-416].

Locations, methods, and probable effects of proposed thinning treatments are disclosed in static maps, as an interactive online storymap, and in analysis. The effects of the treatment will remain within the effects analyzed. See also response to Contention 4a.

ISSUE 3: The Rim Country Project's detail on plan amendments.

Contention 3a: You contend comments on the DEIS note it failed to include the actual language of the amendment for MSO components, failed to explain why the amendment was necessary (how the project would otherwise be inconsistent with the 1985 Tonto Forest Plan), and failed to explain how the amendment would benefit MSO. These omissions have not been corrected in the FEIS. You contend the draft ROD does not explain why this proposed amendment is project-specific rather than amending the Forest Plan in full when the 1985 Tonto Forest plan's components for MSO are inconsistent with the 2012 Recovery Plan. The Forest Service explains the MSO amendment would except the project from existing Forest Plan monitoring requirements and implement the monitoring specific in the FWS BO; however, you contend: there is no monitoring plan set out in the BO; the GPS monitoring of specific owls is inadequate to monitor the effects of proposed treatments and there is no analysis of the effect of dropping meaningful monitoring impacts; there is no consideration of the reasonable alternative of implementing monitoring consistent with the October 26, 2020, commitments which are consistent with the Recovery Plan; Forest Service and FWS failed to consult under the ESA on the amendment to the 1985 Tonto Forest Plan. [Objection, pp. 18-19]

Response: The introduction to Appendix B, Land Management Plan Amendment for the Tonto National Forest, explains the need for the amendment. It states that the Rim Country Project was prepared to be consistent with the recently revised land management plans for the Coconino and Apache-Sitgreaves that reflect current science, policy and technology. The project-specific plan amendment is needed to provide the project with exceptions on three points from the original 1985 Tonto National Forest Land Management Plan [PR 661, p. 243].

The amendment implies the rationale for the project specific amendment. Rather than amending the plan in full, the Plan is being revised separately from the Rim Country Project and the decision on the revised Tonto Land Management Plan is expected later this year [PR 661, pp. 243-245].

One of the Rim Country project-specific amendment exceptions to the 1985 Tonto National Forest Land Management Plan is necessary to be consistent with the 2012 MSO recovery plan. The Forest Service explains the amendment exception would except the project from existing Land Management Plan monitoring requirements and implement the monitoring specific in the USFWS BO [PR 661, p. 243].

The amendment exception would benefit MSO as the 2012 MSO Recovery Plan updates definitions, language, and treatments within MSO habitat and includes more recent management recommendations learned since the outdated 1995 MSO Recovery Plan [PR 688, p. 396]. Consultation with the USFWS was completed for this project to comply with the 2012 MSO Recovery Plan.

The USFWS wrote the required MSO Monitoring Plan that is included in the BO [PR 648, pp. 151-152] and is referenced in the FEIS [PR 688, p. 13]. This MSO Monitoring Plan was proposed with a different study design to improve upon the lessons learned from previous management experiments, particularly the need to increase knowledge of treatment effects to owls and owl habitat with fine-scale data collected more efficiently to meet conservation goals in the 2012 MSO Recovery Plan [PR 648, pp. 151-152].

The Region 3 Mexican Spotted Owl Management Strategy discusses all of the past, ongoing, and future monitoring planned and is a requirement for all forests in the Southwestern Region [PR 509, pp. 3-4.] The Forest Service, in coordination with USFWS, developed several tools to assist the Forests to align with the Strategy [PR 509, pp. 3-4]. These tools include habitat management checklists and guidance for environmental analysis and implementation, which are included in the FEIS, Appendix F, as the MSO Conservation Recovery Framework [PR 666, pp. 116-139].

Contention 3b: You contend that the proposal and analysis fail to provide sufficient detail or site-specific information to evaluate compliance with the forest plans as part of the NEPA process. Reliance on project design features with implementation to be determined at some future point is insufficient and violates both NFMA and NEPA. The FEIS and draft ROD fail to demonstrate consistency with the plans' MSO components. For example, though the A-S plan states species will be managed consistent with the appropriate species recovery plan, there is no attempt to analyze or demonstrate how the project will be consistent with the MSO 2012 Recovery Plan. Neither specific plan components or the different forest plans are identified and there is no explanation for the project's compliance with applicable MSO plan direction. You contend the conclusory statements and list of design features and hypothetical mitigation measures do not demonstrate compliance with the forest plans, in violation of NFMA. [Objection, pp. 19-20]

Response: The Forest prepared a Terrestrial Wildlife Specialist Report that analyzes effects of the alternatives to listed species and critical habitat affected by the project, including the federally threatened MSO [PR 683, pp. 8-14, 33-115]. A summary of the analysis of effects to MSO and its critical habitat by alternatives is included in the FEIS [PR 686, pp. 265-275, 287-324].

The Rim Country Project includes Land Management Plan (LMP) compliance spreadsheets to demonstrate how it is consistent with LMP components for each of the forests, including those pertaining to MSO and its habitat [PR 522, pp. 2-3; PR 697, pp. 2, 5, 20, 41, 43, 45, 48].

As you note, individual LMPs state that species will be managed consistent with the appropriate recovery plan. The Rim Country FEIS included design features to follow the 2012 MSO Recovery Plan recommendations [PR 662, pp. 305-311].

The direction for managing for MSO are guidelines in the LMPs that incorporate the 2012 MSO Recovery Plan [PR 22]. The Coconino LMP guideline states "Habitat management objectives and species protection measures from approved recovery plans should be applied to activities occurring within federally listed species habitat to promote recovery of the species" [PR 225, p. 80; PR 697, p. 2]. The Apache-Sitgreaves LMP guideline states "Activities occurring within federally listed species habitat should apply habitat management objectives and species

protection measures from recovery plans" [PR 41, p. 26; PR 697, p. 41]. Because the 1985 Tonto National Forest LMP references the 1995 MSO Recovery Plan, a project-specific amendment to the 1985 Tonto National Forest LMP for the Rim Country project [PR 661] was necessary to be consistent with the 2012 MSO Recovery Plan [PR 522, pp. 2-3]. These all relate to the BA/BO consultation process with USFWS to ensure project consistency with the 2012 MSO Recovery Plan and LMPs to provide for the needs of MSO.

Compliance with the non-discretionary Reasonable and Prudent Measures and their Terms and Conditions as part of each forest's land management plan BO is reported annually to the USFWS. All of these Terms and Conditions are either incorporated in the Rim Country BO Terms and Conditions [PR 648, pp. 102-110] or will be followed through design features identified in the FEIS, Appendix C [PR 662, pp. 305-311].

The Forest Service adequately completed analysis to comply with NEPA and documented consistency with MSO components in the LMPs to comply with NFMA.

Please see instruction related to this Contention in the Conclusion section below.

ISSUE 4: The Rim Country Project**'s** reliance on condition-based management NEPA.

Contention 4a: You contend the FEIS fails to comply with NEPA because it fails to provide site-specific information necessary to understand the reasonably foreseeable impacts of the proposed actions before the decision is made. Because the CBM approach delays the agency's decision on one or more alternative means of accomplishing the stated goals of the project and fails to disclose information to allow for meaningful evaluation, the Forest Service fails to comply with its own NEPA regulations or CEQ's regulations implementing NEPA. Disclosing and analyzing site-specific information is necessary to meet the NEPA's hard look requirement and the documents do not provide sufficient information to demonstrate the Forest Service took a "hard look" at the impacts. Though Appendix C includes 50 pages of possible design features, BMPs, mitigation and conservation measures, it fails to identify which would be used where or how it would make that decision. That decision would be made well after this NEPA process is complete. [Objection, pp. 20-23]

Response: Following the CBM model, the Rim Country Project does not detail which specific treatment would occur on each acre of land within the project area. However, the project IDT developed and analyzed 15 different treatment types, which are displayed on table 15 of the FEIS, as well as descriptions of other activities [PR 686, pp. 43-63]. Treatments are depicted spatially on static maps [PR 687, maps following p. 241] and on an interactive story map [PR 699]. Approximate acreages for treatment types that would be completed over the life of the project are provided in the EIS [PR 686, pp. 56-62]. A combination of stand exam data and GIS layers were used to identify stand characteristics that were used in the process of assigning treatments described in the FEIS [PR 688, p. 197]. The conditions and process under which these treatments would be applied to specific areas are described in detail in the implementation plan [PR 687, pp. 313-383].

To support site-specific effects analysis, stand exam data that has been collected on approximately 28 percent of analysis acres in the project area were used to conduct a Nearest

Neighbor analysis in FSVeg software, which imputed data for the remainder of the analysis acres. The stand exam data were then modeled using the Forest Vegetation Simulator (FVS) to describe current stand conditions, the need for change, and appropriate treatments based on the project's purpose and need. FVS was also used to simulate cutting and prescribed burning treatments, and estimate structural metrics such as density following treatment, for each alternative up to the year 2049. Each data set was grouped by current forest type, site class, stand structure, and treatment type. Simulations were developed for each treatment based on Forest Plan desired conditions, relevant recovery plans, soils, TES, and considerations concerning other resources. Vegetation and fuels attributes, including tree density (trees per acre, basal area and stand density index) by species or species groups and diameter size class, dwarf mistletoe infection, insect hazard, cubic feet of biomass removed, canopy base height and bulk density, live and dead surface fuel loading, live and dead standing wood, coarse woody debris, and snags, were computed for each growth cycle. These attributes were then averaged for all the data sets represented in the simulation and compiled into an "effects" database [PR 680, pp. 51-53].

These stand data were used by specialists to analyze the direct and indirect effects of implementing the different proposed treatments and activities to resources including vegetation [PR 680, pp. 51-53]; wildlife, including MSO [PR 686, for MSO, see methodology description pp. 287-290, and effects analysis, which documents various effects of different treatments to specific areas of habitat type, pp. 291-324]; fire ecology [PR 686, see methodology description at pp. 218-221, which describes analysis occurring at the HUC 6 watershed level as well as using location-specific data such as stand data]; and air quality [PR 660, pp. 50-51]. Further, to ensure that the acreage and intensity of implemented treatments are within the scope of the effects analysis in the EIS, the EIS includes a tracking system that would track proposed treatments from planning through implementation [PR 687, p. 326; PR 688, p. 243].

While the analysis made the general assumption that each specific treatment would be implemented at the lower end of the target basal area range for that treatment [PR 686, p. 94], distinctions in effects to specific resources were still made based on alternative and type of treatment (see, for example, modeling of fire hazard index, which is summarized at the HUC 6 watershed level) [PR 686, figure 65 on p. 225 for Alternative 1, figure 70 on p. 237 for Alternative 2, and figure 75 on p. 243 for Alternative 3]. This yields an analysis that is reasonably site-specific, particularly given the scale of the project, that goes beyond a simple worst-case analysis and supports a "hard look" at effects and an informed decision, as required by NEPA.

Appendix C of the FEIS lists design features, best management practices, mitigation, and conservation measures (collectively referred to as design features) that are incorporated into the proposed action, alternatives, and analysis [PR 687, pp. 261-311]. Appendix D of the FEIS specifies that the implementation plan is to be considered in conjunction with the design features in Appendix C, and that silvicultural prescriptions will incorporate design features [PR 687, p. 313]. Further, design features are to be considered as part of the site-specific initial project resource review [PR 687, pp. 327-328]. The initial project resource review is the first step of the CBM approach, and would ultimately yield the treatment to be applied to a specific area [PR 687, see graphic on p. 327]. Although assignment of specific design features to treatment prescriptions will occur post-decision as part of the CBM process, design features [PR 311, pp. 534-598] and the CBM process [PR 315, p. 30; PR 312, pp. 599-661] were made available for

public review, application of design features was considered in the effects analysis [see, for example, PR 686, pp. 111, 117, 119-122, 124, 133-134, 260-263, 291, 296, 299-300, 306, 327, 330-331, 364, 420, 428-431, 433; PR 687, pp. 49-52, 83, 85-87, 96-97, 108-110, 112-113, 116, 134, 136, 162, 166-168, 170-172, 178-179], and the Draft ROD makes clear that adherence to applicable design features is mandatory [PR 659, p. 3].

Please see instruction related to this Contention in the Conclusion section below.

Contention 4b: You cited the failure to disclose or analyze site-specific activities within IRAs, making it impossible to determine or assess if the roadless characteristics will be maintained. You contend that the fact activities in IRAs will require additional approvals is evidence the current decision is being made before taking the necessary hard look, in violation of NEPA. [Objection, pp. 21-23]

Response: See response to Contention 4a for a detailed description of site specificity in the Rim Country Project.

The 2001 Roadless Area Conservation Rule (Roadless Rule) prohibits the cutting, sale, and removal of timber in inventoried roadless areas (IRAs), with limited exceptions. One such exception is at 36 CFR 294.13(b)(1), which allows the cutting, sale, or removal of generally small diameter timber when the Responsible Official determines it is needed for one of the following purposes and will maintain or improve one or more of the roadless area characteristics:

(i) To improve threatened, endangered, proposed, or sensitive species habitat; or

(ii) 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.

As stated in the preamble to the Roadless Rule, the agency recognized that science-based forest management might require some level of vegetative management in inventoried roadless areas, and this exception was designed to provide for this management (see 56 *Federal Register* at 3257). The preamble to the Rule indicated the use of this exception would only occur when a project-level NEPA analysis indicates that the cutting, sale, or removal of trees will contribute to the ecological objectives described in § 294.13(b)(1) (Id.). However, the Rule does not prescribe what the NEPA analysis should look like, or even the scope of the analysis, as long as the analysis supports the Responsible Official's determination that the cutting, sale, or removal of trees is needed for the purposes discussed above and will maintain or improve one or more of the roadless area characteristics.

There were no concerns expressed about the proposed activities in IRAs during scoping for the project, and roadless areas were not identified as an issue that contributed to alternative and design feature development and/or focused the analysis for the EIS [PR 686, Chapter 1]. One comment regarding the activities proposed in IRAs was received during the comment period on the DEIS for the project [PR 688, pp. 383-384]. In response to this comment, the IDT completed a separate IRA analysis [PR 678] and incorporated into the FEIS, by reference, analysis prepared for a briefing for the Regional Forester on the use of the exception. The FEIS also includes a section titled Inventoried Roadless Areas [PR 686, pp. 143-173]. Much of the information used

in these analyses was incorporated from prior resource-related analyses including, but not limited to, those covered in the effects analyses for wildlife, aquatic resources, air, soils, recreation, cultural resources, and hydrology [PR 686, Chapter 3]. The potential effects on any of these resource areas would not be different simply because they are within or outside of IRAs, and the potential effects of the project on these resources were clearly disclosed in the DEIS. Many of these resource areas contribute to the roadless characteristics defined in the Roadless Rule (36 CFR § 294.11), and, based on the analyses discussed above, the project's effects on these characteristics are discussed in the briefing document for the Regional Forester's review of the use of the exception at 36 CFR § 294.13(b)(1) [PR 616, pp. 5-16].

To ensure project consistency with the Roadless Rule, IRAs are a prominent consideration in the project design and analysis. An item on the Implementation Plan Checklist is: "for any project work occurring in an IRA: (1) Is the treatment plan consistent with the approved 2001 Roadless Area exception criteria included in the Rim Country project Regional Forester Brief and (2) has the coordination with the Regional Office IRA Lead occurred?" [PR 687, p. 314]. Restoration treatments within IRAs would be assigned with a decision tree modifier that requires additional considerations related to IRAs [PR 687, p. 337]. The project includes design features specific to roadless areas [PR 687, p. 287]. The FEIS describes project area IRAs and their characteristics [PR 687, pp. 143-161] and discloses project effects to IRAs, including effects to the IRAs' characteristics [PR 687, pp. 161-173].

The project record clearly indicates the areas within the IRAs to be treated, along with the types of treatments assigned to each area [PR 598; PR 678]. The Inventoried Roadless Area Specialist Report [PR 678], prepared by a team of interdisciplinary specialists, identifies each roadless area, discusses the roadless characteristics of each area, and has detailed information on the acres within each area to be treated, including different types of treatments. When treatments in IRAs are planned for implementation, the "decision tree," or decision-making process, described in the FEIS will be followed, but with added design features or "modifiers" to ensure resource protection, consistency with the Roadless Rule, and maintenance of roadless area characteristics [PR 686, pp. 39-40; PR 687, pp. 287, 314, and 337; PR 616]. As you point out, treatments in IRAs require additional review and approval (see, for example, PR 687, p. 337). However, this is not "evidence the current decision is being made before taking the necessary hard look," as the you allege. The effects of the project on the resources within and outside IRAs have been considered and disclosed, as discussed above. There are specific design features associated with IRAs, but treatments in IRAs will also need to follow the standard resource protection design features for all activities that are conducted within IRAs.

Stands within and outside IRAs are far outside the natural range of variation in terms of composition, and structure, for the cover types included. Most of these areas have not experienced normal fire regimes in over 100 years, missing many fire intervals (see, for example, PR 678 and PR 616). The Rim Country project activities, including the proposed treatments in IRAs, have been designed to modify fire behavior and allow cover types within IRAs to return to their normal fire regimes. Without action within these areas, they will continue to depart further from the desired condition. As discussed in the FEIS, the IRA specialist report [PR 678], and the Regional Forester briefing and concurrence document [PR 616], the treatments proposed within roadless areas will maintain or improve the roadless area characteristics of the IRAs in the project area. The analyses in the FEIS (including resource-specific analyses) and project record

are sufficient to 1) disclose the potential effects of project activities on the resources within each IRA; and 2) inform the Regional Forester's review and concurrence that the proposed treatments in IRAs are consistent with the Roadless Rule (36 CFR 294.13(b)(1)).

By applying design features and implementation plan criteria, the effects of project implementation can reasonably be anticipated without identification of the specific treatment on each acre of ground within IRAs. This approach provides the decision makers with the "hard look" needed to make an informed decision, in compliance with NEPA.

Contention 4c: In response to comments asking for greater transparency about road-related actions, the Forest Service states it will use a condition-based approach to determine need and develop maps during implementation. The public can then see the roadwork that would be completed. You contend this cuts the public out of the process and denies them the opportunity to comment on reasonably foreseeable impacts from road activities. [Objection, pp. 22-23]

Response: As described in response to Contention 1b, the effects of road-related actions can reasonably be anticipated based on extensive literature and agency experience in roads management without the specific location of each mile of road being identified up front. These effects are analyzed in the FEIS, with differing effects of alternatives compared when appropriate [PR 686, water and riparian: pp. 113-14, 117-18, 120-22, 124; soils and watershed: 130, 134-36, 138, 140-43; fire risk: 240, 246; noxious and invasive weeds: 262-64; wildlife: 300, 307-09, 321, 330-31, 337-39, 343-44, 348, 350-51, 362, 364, 365; aquatics, including aquatic macroinvertebrates: 366, 370-71, 373-74, 376-81, 386-89, 392, 401-03, 405, 407-16; rare plants: 420, 424-25, 427-33; PR 687, vehicle emissions: 24; cultural resources: 47-53; tribal relations; 58-62; socioeconomics: 72-74; lands and minerals: 82-83; range: 88; transportation: 90-100; recreation: 107-118; scenery: 124, 133, 139, 141-43; inventoried roadless areas: 161, 165-66; irreversible and irretrievable commitments of resources: 181]. Much of this analysis was also available for public review in the DEIS.

Although the Rim Country Project does not identify the specific location of each mile of road-related activity, the effects of these activities can nevertheless reasonably be anticipated and communicated to the public based on extensive literature and agency experience in roads management. The analysis, which was made available for public review, discloses the effects of road-related activities, including differing effects by alternative. This approach provides the decision makers with the "hard look" needed to make an informed decision, in compliance with NEPA.

Contention 4d: You contend the condition-based management combined with adaptive management is unreasonable in light of the scale, scope, and potentially infinite timeframe of the decision. Activities are proposed over a period or 20 years or until completed, and makes it appear that the activities could continue beyond 20 years because there is no concrete definition of what project completion is outside of the vaguely defined desired conditions. There are unresolved conflicts (the agency's objective can be achieved in one of two or more ways that will have differing impacts on the environment) and an alternative that specifically identified the where, when, and how of proposed treatments should have been identified. The condition-based approach here precludes a meaningful analysis of alternatives. [Objection, pp. 20-23]

Response: Adaptive Management (AM) and Condition-based Management (CBM) are not mutually exclusive. They are separate processes that meet different objectives. AM is used when there is uncertainty about project effects to adjust management activities after their initial implementation based on monitoring results. CBM determines appropriate management activities before initial implementation based on field reviews that validate current location-specific resource conditions. A CBM project can incorporate AM, but it is not required [PR 723, p. 2].

Implementation of the Rim Country Project would take place over a period of 20 years or more, and would occur as the Southwest is experiencing climatic changes, including periods of extended drought and increased temperatures. These changes are lengthening the wildfire season, shifting plant communities, and threatening native biodiversity, among other effects [PR 688, p. 8]. Within the project area, the diversity of landscapes and size of the project contribute to dynamic and variable conditions, with processes such as fire, insects, encroachment, and competition resulting in a changing environment. Although stand exam data have been collected on approximately 28 percent of analysis acres [PR 680, p. 51; GIS data described in PR 643], it is not feasible to have completely up-to-date information about current conditions on every acre of the project area, which encompasses approximately one million acres [PR 646, p. 4]. In light of these uncertainties and considerations, both AM and CBM are appropriate in the Rim Country Project.

The purpose and need for the Rim Country Project was determined by comparing the existing conditions to the desired conditions in the land management plans related to forest and ecosystem function and resilience [PR 686, p. 19]. Pursuant to Forest Service Handbook (FSH) 1909.15, Section 11.21, this is the standard approach to developing a project's purpose and need. By extension, a determination that a project is "complete" (i.e., the purpose and need has been achieved) will rely on a continued comparison between existing and desired conditions within the project area. This is a purpose of the Rim Country Project's Monitoring and Adaptive Management Plan [PR 688, pp. 1-115]. While the FEIS describes a general implementation timeline of 20 years or until completed, ultimately determining the project's completion based on anything other than a comparison between existing and desired conditions would be arbitrary and in violation of the project's stated purpose and need.

FSH 1909.15, Section 18 provides the process for review of new information or changed circumstances relating to the environmental impacts of a proposed action. If, at any point during implementation of the Rim Country Project, the effects of adaptive management activities are anticipated to exceed those analyzed in the FEIS, additional NEPA analysis may be required [PR 688, p. 9]. Rather than assign an arbitrary end date to the project, using this approach will ensure project implementation is informed by on-the-ground conditions and effects are within the bounds of the analysis as well as compliance with NEPA.

Forest Service NEPA regulations at 36 CFR 220.5(e) state, "The EIS shall document the examination of reasonable alternatives to the proposed action. An alternative should meet the purpose and need and address one or more significant issues related to the proposed action." The FEIS identifies seven significant issues, all of which were addressed through development of Alternative 3, modifications to the proposed action, mitigation measures, or analysis [PR 686, pp. 27-30]. In addition, the CBM process was clarified in the FEIS based on public comment to make it more predictable, reliable, and repeatable [PR 688, pp. 187-195, 197, 202, 235, 237; see

updated implementation plan at PR 687, pp. 313-383]. Concerns about the site-specificity of CBM are addressed in response to Contention 4a.

Please see instructions related to this Contention in the Conclusion section below.

Contention 4e: You state that a goal of the Rim Country Project must be to restore natural processes to the landscape, not create a perpetual need for mechanical treatment. The analysis contains the beginning of an optimization process but fails to complete a proposal that provides a clear explanation of where and under what conditions natural ignitions would be allowed to burn. The Forest Service should fully disclose its decision-making process and the temporal sequence of restoration treatments (locations and methods) that will enable a state where goals of the project are significantly met and catastrophic wildfire threats are reduced in a majority of the project area. [Objection, p. 24]

Response: The Response to Comments states that the FEIS was updated to include additional Land Management Plan Direction information and further discussion in The Fire Ecology Specialist Report. As stated in the report "the Coconino National Forest Land Management Plan, the Apache-Sitgreaves National Forests Land Management Plan, the Tonto National Forest Land Management Plan, and the Tonto National Forest Draft Land Management Plan all allow for the management of wildfires for resource benefits when and where expected fire effects and behavior would be beneficial and would not threaten lives, property, infrastructure or critical resources". The report goes on to provide each LMP's direction on allowing the management of wildfires [PR 674, pp. 10-11, 13, 16-17, 17-19]. Further discussion of a strategic treatments alternative was considered and while ultimately eliminated from detailed analysis, the additional analysis presented in the specialist report, FEIS, and implementation of the project may include optimization of the landscape. As the project is intended to restore ecological structure and function across the broad landscape and is not designed solely to mitigate wildfire risk, the development of potential operational delineations is not pertinent to the analysis [PR 668, pp. 213-214].

The FEIS disclosed the process of implementing mechanical restoration treatments to meet the goals of the project. The FEIS provides detail on the CBM approach, "This type of approach does not assign specific treatments to specific acres, but rather assigns treatments to a set of conditions that occur on the landscape within identified forest stratum. Once these conditions are identified by an interdisciplinary team, they can use this implementation plan in order to identify the appropriate treatment that is described in the FEIS. The need for this approach is derived from applying adaptive management considerations and lessons learned from past related projects" [PR 687, p. 325]. The CBM approach continues to explain, "The process begins with an initial project resource review of forest conditions and site-specific considerations that would inform the CBM process. This process would include the consideration of the vegetation focused strategies, the aquatic and watershed strategies as well as the integration of the two approaches. The area would then be evaluated for special management considerations that would result in a specific treatment assignment, such as Protected Activity Centers, Mexican Spotted Owl Recovery Nest/Roost habitat, WUI, severe disturbance areas, and others" [PR 687, p. 325]. The monitoring plan along with adaptive management strategy helps ensure that project goals are being met, stating "In an adaptive management process, monitoring of indicators prior to and in

response to management actions provides information for understanding if those management actions are leading to progress toward desired conditions and/or towards thresholds that should trigger a change in management response" [PR 688, p. 8]. This project does not propose future management strategies or make future management decisions beyond the scope of the project completion.

ISSUE 5: The Rim Country Project's analysis of old and large trees.

Contention 5a: You contend there is insufficient site-specific information regarding its proposed cutting of trees, resulting in a failure to take a hard look at the direct, indirect, and cumulative effects of the proposed action. The FEIS fails to disclose sufficient detail to demonstrate a hard look. For example, the identification of old trees appears to be subjective and left to determinations in the field well after the final decision is made. Guidance in Section B appears to apply only to ponderosa pine. Also, the Large Tree Implementation Plan guidelines are vague and insufficient to comply with NEPA's requirements to disclose and analyze effects and leaves resolution of any conflicts between the LRMP desired conditions and the exception categories up to the district. The actual proposal to cut large trees is left to some point after the close of the public NEPA process. As to SALT stands, there is a change between draft and final EIS. The FEIS states that across all 5th HUC watersheds in the analysis area the number of acres meeting SALT criteria is currently estimated to be 44,472 acres and would increase to 87,098 by 2039 (FEIS, p. 158). Under the selected alternative, it is anticipated the average number of acres meeting SALT would increase to 77,939 acres by 2039 (FEIS, p. 169). You contend this is the first time this information is provided, and it undercuts the assumptions regarding the long-term impacts of the proposed actions. The Forest Service states that it removed dwarf mistletoe mitigation from the analysis (FEIS Vol. 1, p. ix), but there is still discussion of how to treat mistletoe infected stands (FEIS Vol. 2, p. 337) and the draft ROD includes management of dwarf mistletoe through individual tree removal. The Forest Service also fails to consider reasonable alternatives including the alternative developed by the Stakeholder Group. The reasons for eliminating an alternative that adopts the Old Growth Protection and Large Tree Retention Strategy are not reasonable. [Objection, pp. 28-29, 31]

Response: The Rim Country data used is site-specific and was used to disclose effects across the landscape scale, stratified by similar forest conditions. Understanding how data was applied to an analysis shows how site-specific data was considered in development of stratums of similar forest conditions. These treatment stratum locations are shown on the proposed alternative maps. Common stand exam sampling needs to be operationally and economically feasible. A large-scale sampling coverage for the project is not necessary with the use of the nearest neighbor tool that groups similar forest conditions. Treatments applied for the stands are consistent with the Forest Plans and the analysis represents 100% of project stands.

The Silviculture Report goes into detailed analysis with multiple attributes over an extended period of time [PR 680, pp. 134-182]. Direct, indirect, and cumulative effects were disclosed in the FEIS and Silviculture Report. Forest attributes analyzed over multiple alternatives include tree densities, forest processes, forest composition, forest structure, large tree, and old tree structure across the project area. Density related attributes include trees per acre, basal area and stand density index. Forest Process related attributes include mistletoe severity, bark beetle hazard and fire adaptation. Site-specific data and analysis are disclosed in the FEIS and

Silviculture Report.

There are no Land Management Plan (LMP) components that define “large trees” or their management. Also, there is no other legal direction defining large trees, except the 2012 MSO Recovery Plan which does restrict cutting of trees greater than 24” diameter and has objectives to manage for desired quantities of trees greater than 18” in MSO recovery habitats. The proposed action is consistent with the 2012 MSO Recovery Plan direction. The effects of the proposed action to project defined “large trees” is disclosed in the alternative 2 analysis [PR 686, pp. 169-170].

The Collaborative Forest Landscape Restoration Program (CFLRP) requires that large trees be managed consistent with desired restored forest conditions, based on the LMPs and with collaboration in project planning. The LMPs address “old tree” management constraints, and the project is designed to be consistent with this direction. Definitions for identification of “old trees” were collaboratively developed with the public stakeholder group [PR 663, p. 337]. The project record states “Operationally, the identification of old trees (trees approximately 150 years and older) will be made in consideration of the tree forms depicted in Figure D-1 below as well as the written descriptions from Thomson (1940) listed below. All of these factors for age classes 3 and 4 should be taken into account when identifying old trees. For species other than ponderosa pine, consider tree characteristics identified in Van Pelt (2007) and Van Pelt (2008)” [PR 687, p. 315]. The FEIS provides further direction pertaining to old trees, “Old trees would be retained, with few exceptions, regardless of their diameter, within the Rim Country analysis area. Removal of old trees would be rare. Exceptions would be made for threats to human health and safety, and those rare circumstances where the removal of an old tree is necessary in order to prevent additional habitat degradation that would be caused by forest thinning and burning operations. Old trees would not be cut for forest health reasons or to balance age or size class distributions” [PR 687, p. 315]. The project direction for old trees is consistent with the LMPs. The project action alternatives are consistent with all LMPs and the LMP amendment for the Tonto National Forest [PR 687, p. 243].

There is no LMP direction or other legal direction to identify and manage for SALT (stands with an abundance of large trees) conditions other than mention in the LMPs’ desired condition descriptions that stand conditions dominated by even-aged tree structure would represent a minor proportion of ponderosa pine and dry mixed conifer forest types on the landscape. The SALT classification and management strategy was developed in collaboration with the project stakeholder group and proposed specifically for this project. The general trend of SALT acreages is similar from the DEIS to the FEIS where no action produced the maximum number of SALT acres, followed by Alternative 3, followed by Alternative 2. The acreage of SALT stands under the proposed action increased as the DEIS was refined into the FEIS [PR 686, p. 64]. Maximizing stands that classify as SALT stands is not consistent with purpose and need or LMP desired conditions.

The original project proposal included treatments to regenerate stands severely affected by dwarf mistletoe. These treatments were removed from the proposed action [PR 686, p. 31]. In the Implementation Plan, the decision tree modifier for stand infected with dwarf mistletoe is detailed, “In order to meet the purpose of increasing the resilience and sustainability of ponderosa pine ecosystems within the Rim Country project area, dwarf mistletoe will be

managed as an individual tree removal criterion rather than a mistletoe specific treatment type. The presence or intensity of a dwarf mistletoe infection is not a criterion for treatment assignment in the Rim Country Condition-based Management Approach. Management of dwarf mistletoe should focus on southwestern dwarf mistletoe, and its most common host, ponderosa pine" and "In severely infected stands (80 percent or more infected), the forest health objective must also be weighed against other resource objectives. Generally, these stands would be assigned a similar treatment type to stands without a severe dwarf mistletoe infection, however, mechanical deferral may also be an option" [PR 687, p. 337; PR 659, p. 18]. This will improve overall stand vigor and facilitate long term sustainability of the uneven-aged forest conditions directed by the LMP on the treated areas. It is also recognized that severely infected stands which are proposed to be deferred from treatment will likely not be sustainable over time as ponderosa pine or mixed conifer forests without future regeneration treatments to establish healthy stands.

According to CEQ, the environmental consequences section of an EIS should include the environmental impacts of the alternatives, any unavoidable adverse environmental effects, the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources (40 CFR 1502.16). Regarding alternatives, agencies are to develop alternatives to address unresolved conflicts concerning alternative uses of available resources (40 CFR 1501.2(c)). Forest Service regulations state that an alternative should meet the purpose and need, and address one or more significant issues related to the proposed action (36 CFR 220.5(e)). The FEIS, Chapter 2, Alternatives Considered and Eliminated from Detailed Study section explains that using the original large tree retention strategy from the first 4FRI EIS was not considered because the USFS and Stakeholder group started with this strategy and improved it [PR 686, p. 66]. In other words, the original large tree retention strategy has a new and improved version.

Contention 5b: You contend the Forest Service fails to take a hard look at the impacts of cutting large and old trees, ignoring best available science that shows the importance of conserving old growth and conserving old, mature forests, especially in the context of a growing climate crisis. You contend the Forest Service did not address opposing scientific viewpoints and cites the viewpoints set forth in Gillihan 2006 cited in their comments to the DEIS, the new information in the 2022 IPCC Sixth Assessment Report, and specifically opposing scientific viewpoints and new information that questions the Forest Service's assumptions that cutting trees is the most effective path to a resilient forest. You contend that the Forest Service fails to meaningfully assess project impacts to climate change and impacts from climate change to the project in light of this new information. You contend the Forest Service should reconsider the proposed vegetation treatments given both the changing climate and changing political landscape evidenced by the April 22, 2022, Executive Order titled "Executive Order on Strengthening the Nation's Forests, Communities, and Local Economies". [Objection, pp. 29-31]

Response: In response to taking a hard look at the impacts of cutting large and old trees, please see the response to Contention 5a.

The proposed actions are consistent with the LMPs desired conditions, Standards, and Guidelines, and the 2012 MSO Recovery Plan (where applicable). The recently revised LMPs were developed considering the best available science for the ecology of the local forest ecosystems governed by the LMPs. The LMP desired conditions were informed by historic reference conditions and are focused on improving and maintenance of ecosystem resiliency to climate change and other ecosystem stressors and disturbance agents. Reduced forest density will facilitate restoration of frequent surface fires to the landscape and maintain carbon on the site consistent with ecosystem capability.

You contend that the Forest Service did not consider opposing science, citing Gillihan 2006, which addresses bird habitat in pinyon juniper stands in Utah. The article also recommends retaining mature stands of pinyon juniper because of their ecological value and benefits to cavity-nesting birds [PR 418, p. 52]. The FEIS Appendix H, Response to Comments, explains that old and large tree protections in the Old Tree Implementation Plan (OTIP) and Large Tree Implementation Plan (LTIP) apply to all conifer species [PR 688, p. 325]. The 4FRI IDT included pinyon and juniper in old growth protections between draft and final versions of the EIS.

Regarding the 2022 IPCC Sixth Assessment Report, this report was finalized February 27, 2022 and April 4, 2022. The Executive Order you are referring to is dated April 22, 2022. Both were issued after publication of the FEIS in March 2022. The Rim Country Project would contribute towards this Executive Order on Strengthening the Nation's Forests, Communities, and Local Economies. The restoration treatments will put 991,000 acres on a trajectory toward increased resiliency and sustainability [PR 659, p. 11]. The project will also support sustainable forest products industries and local communities [PR 659, p. 14].

Contention 5c: You contend the analysis fails to demonstrate how the proposed cutting of old and large trees (and the implementation plans) will comply with the three forest plans' components related to logging old and large trees. You contend none of the analysis displays compliance with forest plans and asserts that the same deficiencies apply to proposed plan standards and guidelines designed to protect old and large trees. [Objection, p. 32]

Response: The direction for old and large trees for the Coconino and Apache-Sitgreaves Land Management Plans (LMPs) is in the form of several desired conditions and three guidelines. The old growth and old tree direction in the 1985 Tonto LMP is based on outdated science and as a result the Rim Country Project is excepted from most of its prescriptive and outdated direction. The Apache-Sitgreaves LMP [PR 41, p. 38] has the following guideline for all vegetation types:

"*Where current forests are lacking proportional representation of late seral states and species composition on a landscape scale, old growth characteristics should be retained or encouraged to the greatest extent possible within the scope of meeting other desired conditions (e.g., reduce impacts from insects and disease, reduce the threat of uncharacteristic wildfire).*"

The Coconino LMP contains the following guidelines [PR 225, p. 62]:

"*To protect old-growth forest components, existing old-growth forest attributes should be protected from uncharacteristic natural disturbances. Methods of protecting existing old-growth*

forest components on the landscape may include prescribed cutting, prescribed fire, and wildfires managed for resource objectives" and

"*To perpetuate old-growth forest components, the development of old-growth conditions should be encouraged in areas where old growth is lacking. Uneven-aged vegetation treatments should be designed such that replacement structural stages and age classes are proportionally present to assure continuous representation of old-growth characteristics across the landscape over time*."

The Rim Country Project design for retaining large trees is consistent with and more restrictive than the applicable LMP desired conditions and guidelines (FEIS Appendix D). The FEIS adequately analyzes and discloses effects to the large and old tree resources and considers the best available science and opposing views related to old growth [PR 686, pp. 152-197]

Refer also to responses to Contentions 5a and 5b regarding the Rim Country Project. Regarding the contention that there are deficiencies to protect old and large trees in the proposed plan standards and guidelines, this FEIS does not affect the draft Tonto National Forest LMP.

ISSUE 6: The Rim Country Project and the Tonto National Forest's LMP amendment.

Contention 6a: You contend steep slope mechanical thinning treatment was not clearly proposed with the DEIS, and Forest Service told a small sub-group in April 2022 that there was analysis of steep slope logging in the DEIS, but it was largely relegated to specialist reports. The Forest Service explained that more clarification of cable logging was included in the FEIS, but you contend that the FEIS does not include acreage totals for steep slope treatments to be conducted by both cable and ground-based equipment. There are design features in the FEIS but there is no specific analysis for the effects of steep slope logging. You contend there was no real opportunity for public comment on this aspect of the project because location, total acreages, methods, and direct, indirect, and cumulative effects of steep slope logging on landscapes including, but not limited to, critical habitats, MSO protected areas, IRAs, nominated or designated Wild and Scenic River corridors, sensitive soils, watersheds, etc. was not disclosed or explained. [Objection, pp. 33-34]

Response: These treatments are proposed to increase sustainability of forests on steep slopes by reducing the likelihood of high severity wildfire occurrence. The treatments will facilitate restoring or maintenance of desired conditions identified as objectives in the Apache-Sitgreaves, and Coconino National Forest Land Management Plans (LMPs), and the draft Tonto National Forest LMP and the current LMP as amended. The areas proposed under alternative 2 to be harvested on steep slopes by cable or tethered harvesting systems are disclosed in the project record. A total of 54,609 acres (all three Forests combined) are proposed as candidate acres for silvicultural treatments on steep slopes (greater than 30%) [PR 686, pp. 291; PR 601, p.1] and locations are displayed on a map [PR 601, p. 2]. No steep slope treatments are proposed for MSO PACs [PR 683, p. 63]. Of the 54,609 acres proposed to be treated on steep slopes, 30,986 acres are in MSO habitat areas, with treatment prescriptions focused on managing to develop or maintain desired conditions described in the 2012 MSO recovery plan. Within nest/roost recovery areas, 5,045 acres are proposed for treatment and within foraging/non-breeding habitat areas, 25,941 acres are proposed for treatment in foraging/non-breeding habitat areas on steep

slopes [PR 686, p. 301]. The effects analysis for these treatments are found in each of the resource specialist reports (Soils and Watershed Resource Report [PR 682, p. 131]; Silviculture Report [PR 680, p. 50]; Terrestrial Wildlife Report [PR 683, pp. 91-106]). Design features are addressed in response to Contention 6c.

Sensitive Soils is an undefined term. Soils based on their inherent and dynamic properties have different potentials and susceptibility to disturbance, both natural and anthropogenic.

The Soils and Watershed Resource Report defines soil erosion hazard [PR 682, p. 60] and Appendix A provides a list of individual map units and the soil classification, potential plant community, soil condition rating, soil erosion hazard, timber harvest limitation and natural regeneration potential of each unit [PR 682, pp. 116-133]. Appendix B further breaks down individual map units including those on steep slopes, those with severe erosion hazards, those in wetland/riparian areas and includes potential management strategies [PR 682, pp. 135-158]. Current and predicted sediment delivery rates were analyzed for each map unit within the project area for undisturbed forest and different treatment types including thinning, prescribed fire, wildfire, low and high traffic roads as a summary in Table 14 [PR 682, pp. 61-65] and is further described in Appendix C [PR 682, pp. 159-248]. Table 15 [PR 682, pp. 65-68] provides sediment delivery rates for each map unit by low, moderate and high soil burn severity from the first year following the fire through year five post-fire. Cumulative effects to soils including soil erosion are discussed by alternative as well [PR 682, pp. 95-105]. Soil effects from cable yarding operations are further described in the Rocky Mountain Research Station Soil Sustainability and Harvest Operations: A Review report [PR 619, pp. 13-14] as well as effects to soils with other harvest systems. The cable yarding operations section is specific to steep slopes and some findings were that partial suspension of logs could result in greater amounts of exposed soil and rutting especially in fine textured or ash-capped soils, where complete suspension of logs and use of helicopters to remove trees from steep slopes results in less overall soil disturbance compared to ground-based harvest systems [PR 619, pp. 13-14].

Contention 6b: Cable logging was not analyzed in the Rim Country DEIS, though it was mentioned in Appendix C (DEIS, pp. 579-580). Helicopter logging was not analyzed in the DEIS or FEIS. The FEIS specifically analyzed cable logging as its steep slope logging method (FEIS, pp. 291, 300-301). In the draft ROD, LMP Amendment for the Tonto National Forest Exception 3 is justified by referring to a paper (Holzfeind et al. 2020) that specifically discusses Winch-Assist Harvesting, discussing how it is different from cable logging. Winch-Assist Harvesting is not mentioned in the FEIS. Additionally, you contend that Holzfeind does not claim that the logging techniques discussed will have no adverse effects, nor does the paper reveal any information about winch-assisted technology in arid or semi-arid locations. You contend that Holzfeind et al. 2020 is not a substitution for actual analysis of the effects of the actions proposed. You are also concerned that the draft ROD refers to “technology into the future”, introducing a large amount of uncertainty into project implementation. You contend specialist reports from 2022 mention cable logging but fail to provide analysis of the effects. The Soils and Watershed Resource Report makes an assertion of the impacts without scientific references (March 2022, p. 86). The Terrestrial Wildlife Report acknowledges cable logging would occur but does not disclose effects beyond an assumed restoration of habitat that would accompany a reduction in vegetation and fire risk (p. 33). The Terrestrial Wildlife Specialist Report does disclose the potential for >30,000 acres of cable logging in critical habitat, specifically within

MSO habitat types, but does not disclose any other acreages. You admit confusion because three different tables offer three different acreage totals for what appears to be Alternative 2 Cable Operations in MSO critical Habitat (2022 Terrestrial Wildlife Specialist Report, pp. 64-66). You note that the BO contains more specific information, including acreages, than is disclosed in the FEIS and contends the FEIS fails to take a hard look at the impacts of steep slope mechanical treatments. You contend the Forest Service needs to analyze the direct, indirect, and cumulative effects of steep slope logging by various mechanical means. Only cable logging is mentioned in the FEIS; only winch-assisted logging is implied in the draft ROD. The Forest Service needs to provide peer-reviewed research on the need for and effectiveness of steep slope (>40%) treatments for ameliorating fire risk. [Objection, pp. 34-35, 38-39]

You include information on two other projects (Bill Williams and FWPP projects) regarding mechanical treatments on steep slopes associated with these projects. You contend that the Forest Service justification (in a statement made in the 2021-11-17 meeting notes) is misleading and the analysis presented in the 2020 FEIS is insufficient to determine the impacts of mechanical steep slope logging on 54,609 acres of the Project Area, and that the type of cable logging proposed in the 2020 FEIS has never been executed as part of the Bill Williams or Flagstaff Watershed Protection Projects. [Objection, p. 33]

Response: Helicopter logging was neither proposed nor analyzed as part of this project. It will not be authorized under this project decision. The areas and acreages proposed as candidates for treatments on steep slopes (greater than 40%) are disclosed in the project record (see response to Contention 6a. The effects were analyzed by specific resource area and disclosed in the project record (see response to Contention 6a).

Holzfeind et al. 2020 provides a general summary of the effects of cable harvesting systems, but the project specialist reports provide more specific discussion of effects to the local landscape and resources. Implementation of steep slope cable operations have been completed successfully in the past for other projects across the southwestern US: on the Apache-Sitgreaves, Lincoln, Santa Fe, and Carson National Forests. Some of these past treatments were implemented within the Rim Country project area during the 1980s. Winch-assisted harvesting systems have been successfully implemented recently on National Forest projects on the Lincoln, Carson, Rio Grande, and San Juan National Forests, and on private lands in Colorado and New Mexico. None of these operations resulted in effects significantly different than disclosed in this project record. These effects were also analyzed for the cited Bill Williams project on the Kaibab National Forest, and the Flagstaff Watershed Protection project on the Coconino National Forest. Even though helicopter logging was implemented for those projects, the effects analysis is still valid [PR 624].

Fire behavior increases as the steepness of the slope increases (>30%), this makes it difficult to treat the landscape on steeper slopes especially with mechanical treatment and suppression tactics [PR 674, p. 28]. The steeper slopes that experience fire are more likely to have negative impacts on the landscape as well as surrounding resources. Therefore, treating these areas and increasing spacing between existing trees, changing the fuel continuity as well as density can provide more flexibility and potentially reduce large scale determinantal impacts from high severity wildfires.

In response to the confusion on the Terrestrial Wildlife Specialist Report, Tables 30 and 31 provide the acres of cable operations in MSO Recovery Habitat for alternatives 2 and 3, respectively by forest. Tables 32 and 33 provide acres of cable operations in critical habitat units by alternatives 2 and 3, respectively [PR 683, pp. 64-66].

Contention 6c: You contend mention of steep slope logging is found in the Soils and Watershed Specialist Report (pp. 59, 68, and 73). You acknowledge there are design features included, but no specific analysis for the effects of steep slope logging aside from the Forest Service noting "These soils are not suitable for mechanical tree harvesting unless machinery designed specifically for steep slope harvesting is used and identified design features and BMPs are effectively implemented during mechanical tree harvesting and prescribed fire" (Soils and Watershed Specialist Report, p. 59). [Objection, pp. 32-39]

Response: Responses to Contentions 6a and 6b include the location of analysis for steep slope activities. The FEIS states, "Table C-1 lists design features, best management practices, and mitigation and conservation measures (collectively referred to as design features) that are designed to minimize or avoid effects common to all action alternatives. They are integral parts of the action alternatives that help align proposed activities with land management plan objectives, desired conditions, standards, and guidelines. As such, they have been included in the analysis presented in this FEIS" [PR 686, p. 261].

You stated there is no specific analysis of steep slope logging for soils and watershed. The Soils and Watershed Resource Report presents a specific analysis of the steep slope erosion associated with different management treatments [PR 682, pp. 169, 198, 204, 207, 213, 243]. The results from this analysis includes sediment delivery in the year of disturbance and average annual hillslope sedimentation.

Current and predicted sediment delivery rates were analyzed for each map unit including those with steep slopes within the project area for undisturbed forest and different treatment types including thinning, prescribed fire, wildfire, low and high traffic roads as a summary in the Soils and Watershed Resource Report Table 14 [PR 682, pp. 61-65] and in further described in Appendix C [PR 682, pp. 159-248].

Specific mitigation measures are also included as part of the analysis, including SW033, SW034, and SW036 [PR 690, pp. 296-297]. These measures include common and effective BMPs for the reduction of soil erosion and sedimentation.

Contention 6d: You state Exception 3 is a project-specific amendment applying only to Rim Country and the effects analyzed within. The analysis of the Substantive Requirements does not disclose the impacts to soils, long term impacts on regeneration or vegetative community composition, the scenic impacts of cable corridors, the potential for cable corridors to conduct fire or become colonized with fire-prone invasive species. Erosion, deviation from scenic integrity, and noxious weed infestation are listed as "short term" with no explanation of how or why they would not be long term impacts. [Objection, p. 38]

Response: The justification for Exception 3 says "This exception is needed to meet the purpose and need of the Rim Country project to restore these steeper slope areas, while meeting the

original intent of the standard/guideline of protecting soils on steep slopes." It only applies "where it is not otherwise restricted and where it would not result in adverse effects on soil and water resources" [PR 688, pp. 243, 260]. The FEIS Volume II [PR 687, pp. 174-176] addresses the substantive requirements of the 2012 Planning Rule Analysis with a summary that the exception "would not result in substantial adverse effects associated with the sustainability requirement". This conclusion is supported by the analysis in the FEIS Volume I and Soils and Watershed Resource Report [PR 686 pp. 124-142; PR 682].

ISSUE 7: The Rim Country Project and the impacts of livestock grazing.

Contention 7a: You contend that the Range Specialist Report describes the impact of project activities on grazing and livestock forage but fails to address whether livestock grazing would affect the restoration of understory species or answer the question of how livestock grazing will affect the project's ability to meet its desired future conditions. You included references with their scoping and comment letters and requested they be included in the analysis to give a true hard look at the cumulative effects. Additionally, you contend the Forest Service failed to address the following:

- Mention reduced competitive and reproductive capacities of native species in grazed areas, and actions associated with grazing can spread exotic plant seed such as cheatgrass.

- Acknowledge that grazing and browsing contributes to aspen decline and is detrimental to aspen recruitment and survival.

- Discuss how grazing impacts springs and riparian areas, and has a negative interaction with off highway vehicle use.

- Explain how future livestock management would differ from the past practices that helped lead to unhealthy forests in the first place.

- Explain how monitoring will detect problems and what changes might be made to grazing.

- Take a strong position suggesting what changes to grazing might be necessary to achieve a fully restored forest.

- Cite the following source. The science establishing an interaction between grazing, fire, understory health, and pine recruitment is well established and goes back over half a century. The following peer-reviewed literature contributes to the knowledge that cattle grazing can create effects counter to forest restoration efforts: Kerns et al. 201134, Bakker et al. 2010, Kimball and Schiffman 2003, Allen et al. 2002, Belsky and Blumenthal 1997, Cooper 1960, Madany and West 1983, Savage and Swetnam 1990, Arnold 1950.

[Objection, pp. 39-40]

Response: Effects of livestock grazing on fire, understory species, riparian areas, aspen, soils and hydrologic function as well as effects of historic livestock management are discussed in the Range Specialist Report [PR 676, pp. 7-8, 8-11 respectively].

Cumulative effects of livestock grazing are discussed in the FEIS for various resource sections on FEIS Volume 1, pages 123 (water quality), 142 (livestock grazing), 264 (noxious and invasive species), 344 (wildlife), 346 (wildlife), 348 (wildlife), 351 (wildlife), 353 (wildlife), 405 (aquatics) [PR 686]; FEIS Volume 2, pages 85 (range), 89 (range) [PR 687]. The Range Specialist Report also discusses cumulative effects [PR 676, p. 71].

Mitigation measures are discussed in the FEIS Volume II (range), 166 (recreation), 168 -169 (recreation), and Appendix C (design features) on pages 281 (FE001, RM004), 288 (SI003), 289 (SI011), 293 (SW012), 294 (SW014, SW018) [PR 687, pp. 85, 87].

The contention regarding whether livestock grazing would affect the restoration of understory species was also addressed in the response to comments with the following:

During implementation, determinations would be made to ensure livestock grazing can resume in a pasture after a restoration activity has occurred. As part of implementation, adaptive management is applied to livestock management, such as stocking and season of use which are specified within an annual operating instruction developed with and issued to the grazing permittee. This annual operating instruction will specify levels of use for the allotment, generally 25 to 40 percent use. Utilization of forage/understory species at these levels will maintain or improve forage production and plant vigor. Depending on several factors such as the type of treatment and scale/size, restoration of understory species may increase forage production in different areas, which would increase livestock distribution and decrease utilization [PR 688, p. 300, #6].

Besides accounting for the project's cumulative effects from grazing and the action alternatives, the project provided protections from these potential effects. Fencing to protect spring outflows from ungulates is indicated in Table 72 [PR 686, p. 386]. The project also includes design features to protect herbaceous regrowth post-treatment from livestock grazing if necessary (RM004, SW012) [PR 686, p. 401; PR 687, p. 166]. Mitigation adjustments to reduce effects on forage species were considered, such as rest or deferment and would be managed adaptively based on site conditions. These mitigations have shown to maintain static understory conditions in grazed areas [PR 687, pp. 87-89].

Appendix C demonstrates multiple measures that would protect restoration efforts from future negative grazing effects, including SI002 which considers delays in burning and retaining felled trees in place or using them as grazing barriers; and SW012 deferring grazing within an aquatic management zone (AMZ) affected by prescribed fire treatment in order to: reestablish groundcover, promote recovery and establishment of riparian species, protect floodplain function, and provide for resilient stream systems PR 687, pp. 288, 293, respectively]. Several aquatic design features also allude specifically to fencing in riparian areas and to protect forage and treatments from grazing [PR 687, pp. 264-265, 272, 282, 288, 296]. Furthermore,

descriptions preceding ecological objectives for seeps and springs, wet meadows, grasslands, and Gambel oak in Appendix D *Implementation Plan for Alternatives 2 and 3* described how conditions pertaining to effects from grazing would be considered as part of the decision modifiers during treatment implementation [PR 687, pp. 318, 320, 321, 323-324]. As part of CBM for aquatics and watershed restoration treatments, grazing actions and aquatic and springs conditions are special management considerations and decision modifiers [PR 687, pp. 338, 339, 340, and table D-4 p. 350].

Further details were provided in the *Range Specialist Report*: Livestock grazing is authorized through term grazing permits. Allotment Management Plans (AMPs) are developed through a separate NEPA process that analyzes stocking rates, season of use, and management for allotments. The FEIS discusses that increased forage resulting from the implementation of this project will allow for more flexible livestock management and distribution and does not indicate an increase in livestock numbers [PR 687, p. 87]. An increase in permitted numbers would require a grazing authorization analysis which would have to occur separate from this project. The purpose and need for this project are not directly related to the permits or AMPs. Although no permanent changes to the stocking, season of use, or management will occur with this decision, annual changes could occur, if deemed necessary. These changes may include rest or deferment of pasture, and would be discussed as needed, such as during the Annual Operating Instruction meetings [PR 676, p. 1]. The *Monitoring and Adaptive Management Plan* in Appendix E also includes consideration of future grazing effects on restoration goals, including ensuring pasture readiness prior to grazing, and adaptive management based on invasive species surveys [PR 688, pp. 18, 33, 47 respectively].

The Botany and Noxious Weeds Specialist Report discloses that the temporary reduction of the native plant community may allow for invasive species to establish within the community. This contention was also addressed in the Scoping Comments Addressed document. Response #18 to Letter 29 recognizes that ground disturbing activities "can contribute to invasive plant invasion", and states that each forest involved in the analysis has prepared a weed management documents. This response goes on to state that "(r)ange managers monitor utilization throughout the grazing period to assure overgrazing does not occur" [PR 163, pp. 114-115].

The FEIS discusses impacts from grazing and recreation to riparian areas and springs [PR 686, pp. 1, 110, 123, 142, 405, 406]. Interactions between livestock grazing and OHV use were not analyzed but OHV use was addressed in the Scoping Comments addressed document. Response #1 to Letter 10 states "Unauthorized ATV/OHV use is an ongoing issue that is best addressed through implementation of Travel Management Regulations by each forest" [PR 163, p. 18].

The FEIS discloses that the death and decline of aspen stands is a result of combined effects from multiple scenarios including livestock grazing/browsing [PR 686, p. 15].

The FEIS indicates that current conditions are due in part to historic livestock management. According to the Range Specialist Report, historic livestock management changed throughout the past 100+ years, including the reduction in livestock numbers [PR 676, pp. 8-9]. The report also addresses how current management incorporates adaptive management [PR 676, pp. 13-14]. This type of management allows for annual changes to livestock management based on current and/or recently past conditions. This is also discussed in the Scoping Comments Addressed

document [PR 163, p. 89].

Management of livestock includes multiple types of monitoring that is used to detect issues and make changes when necessary. FEIS Volume 3, Appendix H, states:

Annual monitoring, collecting data on livestock use and actual use, and long-term monitoring, collecting data on attributes such as canopy cover, frequency, composition and/or ground cover, are conducted on an individual allotment basis. This data is used during allotment analysis to assist in determining appropriate livestock management. The Rim Country project is not analyzing livestock management. [PR 688, p. 298]

The Scoping Comments Addressed document discusses the inclusion of design features for livestock management (also mentioned above, RM004) that can be used to achieve the desired conditions of this project [PR 163, p. 110]. Significant changes to livestock management including permitted numbers and season of use would be analyzed during the allotment management planning period.

Regarding the contention that certain publications must be cited in the FEIS: Allen et al. 2002, Arnold 1950, Bakker et al. 2010, Cooper 1960, Madany and West 1983, and Savage and Swetnam 1990, and all references listed discuss interactions between grazing, fire, understory health and pine recruitment and were referenced in the Range Specialist Report; these publications are also documented in the project record [PR 600].

ISSUE 8: The Rim Country Project and causes of aspen decline.

Contention 8a: You contend fencing is expensive, difficult to maintain, unsightly, and blocks movement of many wildlife species. You also contend the Forest Service must acknowledge that the lack of or severely reduced populations of top predators including wolves exacerbates the problem of overgrazing and over browsing on aspen, as does elk overpopulation. You contend fencing should only be used as a last resort and provides suggestions for other actions to protect values at risk from grazing and browsing. [Objection, pp. 40-41]

Response: The following information from the DEIS Response to Comments, speaks to these concerns: "The aspen restoration methods described in the draft environmental impact statement represent the best scientific information available and were developed in a collaborative manner. The aspen restoration strategies described in Kitchen et al. (2019) and Rogers (2017) represent collaboratively developed strategies to restore aspen on lands in the western United States. The reintroduction of Mexican wolves into the Rim Country project area and grazing allotment management is outside the scope of this analysis" [PR 668, p. 225]. However, the Forest Service recognizes that the absence of top predators and livestock browsing contribute to aspen decline and reduced regeneration and include instructions to clarify this position. We also want to address the use of fencing in the Rim Country Project as it will be used for aspen restoration.

Fencing aspen clones to protect from large ungulate browsing has been common practice in Arizona and New Mexico for many decades. The Silviculture Report explains that "Ungulate browsing has impacted aspen regeneration since the 1960s (Rolf 2001) on the Coconino and ASNF since the mid-1980's. For these reasons, permanent exclusion fences have proven to be a necessity to regenerate and maintain aspen throughout these forests" [PR 680, p. 77]. This

technique has proven to meet treatment objectives to increase aspen sapling establishment and potential recruitment, ultimately, providing future wildlife habitat.

The Silviculture Report acknowledges heavy browsing as a factor of decline by large ungulates among other important contributing factors: "Aspen communities throughout the Southwest have been declining for decades; a phenomenon thought to be the result of: 1) altered fire regimes since European settlement which promoted natural succession to conifer forests (USDA 1994, Dahms and Geils 1997) and 2) heavy browsing by large ungulates which prevented successful regeneration of aspen in burned or harvested forests (Shepperd and Fairweather 1994, Rolf 2001). Recent increased mortality and decline, due to weather, defoliation, and fire events, coupled with the inability of aspen regeneration to survive browsing, are resulting in accelerated conversion of aspen forest to coniferous forest (Fairweather et al. 2006)" [PR 680, p. 77].

The Scenery Specialist Report discloses the effects of linear features to protect aspen clones, stating "Aspen, Native Willows, Big-Tooth Maple, ephemeral drainage treatments and spring/seep areas require protective barriers to protect the areas from browsing. Both action alternatives require up to 200 miles of protective barriers. Barrier materials proposed include wire, wood and jackstrawing of trees. All would introduce unnatural linear features into the landscape that would not be natural appearing. Since these are isolated areas scattered around the over 1,000,000-acre project area, introduction of linear features would have minor effects" [PR 679, p. 53]. The FEIS states these 200 miles of protective barriers could be constructed for restoration, that includes around aspen "as needed" [PR 686, p. 49].

Please see instruction related to this Contention in the Conclusion section below.

Conclusion

I have reviewed the project in light of the issues presented in the objection letters. My review finds that the project is fully compliant with all applicable laws and the Apache-Sitgreaves, Coconino, and Tonto LMPs. However, based on my review and discussion with the Forests and the review team members, and you during our objection resolution meeting, I am asking the Forest Supervisors to clarify or expand on the project record in the following areas:

- **Contentions 1b, 1e:** Clarify in FEIS Appendix D, Implementation Plan, Aquatics and Watershed Restoration Condition-based Management Section, that decommissioning of NFS roads during project implementation will focus on recommendations already identified in Forest-level TARs and Travel Management decisions and that all unauthorized roads within the project boundary will be considered for decommissioning as part of the 800 miles considered. State that the Forest Service recognizes that some activities impacting existing NFS roads (including decommissioning) may require additional site-specific NEPA decisions. Describe considerations and applicable design features for the use of unauthorized roads as temporary roads for implementing treatments.

- **Contention 1f:** Add explicit roads considerations to the descriptions of the tracking process in FEIS Appendix D, Implementation Plan. Tracking should ensure mileages of road actions do not exceed those allowed by the selected alternative as well as application

of Appendix C design features to roads actions.

- **Contention 2a:** Add the following text to FEIS Appendix D, Implementation Plan, Implementation Plan Checklist: "Has the Pre-implementation Compliance Review for the Regional Mexican Spotted Owl Recovery Strategy been completed (see appendix K) and made publicly available as applicable?"

- **Contention 2b:** State in the Final ROD helicopter logging will not be used in this project. If it is to be considered at a later time that would require additional NEPA analysis.

- **Contention 2e:** Add a clarifying statement to design feature WL014 that if surveys cannot be completed, the Forest Service will assume owl presence within the project area not surveyed, plus a buffer of 0.5 miles.

- **Contention 3b:** Change a statement in FEIS Appendix D, Implementation Plan, Recovery Nesting/Roosting Habitat Mechanical Thin and Burn Treatment Design from "Retain all trees greater than 24 inches d.b.h." to "Retain all trees greater than 18 inches d.b.h."

- **Contention 4a:** Add a brief description to Appendix C, Design Features, and D, Implementation Plan, of how design features will be applied during the CBM implementation process.

- **Contention 4d:** Add a clarifying statement to the FEIS, Appendix E, Adaptive Management Process section how monitoring will inform the separate, but related, adaptive management and CBM processes.

- **Contention 4d:** Add a brief rationale to the FEIS, Chapter 2 for why an implementation timeline of "20 years or until completed" was chosen.

- **Contention 8a:** Change a statement in FEIS Appendix D from "Other factors contributing to gradual aspen decline over the past 140 years include reduced regeneration from browsing ungulates (Pearson 1914, Larson 1959, Martin 1965, Jones 1975, Shepperd and Fairweather 1994, Martin 2007)." to "Other factors contributing to gradual aspen decline over the past 140 years include reduced regeneration from browsing by livestock and introduced and native wild ungulates in the absence of natural predators like wolves (Pearson 1914, Larson 1959, Martin 1965, Jones 1975, Shepperd and Fairweather 1994, Martin 2007)."

Once the instructions are addressed, the Forest Supervisors may sign the final Record of Decision. My review constitutes the final administrative determination of the Department of Agriculture; no further review from any other Forest Service or Department of Agriculture official of my written response to your objection is available [36 CFR 218.11(b)(2)].

Thank you again for your participation in this project and the objections process.

Sincerely,

ELAINE KOHRMAN

Digitally signed by ELAINE KOHRMAN
Date: 2022.07.18 13:49:53 -06'00'

ELAINE KOHRMAN
Deputy Regional Forester

cc: Laura Jo West; Neil Bosworth; Judith Palmer; Kara Kirkpatrick-Kreitinger; Roxanne Turley