Attachment

Apache-Sitgreaves National Forests Land Management Plan

Appeal Issues Affirmed Without Instruction

This attachment includes responses to those issues the review found in full compliance with relevant law, regulation, and policy and that do not require follow-up instructions to the responsible official. This attachment is organized by major laws most relevant to each issue and sub-groupings according to specific requirements under those laws or the particular forest resource at issue. After each issue description, the abbreviated appeal reference number is noted, with the corresponding page number(s), in parentheses.

Contents

National Environmental Policy Act (NEPA)

Range of Alternatives

Issue: The appellants contend the Forest Service violated NEPA, NFMA and APA for failing to consider a range of reasonable alternatives. Specifically, they contend the Forest Service failed to consider in detail a reasonable alternative suggested in 2010 which would increase protection of forest resources, including aquatic ecosystems and species viability, in response to climate change, similar to the Aquatic Conservation Strategy the Forest Service used to amend Forest Plans in the Pacific Northwest Region. (#0008, pp. 13-16)

Response: Council on Environmental Quality (CEQ) NEPA Regulations at 40 CFR 1502.14 specify agencies shall:

> (1) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated; (2) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits; (3) Include reasonable alternatives not within the jurisdiction of the lead agency; (4) Include the alternative of no action; (5) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference; (6) Include appropriate mitigation measures not already included in the proposed action or alternatives.

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. Since an alternative may be developed to address more than one significant issue, no specific number of alternatives is required or prescribed.

The "Purpose and Need for Change" (FEIS Vol. I, p. 5) for this plan revision states there is "a need to incorporate management direction to guide future projects to maintain species diversity and viability across the planning area" and "a continuing need to improve soil and riparian conditions, prevent water quality deterioration, and acquire or maintain instream flow."

From these needs, the responsible official developed four alternatives that were analyzed in detail. An element common to all proposed alternatives is to "[p]rovide protection for riparian areas" (FEIS Vol. I, p. 23). Alternative D, in particular, "was developed to respond to issues by placing more emphasis on natural processes (use of wildland fire[1]) as a restoration tool to maintain or move toward desired conditions" (FEIS Vol. I, p.15).

[1] **Wildland Fire** – a general term describing any non-structure fire that occurs in the wildland.

Under alternative D, treatments are focused in priority watersheds. One of the primary objectives of alternatives B and D is to remove or mitigate degrading factors in at least 10 priority 6th level Hydrologic Unit Codes (HUC) watersheds within the next 10 to 15 years. In particular, "Approximately 5,000 to 30,000 acres per year of woodland Potential Natural Vegetation Type (PNVT) (primarily Madrean pine-oak using fire) and 300 to 600 acres per year of riparian areas would be treated to improve ecological conditions." (FEIS Vol. I, pp. 27 and 31).

In addition to analyzing alternatives in detail, the FEIS described alternatives eliminated from detailed study and provided rationale for why they were excluded (FEIS Vol. I, pp.16-22).

One of the alternatives not considered in detail was an, "Alternative to Manage Forests as a Refuge for Fish and Wildlife," which would have focused on "managing for biological diversity and at-risk species to address scientific uncertainty and controversy regarding climate change impacts. …The FEIS explained that, "[t]he alternative was not considered in detail because, by focusing solely on fish and wildlife habitat over other uses, it would not meet the legal direction of the National Forest Management Act or Multiple Use-Sustained Yield Act. … Also, in light of changes predicted by current climate models…there is a need to reduce vulnerability by maintaining and restoring resilient native ecosystems which would be an outcome in alternatives B, D, C, and A (in order from greatest resilience to least)." (FEIS Vol. I, p. 21).

The appellants suggested that the Forests "adopt an ecosystem-scale aquatic conservation strategy." The responsible official responded that "[t]he primary approaches of the plan to address these issues are through ecosystem restoration of the various PNVTs across the landscape, addressing degraded watershed conditions, and improving conditions within riparian areas and their associated aquatic habitats and species. Numerous objectives, desired conditions, standards, and guidelines have been developed for each of these for improving conditions by reducing historical, ongoing, and potential impacts through restoration activities and moving towards desired conditions through project implementation"

The FEIS (Vol. II, p. 636) included specific objectives such as:

> (1) During the planning period improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors."
> (2) Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian dependent species.

Prescribed Fire—is a wildland fire originating from a planned ignition to meet specific objectives identified in a written, approved, prescribed fire plan for which NEPA requirements (where applicable) have been met prior to ignition (see planned ignition).
Wildfire – unplanned ignition of a wildland fire (such as a fire caused by lightning, volcanoes, unauthorized and accidental human-caused fires) and escaped prescribed fires.

I believe the record shows the responsible official chose to address protection of aquatic ecosystems and species viability through restoration of PNVTs. I believe the record also shows that a number of alternatives were considered and four were carried forward for analysis. The Revised Apache-Sitgreaves Land Management Plan (Forest Plan) identified the need to improve riparian conditions, analyzed alternatives with varying degrees of treatments in priority watersheds, and developed forest plan components addressing riparian habitat.

I find no violation of law, regulation or policy.

Analysis of Baseline Watershed Conditions after Major Wildfires

Issue: The appellants contend the Forest Service violated NEPA and the Clean Water Act by failing to disclose the change in baseline conditions of watersheds resulting from the Rodeo/Chediski and Wallow Fires. The appellants further contend the Forest Service failed to fully disclose and analyze the resultant impacts to water quality (soil erosion potential, non-point source pollution, sediment and flooding), impacts to critical aquatic and riparian habitat, and lives and property. The appellants contend:

- The Forest Service failed to properly analyze the long-term adverse impacts due to recent mega wildfires and the impact they will continue to have on the environment, public and private property, and human welfare, violating NEPA.
- The Forest Service did not adequately identify the soil and water protection measures and accelerated watershed restoration efforts needed to mitigate and reduce the adverse impacts caused by recent mega wildfires.
- The Forest Service arbitrarily dismissed the suggestion to create Rodeo-Chediski and Wallow wildfire special emphasis areas without disclosing the reasons for dismissal (Wallow Fire Changed Condition Assessment report) (#0005, pp. 6-8).

Response: The Forest Service NEPA regulations at 36 CFR 220.4(f) state:

> CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions. … Simply because information about past actions may be available or obtained with reasonable effort does not mean that it is relevant and necessary to inform decisionmaking.

The Rodeo-Chediski Fire occurred in 2002 and the Wallow Fire occurred in 2011. Both fires were discussed in the background for *Overall Ecosystem Health* (Forest Plan, p. 15) and *Wildland Fire Management* (Forest Plan, p. 105). Both wildfires are also discussed in a section focused on the threat to communities from mega fires in the *Purpose and Need for Change* (FEIS, Vol. 1, p. 7).

In regard to soil condition, the interdisciplinary team noted in the FEIS, Volume I, page 60:

> The 2011 Wallow Fire had dramatic effects on soil conditions, including an estimated 28 percent increase in impaired and unsatisfactory conditions…Estimated time for recovery to satisfactory conditions within the burned area depends on many factors including pre-burn conditions, burn severity, post-fire treatments,

> management, and weather patterns. As a result, soil condition would not be inventoried until more of the fire area has stabilized. Within 5 years and where soils are capable, ground cover is expected to increase enough in high and moderate burn severity areas to bring erosion rates to a level where long-term soil productivity is no longer at risk.

Table 6 of the FEIS describes current and desired soil condition and acknowledges that current soil condition is a pre-Wallow Fire estimate (page 62-63). The Rodeo-Chediski Fire is briefly mentioned on page 63 in regard to macrobiotic soil crusts. The Rodeo-Chediski occurred 9 years before the Wallow Fire and is adequately accounted for in the description of soil condition in the Soils Specialist Report and FEIS. As stated above, the Forest Service has found that recovery of burned areas happen within approximately 5 years. The Wallow Fire occurred 5 years ago and the Rodeo-Chediski fire 15 years ago. The more recent Wallow fire was still in the recovery phase when the Forest Plan was being develop. Because of this the FEIS, Volume I, p. 64 stated:

> The estimated trends do not take into consideration the effects to soil condition from the Wallow Fire. The effects of the Wallow Fire were not included in this determination as conditions are variable by PNVT within the fire perimeter. The general trend would be that the area is improving at natural recovery rates. Generally, a**lternative A** would trend away from desired conditions for soil condition and could result in additional areas with reduced soil function and increased vulnerability to degradation. The action alternatives would trend toward desired conditions or would be static in most cases and would have the most areas where soil function is sustained and functioning properly and normally.

In summary, the analysis took into account the effects of both the Rodeo-Chediski Fire and the Wallow Fire. The Wallow Fire recovery was still occurring during the revised Forest Plan analysis time frame. The FEIS says that the current Forest Plan (alternative A) does not do enough to move toward desired conditions for soils after large fire events.

With respect to watershed conditions, the analysis (FEIS Vol. I, pp. 72-76) documents the watershed condition class for all 6th level HUCs on the forest both before and after the Wallow Fire. Watershed condition assessed before the Wallow Fire incorporated results from the Rodeo-Chediski fire (Table 12, page 73). Figure 7 displays watershed condition ratings in 2010 (after the Rodeo-Chediski Fire) and Figure 8 displays watershed condition ratings in 2012 (after the Wallow Fire):

> Figure 7 shows the 2010 watershed condition rating across the forests; while figure 8 shows the 2012 watershed condition rating. These maps display watershed conditions prior to and after the 2011 Wallow Fire. There were 50 watersheds affected by the fire. Some watersheds were heavily affected, resulting in a shift to a lower class. The effects of the fire to watershed condition in some of these watersheds were minimal... (FEIS, Vol. I, p. 73).

The alternatives analyzed in the FEIS include a variety of treatment methods to improve watershed conditions through watershed restoration. In the FEIS, Volume I, page 76 it states:

> There are a variety of treatment methods available in **all alternatives** that could improve the watershed condition…**Alternative A** does not provide a focused approach to watershed restoration. Treatments would likely not be concentrated within priority watersheds and would not substantially remove degrading factors that cause functioning-at-risk or impaired watersheds to improve…**Alternatives B and D** concentrate treatments in priority watersheds which allows a better opportunity for restoring or maintaining watersheds across the forests.

The FEIS documents an assessment of water quality across the forests. Existing conditions were compared to desired conditions. Desired conditions include the standards for water quality set by the State of Arizona under authority of the Clean Water Act (CWA) (FEIS Vol. I, p. 79). The described methodology and assumptions for the water quality analysis, noted "Data used in this analysis represents forestwide conditions and may not represent water quality or flow conditions at any given point. Onsite inspections will be conducted for site-specific project assessments." (FEIS Vol. I, p. 80).

The riparian analysis also addressed impacts of the Wallow Fire, noting that:

> Recent observations in many riparian areas reveal a range of little change from fire effects to severe degradation in specific riparian areas from channel cutting, sediment deposition, and, in extreme cases, debris flow. Forest personnel are still evaluating the effects to riparian as funding and workload allow. It will take many years to understand the full effects of the Wallow Fire on riparian areas. (FEIS Vol. I, p. 92)

While "[t]he current trend is away from desired conditions in all riparian PNVTs" (FEIS Vol. I, p. 96), the FEIS also states, "In **all alternatives**, environmental consequences within the foreseeable future to riparian areas and wetland ecosystems from management activities (timber harvesting/forest restoration) are expected to be minor. This is because project design incorporating BMPs, aquatic management zones, and wildlife habitat mitigation would be implemented; riparian areas and wetland ecosystems would be avoided; and new road construction related to timber harvesting is not expected to occur" (ibid.). This is reflected in the guidelines and description of "Management Approaches for Riparian Areas" on pages 35 and 36 of the revised Forest Plan.

The record shows that both fires were considered in the existing condition of the forests. As a result of these large wildfires, the forests have emphasized the importance of a need to change management direction not only to move toward desired conditions to improve soils and watershed, but to take action to reduce the frequency and severity of large fires. This emphasis is seen In the *Analysis of the Management Situation* which identifies wildfire in the need for changes from the 1987 Plan:

> Provide direction to address communities at risk from uncharacteristic wildfire. This includes describing the appropriate vegetation desired conditions and fire regime and treatment of the wildland-urban interface.

We find that the revised Forest Plan does take into account the effects of the Rodeo-Chediski fire in the analysis of the existing condition. In addition, after the Wallow Fire post-fire reports were prepared and are included in the record. The revised Forest Plan states in several areas (e.g. Desired Conditions, Standards, Guidelines and Management

Approaches) wildfire hazards and effects to local communities will be reduced (Forest Plan, pp. 30, 31, 38, 69, 87, 107, 108, 109, 112, 113, 114, 128, and 131).

The appellants also allege the Forest Service arbitrarily dismissed the suggestion to create Rodeo-Chediski and Wallow wildfire special emphasis areas. Page 6 of the *Wallow Fire Changed Condition Assessment* reads, "the team briefly considered whether to create a new management area for the Wallow Fire burned area, but chose not to pursue further. Earlier in plan development, we had considered this as an option for managing the area burned by the Rodeo-Chediski and decided not to make it a separate management area." Additionally, "The team reviewed the existing management areas that coincided with the Wallow Fire burn area and evaluated whether there was a need to change" (Wallow Fire Changed Condition Assessment, p. 6).

The responsible official decided not to create a new wildfire special emphasis area or make changes to the existing management areas, instead "[a] new section entitled 'Landscape Scale Disturbance' has been added to the proposed plan. It contains standards and guidelines that will guide managers if they face another 10,000 acre or greater disturbance event. Direction includes focus on human safety and property, erosion control, felling of hazard trees, soil stabilization, reforestation, wildlife needs, and scenery and removal of temporary mitigation features when no longer needed" (ibid).

I find that the revised Forest Plan does take into account the effects of the Rodeo-Chediski fire in the analysis of the existing condition. In addition, after the Wallow Fire, post-fire reports were prepared and are included in the record. The revised Forest Plan states in several areas (e.g. Desired Conditions, Standards, Guidelines and Management Approaches) wildfire hazards and effects to local communities will be reduced (Forest Plan, pp. 30, 31, 38, 69, 87, 107, 108, 109, 112, 113, 114, 128, and 131).

In conclusion, I have found that the effects from the Wallow fire are described in the soil condition, watershed condition, water quality, and riparian area analyses. While the Rodeo-Chediski Fire was not consistently mentioned directly in all resource impact analyses, impacts from the 2002 Rodeo-Chediski Fire are incorporated into the pre-Wallow fire condition, based on documentation in the record. For each resource listed above, the team identified the need for additional site-specific analysis or included plan components to address potential impacts of future projects. Relative to the need for a wildfire emphasis area, the team considered the need, reviewed standards and guidelines after the fire, and added "Landscape Disturbance" plan direction to address future large-disturbance events.

I find no violation of law, regulation, or policy.

Impacts of Increased Primitive Recreation on Water Quality

Issue: The appellants contend the Forest Service violated NEPA and the Clean Water Act for failing to adequately analyze and disclose adverse impacts to water quality and human health due to increasing, concentrated primitive and dispersed recreation opportunities generated from inappropriate disposal of human waste. For example, appellants contend:

- The Forest Service acknowledges increases in recreational use across the Forest. This coupled with restrictions on motor vehicle use from creation of non-motorized Management Areas will lead to an increase in primitive and semi-primitive camping where proper restroom facilities are lacking. This can lead to high levels of water borne parasites and spread of disease. This issue was not disclosed or adequately analyzed in the EIS, violating NEPA and the Clean Water Act.
- The Forest Service acknowledges that dispersed campsites should be located away from streams and sensitive areas but fails to develop any additional management direction or guidelines for monitoring camping use levels or adaptive management actions to implement protective measures when monitoring thresholds are exceeded, violating NEPA. (#0005, pp. 10-11).

Response: Forest Service planning regulations at 36 CFR 219.21(d)(1982) state that "In formulation and analysis of alternatives … interactions among recreation opportunities and other multiple uses shall be examined. This examination shall consider the impacts of the proposed recreation activities on other uses and values and the impacts of other uses and activities associated with them on recreation opportunities, activities, and quality of experience."

The Forest Service NEPA Handbook at 1909.15 Section 15 says:

> For each alternative considered in detail, analyze and document the environmental effects, including the effectiveness of the mitigation measures that would result from implementing each alternative, including the no-action alternative…. Consider the magnitude, duration, and significance of the changes…Consider the degree to which the proposed action affects public health or safety.
>
> Cumulative effects must be considered and analyzed without regard to land ownership boundaries or who proposes the actions. Consideration must be given to the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals, that may have a measurable and meaningful impact on particular resources.

The Forest Plan FEIS is programmatic in nature. As described in the *CEQ Memorandum on the Effective Use of Programmatic NEPA Reviews* (December 18, 2014, p. 31):

> The Programmatic EA or Programmatic EIS must provide sufficient detail to foster informed decision-making that reflects broad environmental consequences from a wide-ranging federal program. Site- or project-specific impacts need not be fully evaluated at the programmatic level when the decision to act on a site development or its equivalent is yet to be made. Alternatives need not consider every specific aspect of a proposal but rather should be detailed enough to make a reasoned choice between programmatic directions.

The FEIS (Vol. I, pp. 87 and 98) describes the general impacts of forest activities on water quality:

> In the action alternatives, there is guidance to locate dispersed campsites away from streams or sensitive areas, and facilities or developments could be provided for protection of the environment rather than for convenience of visitors. Alternative A does not contain this guidance and would allow campsites to be located in close proximity to the forests' waters. This concentrated unmanaged recreation use could cause damage to vegetation, soil compaction and erosion, and water pollution from human and animal waste, dishwashing, trash, and vehicle fluids.

In addition, forest plan components, including objectives, standards, and guidelines direct how the issue will be dealt with:

- Objectives for dispersed recreation: "Annually, rehabilitate, stabilize, revegetate, or relocate an average of five dispersed campsites to improve recreation opportunities and/or protect the environment" (Forest Plan, p. 72).
- Standards for dispersed recreation: "Dispersed campsites shall not be designated in areas with sensitive soils or within 50 feet of streams, wetlands, or riparian areas to prevent vegetation and bank damage, soil compaction, additional sediment, or soil and water contamination" (ibid).
- Guidelines for dispersed recreation: "In dispersed areas, the priority for facilities or minor developments should be access and protection of the environment, rather than the comfort or convenience of the visitors" (ibid).

The forest monitoring plan (Forest Plan, p. 142) includes monitoring questions and indicators to evaluate the forests movement toward desired water quality standards, including:

- How well are management activities contributing to desired conditions or maintaining watersheds in a healthy state and meeting Arizona water quality standards?
- Review a sample of soil-disturbing activities for compliance with BMPs by project; allotment operating instruction implementation; Section 18 reviews of allotment National Environmental Policy Act (NEPA); burn area emergency response (BAER) assessments; and Arizona Department of Environmental Quality water quality data.

The Forest Plan cannot control public conduct at dispersed campsites. When monitoring of sites, or reports of degradation of a dispersed site highlights a problem, then the Forest Plan guides how the issue can be corrected.

In conclusion, I have found that the FEIS adequately addressed the potential for human waste to impact water quality in the programmatic analysis of effects, in compliance with NEPA. I find that the Forest Plan components (desired conditions, objectives, standards and guidelines) address the issue regarding dispersed camping and minimize the potential for adverse impacts to water quality.

I find no violation of law, regulation, or policy.

Impacts of Smoke on Air Quality

Issue: The appellants contend the Forest Service violated NEPA and the Clean Air Act for failing to adequately analyze and disclose the adverse impacts to air quality from smoke generated from prescribed fire and wildfire as a management tool. The appellants contend:

- The Forest Service omits discussion of the magnitude of, and effects from smoke production in the EIS, violating NEPA and the Clean Air Act.
- The Forest Service addresses global warming in the revised Plan but failed to properly analyze the long-term adverse impacts due to the recent mega wildfires and the impact they will continue to have on the environment, public and private property, and human welfare, violating NEPA (#0005, pp. 9-10).

Response: Forest Service planning regulations at 36 CFR 219.27(12)(1982) require the agency to "Be consistent with maintaining air quality at a level that is adequate for the protection and use of National Forest System resources and that meets or exceeds applicable Federal, State and/or local standards or regulations."

The Forest Service NEPA Handbook at 1909.15 Section 15.1 directs that,

> Cumulative effects must be considered and analyzed without regard to land ownership boundaries or who proposes the actions. Consideration must be given to the incremental effects of the action when added to the past, present, and reasonably foreseeable related future actions of the Forest Service, as well as those of other agencies and individuals, that may have a measurable and meaningful impact on particular resources.

The Forest Plan FEIS is programmatic in nature (see previous issue response (pp. 8-9 of this document) quoting the *CEQ Memorandum on the Effective Use of Programmatic NEPA Reviews*).

The Forest Plan must follow other governing statutes with respect to land management. The Forest Service has the responsibility to protect the air from impacts of air pollutants produced within Forest Service boundaries and also work with states to protect air resources from degradation associated with impacts of air pollution emitted outside the Forest Service lands. The Clean Air Act specifies the agency's roles and responsibilities:

> It [The Clean Act] mandates that every state have a statewide implementation plan to regulate pollutants. Smoke is regulated with oversight and compliance by the State of Arizona. The Arizona State Implementation Plan, administered by the ADEQ, requires that Federal and State land management agencies submit annual registrations, prescribed fire burn plans, and prescribed burn requests in order to obtain authorization to burn. (FEIS, Vol. I, p. 225).

Since emissions are variable based on climatic and environmental conditions, an assumption made in the FEIS is: "Particulate emissions from prescribed fires would be modeled at the project level" (FEIS Vol. I, p. 216). Modeling utilizes climatic and

weather information to project the best time to conduct a prescribed burn to minimize adverse air quality impacts. Furthermore, the Fire Specialist Report, that informed the FEIS, states: "Although smoke production is an unavoidable part of prescribed fire, strategies to limit smoke are an important part of every prescribed fire plan. Projects would be designed in a way to lessen the impacts produced by smoke emissions. As mentioned above, all prescribed fire is accomplished in accordance with the State implementation Plan." (Page 24, Fire specialist report, 2012 (updated 2014)).

The FEIS analysis, "compares how each alternative may contribute smoke, by comparing the amount of wildland fire that is planned in each alternative and how each alternative varies in its emphasis of treatments near the wildland-urban interface" (FEIS Vol. I, p. 216). For each alternative, the programmatic effects analysis considers the potential for impacts to human welfare and public and private property through its effects analysis of smoke to forest visitors, local residents, and adjacent land ownerships. The FEIS compares the direct and indirect short term effects on air quality among alternatives:

> With its number of acres being treated with wildland fire, there is a higher probability that **alternative D** would have more short-term impacts to forest visitors and local residents. These impacts could include smoke, areas of blackened or charred vegetation, and possibly delay or deny forest access due to fire activity. **Alternative A** would have fewer acres proposed for wildland fire treatments and, therefore, would have fewer short-term impacts followed by **alternatives C and B**, respectively (FEIS Vol. I, p. 230).

In addition to considering direct and indirect effects, the FEIS also includes a discussion of cumulative impacts of prescribed fires on other lands within the same airshed that may affect the ability of the forests to use prescribed fire under all alternatives (FEIS, Vol. I, p. 59). The cumulative impacts from vegetation treatments and projects from adjacent land ownerships are also considered as they may affect air quality via dust from travel on roads or other activities including burning (FEIS Vol. I, pp. 231-232).

The appellants contend that the Forest Service failed to properly analyze the long-term, adverse impacts of recent mega fires as they contribute to climate change. The analysis looked at the effects of each alternative relative to climate change (global warming) and wildland fire. These effects are discussed in terms of vegetation management: "Fire frequency and severity may be exacerbated if temperatures increase, precipitation decreases, and overall drought conditions become more common. Seasonal timing of planned and unplanned wildland fires may be affected by climate change (e.g., if there are hotter drier seasons, fires may occur during times when areas would have usually been covered in snow). During the planning period, alternatives B and D followed by alternatives C and A would provide the most resiliency to climate change since they have the greatest amount of vegetation at desired condition" (FEIS Vol. I, p. 231).

In conclusion, the responsible official outlined the process for compliance under the Clean Air Act and noted that particulate emissions from prescribed fires would be modeled at the project level in order to limit prescribed burning to conditions where air quality impacts will be minimized. Smoke is regulated with oversight and compliance by the State of Arizona. The Arizona State Implementation Plan, administered by the

Arizona Department of Environmental Quality, requires that Federal and State land management agencies submit annual registrations, prescribed fire burn plans, and prescribed burn requests in order to obtain authorization to burn. The programmatic analysis of direct, indirect, and cumulative impacts of planned and unplanned wildland fire on air quality, as documented in the Air Quality Specialist Report, FEIS, and ROD adequately considers and describes the magnitude, extent and duration of effects from smoke production to air quality and its potential for indirect impacts to forest visitors, local residents, adjacent land ownerships, and climate change.

I find no violation of law, regulation, or policy.

National Forest Management Act (NFMA)

Management Direction and Lack of Standards and Guidelines for Riparian Habitat

Issue: The appellants contend the Forest Service violated NFMA by failing to provide adequate plan components for riparian ecosystems and failed to identify reasons for a change of management approach from the former Plan to the revised Plan. The appellants contend:

- The revised Plan acknowledges the generally degraded condition of riparian areas but contains no new management direction to remedy the situation or provide viability of species associated with riparian areas; the revised Plan repeals, deletes and weakens many standards and guidelines that governed management of riparian areas.
- The planning record contains no explanation why the Forest Service abandoned standards and guidelines from the former Plan.
- The Forest Service responses to similar comments on the DEIS are inadequate (#0008, pp. 4-8).

Response: The Forest Plan was revised pursuant to the 1982 planning regulations, as allowed by the transition wording of the current regulations, 36 CFR 219.17(b)(3). The 1982 rule, section 219.27, provides the minimum specific management requirements to be met in accomplishing goals and objectives for the National Forest System.

With respect to protection of riparian areas, the 1982 Planning Rule at 219.27(e) states,

> Special attention shall be given to land and vegetation for approximately 100 feet from the edges of all perennial streams, lakes, and other bodies of water. This area shall correspond to at least the recognizable area dominated by the riparian vegetation. No management practices causing detrimental changes in water temperature or chemical composition, blockages of water courses, or deposits of sediment shall be permitted within these areas which seriously and adversely affect water conditions or fish habitat. Topography, vegetation type, soil, climatic conditions, management objectives, and other factors shall be considered in determining what management practices may be performed within these areas or the constraints to be placed upon their performance.

Section 219.3 of the 1982 rule defines management direction, goal, and objective as:

> Management direction: A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them.
>
> Goal: A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed.
>
> Objective: A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals.

The 1982 Planning Rule does not dictate which specific plan component (desired conditions, objectives, standards, guidelines, and suitability) should address the management requirement. Section 219.11 lists Forest Plan content in only a general way. The Revised Forest Plan strengthens the consistency requirements for desired conditions, objectives, and guidelines in such a way that implementation of riparian requirements can still be assured.

The revised Forest Plan reframed many of the standards and guidelines from the 1987 Forest Plan as desired conditions or guidelines. The ROD states, "The revised Plan establishes a framework for future decision making by outlining a broad, interdisciplinary program for achieving the desired goals, objectives and future conditions of the Forests."

The Forest Plan specifies that "Desired Conditions set forth the desired social, economic, and ecological attributes of the Apache-Sitgreaves NF's". Specifically the revised Forest Plan on page 6 says:

> To be consistent with the desired conditions of the plan, a project or activity, when assessed at the appropriate spatial scale described in the plan (e.g., landscape scale), must be designed to meet one or more of the following conditions:
>
> - Maintain or make progress toward one or more of the desired conditions of a plan without adversely affecting progress toward, or maintenance of, other desired conditions; or
> - Be neutral with regard to progress toward plan desired conditions; or
> - Maintain or make progress toward one or more of the desired conditions over the long term, even if the project or activity would adversely affect progress toward or maintenance of one or more desired conditions in the short term; or
> - Maintain or make progress toward one or more of the desired conditions over the long term, even if the project or activity would adversely affect progress toward other desired conditions in a negligible way over the long term.
>
> The project documentation should explain how the project is consistent with desired conditions and describe any short term or negligible long term adverse effects the project may have concerning the maintenance or attainment of any desired condition.

The 1987 Forest Plan required management activities had to be consistent with the standards and guidelines. For the revised Forest Plan, the Regional Forester has made the decision, as illustrated in the excerpt from the Forest Plan above, to require all future projects or activities to be consistent with desired conditions.
The FEIS, Volume III, pp. 1077 – 1111, displays a table that shows the 1987 Plan Content (as amended) compared to the new Plan direction (including retained and modified direction) and a column showing the rationale for deleting or modifying the 1987 direction. The intent of this table is to clarify the changes between the 1987 Plan and the revised Forest Plan. The pages noted are specific to Air, Soil, Water, and Riparian.

Appellants point to degraded riparian conditions and that there are no new management standards and guidelines to remedy the situation. The FEIS on page 96 does state that **alternative A** (the 1987 Forest Plan) currently results in a trend away from desired conditions in riparian PNVTs. However, the other alternatives include objectives to treat riparian areas and move the trend toward the desired condition. The FEIS goes on to explain that the situation is not worsening because best management practices and other mitigation measures are being implemented:

> In **all alternatives**, environmental consequences within the foreseeable future to riparian areas and wetland ecosystems from management activities (timber harvesting/forest restoration) are expected to be minor. This is because project design incorporating BMPs, aquatic management zones, and wildlife habitat mitigation would be implemented; riparian areas and wetland ecosystems would be avoided; and new road construction related to timber harvesting is not expected to occur. Livestock grazing would continue into the foreseeable future throughout the planning area; continued impacts to riparian areas and wetland ecosystems may occur. Continued monitoring and adaptive management applied to livestock grazing would aid in minimizing impacts to riparian areas and wetlands.

The Record of Decision explains on page 22:

> Alternative B (the selected alternative) is expected to result in a positive trend for riparian areas, based on the overall focus on ecosystem restoration and resiliency, in addition to specific objectives to treat riparian areas and remove motorized routes that impact riparian condition.

Appellants allege that the selected alternative has removed some standards and guidelines that were in the previous plan and necessary to assure riparian area protections. However, the plan on pages 33 through 36 contain several new, enforceable desired condition statements for riparian areas at the landscape scale, mid-scale, and fine-scale.

In addition to the desired condition statements, the Forest Plan provides numerous measurable objectives designed to improve riparian habitats, directly or indirectly with the goal of moving toward the desired condition. For example:

Objectives for Soil ((Forest Plan, page 21) :

> Annually, enhance or restore an average of 350 acres within priority 6th level HUC watersheds, including treating the causes of State and federally designated impaired or threatened waters to improve watershed condition and water quality

Objectives for Aquatic Habitat and Species (Forest Plan, page 26):

> Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species.
>
> During the planning period, complete at least five projects (e.g., remove barriers, restore dewatered stream segments, or connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species.

Objectives for Riparian Areas (Forest Plan, page 35):

> Annually, move 200 to 500 acres toward desired composition, structure, and function of streams, floodplains, and riparian vegetation.
>
> Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest System roads or trails that add sediment to streams, damage riparian vegetation, erode stream banks, cause gullies, and/or compact floodplain soils.
>
> Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode stream banks, cause gullies, and/or compact floodplain soils.
>
> Within the planning period, enhance or restore 5 to 25 wet meadows, springs, seeps, or cienegas to proper hydrologic function and native plant and animal species composition.
>
> Annually, work with partners to reduce animal damage to native willows and other riparian species on an average of 5 miles of riparian habitat.

Because there is clear direction in the Plan, which projects must be consistent with, and because the record shows that riparian conditions will be protected through desired conditions, best management practices and other mitigation measures, I find that the Forest Plan adequately meets the management requirements of the 1982 planning rule.

I find no violation of law, regulation, or policy.

Designation of Land Use Restrictions

Issue: The appellants contend the Forest Service violated NFMA by failing to properly identify the purpose of and need for designating certain Management Areas for special emphasis, the laws or regulations that provide for this change in management direction, and for failing to provide an adequate opportunity for public input. The appellants contend:

- The Forest Service arbitrarily designates ‘Wildlife Quiet Areas’ as a means to provide wildlife an area where they will not be disturbed. This designation is not

consistent with any other Forest in the region and is not a requirement of a law, regulation, or Forest Service policy.

- The creation of the 'Wildlife Quiet Areas' and Natural Landscapes' management areas will restrict public use and access and in doing so, discriminates against the disabled and elderly and creates a pseudo wilderness. This is in violation of the procedures and processes of The Wilderness Act and is an incorrect application of the 2001 Roadless Conservation Rule. (#0005, pp. 5-6)

Response: The National Forest Management Act (NFMA) requires Forest Plans to address certain management requirements while providing for multiple uses, including wildlife (16 U.S.C. 1604(e)(1)). The 1982 planning rule states "plans shall provide for multiple use and sustained yield of goods and services from the National Forest System in a way that maximizes long term net public benefits in an environmental sound manner." (36 C.F.R. 219.1(a)). The 1982 planning rule also states "Plans guide all natural resource management activities and establish management standards and guidelines for the National Forest System. They determine resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management…" (36 CFR 219.1(b)).

As stated in the FEIS, the Forest established wildlife quiet areas in coordination with the AZGFD to provide security for big game and other wildlife. The FEIS on page 332 explains that these areas "provide beneficial environmental consequences of longevity and continuity of wildlife use." The Forest Plan on page 119 further explains that these areas "provide relatively undisturbed habitat where big game and other wildlife could reside without disturbance from motorized vehicle use." There is no prohibition on the creation of special management areas or a requirement that all forest plans have similar management areas.

As stated in FSH 7709.55, Chapter 10, section 11.2 (travel planning), land management plans are strategic documents. Approval of a plan should not include a final decision on designating roads, trails or areas for motor vehicle use or otherwise restrict those uses; plans provide information and guidance for travel management decisions.

In addition to analyzing forestwide desired conditions, the FEIS Purpose and Need, page 6, also addresses recreation related activities, including the suitability for motorized vehicle use, "There is a need to update the spectrum of recreation opportunities to reflect current and projected recreation needs, natural resource impacts, and public input. This includes identification of areas that are developed for high use and areas that resemble more natural landscapes. There is also a need to identify the suitability of areas for motorized vehicle use and other recreational activities."

Wildlife Quiet Areas and Natural Landscape Areas are not "pseudo wilderness," as appellants allege. The Wilderness Act of 1964 Section 2(a) provides that "no Federal lands shall be designated as 'wilderness areas' except as provided for in this Act or by a subsequent Act." The forest is not designating any wilderness areas through its planning process, that authority is reserved for Congress. Wildlife Quiet Areas were identified in

the 1980s by the Forest and AZGFD to provide relatively undisturbed habitat where big game and other wildlife could be mostly free of disturbance from motorized vehicle use. Natural Landscape Areas are generally undeveloped and include most of the inventoried roadless areas (IRA) that were identified in the 2001 Roadless Area Conservation Rule. IRAs are managed to protect and conserve their roadless character. Motorized use is not banned in Natural Landscape Areas. While motorized vehicle uses will be limited, other activities such as temporary roads and mechanical transport are allowed in wildlife quiet areas and natural landscape areas (Forest Plan, pp 138, 140). The Responsible Official has authority and discretion under NFMA and the 1982 Planning Rule to manage non-wilderness areas for non-motorized use for a variety of reasons, including wildlife and recreational purposes.

The designation and related motorized restrictions of Wildlife Quiet Areas comply with Section 504 of the Rehabilitation Act of 1973 as amended (29 U.S.C Section 794). Restrictions apply to all visitors, and do not discriminate against those visitors with disabilities. The forest continues to offer a variety of motorized and non-motorized opportunities across the forest.

In conclusion, the establishment of desired conditions, objectives, standards, and guidelines for Management Areas as part of the forest planning process is appropriate and provides a broad framework intended to provide guidance only to future transportation system decisions. The record shows there is a reasonable basis for the establishment of Wildlife Quiet Areas and Natural Landscapes. The designation of these management areas was not arbitrary and capricious, is consistent with the Wilderness Act, and Section 504 of the Rehabilitation Act of 1973, as amended. The ROD states that no changes to the existing transportation system will be implemented or enforced as a result of this Forest Plan decision; any future site-specific travel management decisions that allow or prohibit motor vehicle use will be determined through implementation of the Travel Management Rule (36 CFR 212) procedures and its associated NEPA analysis, including public involvement.

I find no violation of law, regulation, or policy.

Designation of an "Energy Corridor" for Blue, Arizona

Issue: The appellant contends that the Forest Service inappropriately omits the 'Energy Corridor' for the Blue, Arizona community where this designation is important for energy operations and reduced hazards.

Response: The 1982 Forest Planning regulations require consideration of utility corridors as part of Forest Plan development (36 CFR 219.9(a)(5)(iv)-1982). FSM 1926.15-19 require designation and incorporation of energy corridors into Forest Plans for the high voltage electric lines that were identified in the *2009 Westwide Energy Corridor EIS* in accordance with the Energy Policy Act of 2005.

The Forest considered an alternative that established designated energy corridors for all existing transmission facilities and expansion of existing high voltage corridors, but

dismissed this suggestion from further consideration, as described in FEIS, Vol. I, page 19.

The Forest Plan explains in the description of the Energy Corridor Management Area (Forest Plan, Vol. I, page 116):

> The Energy Corridor Management Area includes the three existing high voltage energy corridors located on the Apache-Sitgreaves National Forests. Two corridors traverse the Sitgreaves NF: one containing 500 kV transmission lines and one containing 345 kV transmission lines. These are operated by Arizona Public Service and the Salt River Project. Local distribution and low voltage transmission lines (up to 230 kV) are not included in this management area but are part of the management area in which they are physically located.

This Energy Corridor Management Area is intended to ensure the integrity of high voltage electric lines (345 kV or greater). Low voltage transmission lines and local distribution lines, such as those that serve the community of Blue, Arizona are not included in this Management Area, as stated above, but any low voltage distribution lines that currently exist would be managed in accordance with the Management Area they are located within and their approved energy corridor management plans (FEIS, Vol. I, page 420-4222), or through subsequent project planning.

The corridor area, as shown on the map submitted by the appellant, appears to be within the Blue Range Primitive Area. This area is managed as a Primitive Area until Congress acts on the 1971 Wilderness recommendation, and all projects would need to be consistent with this direction (Forest Plan, pages 128-130). This area was determined not suitable for new energy corridors or other energy development (Forest Plan, page 135).

The appellant cites the Healthy Forest Restoration Act (HFRA) as an overriding consideration, but HFRA was intended for the high risk communities-at-risk as identified in the Federal Register. Blue, Arizona is not on that list.

I find no violations of law, regulation, or policy.

Failure to Recognize the Blue River/Greenlee County Wildland Urban Interface (WUI) Management Area

Issue: The appellant contends the Forest Service violated the Blue River and Greenlee County Community Wildfire Protection Plans (enabled and created under the HFRA and signed onto by the ASNF) by failing to recognize the Blue River/Greenlee County WUI Management Areas in the revised Forest Plan. These WUIs for Greenlee County are absent from both the text and the maps in the final Plan. The appellant contends:

- The Forest Service's Management Area map inappropriately displays the 'Natural Landscapes' management area in the established Blue River WUI area and does not acknowledge the Blue River WUI at all (#0009, pp. 2-3).

Response: The Natural Landscape Management Area in question is primarily comprised of IRAs subject to the provisions of the 2001 Roadless Rule. As explained in the FEIS (Col. II, p. 660):

> The Natural Landscape Management Area reflects, in most cases, the presence of Inventoried Roadless Areas (IRAs). A large portion of NFS land in Greenlee County is in IRAs. This is why much of the land in Greenlee County falls within the Natural Landscape Management Area, where other counties have more land in General Forest Management Area.
>
> The 2001 Roadless Area Conservation Rule provides protection and management direction for the areas identified in a set of inventoried roadless area maps contained in Forest Service Roadless Area Conservation, Final Environmental Impact Statement,Volume II, dated November 2000. Management activities within the Natural Landscape Management Area may include restoration of ecological conditions or habitat components, soil stabilization, planned and unplanned ignitions, hazardous fuels reduction, and invasive species reduction.

The Forest Service responded to a comment regarding the reasoning behind why certain Community Wildfire Protection Plan Wildland Urban Interface (CWPP-WUI) areas were included in the EIS and others weren't (FEIS, Vol. II, pp. 659-660). The Community Forest Intermix Management Area consists of National Forest System (NFS) lands within one-half mile of communities-at-risk. The 12 communities-at-risk listed in the EIS are those identified as "Urban Wildland Interface Communities within the Vicinity of Federal Lands That Are at High Risk from Wildfire" as listed in the Federal Register (66 FR 751-777). The communities are referenced under the heading "National Fire Policy and Wildland-Urban Interface" within the "Fire" section (FEIS, Vol. I, p. 217). None of these communities are located within Greenlee County.

The Natural Landscape Management Area reflects, in most cases, the presence of Inventoried Roadless Areas (IRAs). A large portion of NFS land in Greenlee County is in IRAs. This is why much of the land in Greenlee County falls within the Natural Landscape Management Area, where other counties have more land in General Forest Management Area.

> The 2001 Roadless Area Conservation Rule provides protection and management direction for the areas identified in a set of inventoried roadless area maps contained in Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Vol. 2, dated November 2000. Management activities within the Natural Landscape Management Area may include restoration of ecological conditions or habitat components, soil stabilization, planned and unplanned ignitions, hazardous fuels reduction, and invasive species reduction.

The Plan documents the need for addressing communities at risk from uncharacteristic wildfire (Forest Plan, p. 4). The Forest Plan provides forest-wide direction for this in Community-Forest Interaction (Forest Plan, p. 86) and Management Approaches for all PNVTs, specifically mentioning community wildfire protection plans (Forest Plan, p. 31). CWPPs are also defined in the Forest Plan glossary where the Greenlee County CWPP is specifically mentioned, among others (Forest Plan, p. 151). The Wildland Fire

Management section of the Forest Plan (pp. 105-109) provides forest-wide direction and management approaches for fire, emphasizing protection of human life, property and resources. Appendix E, Proposed and Possible Management Actions, states "Prioritize vegetation treatments in focus watersheds and areas identified as CWPPs, including regular treatments to maintain desired conditions in the Community-Forest Intermix Management Area." (Forest Plan, p. 292).

The description of the Community-Forest Intermix Management Area acknowledges that this area "makes up a portion of the wildland-urban interface (WUI). The WUIs were identified in community wildfire protection plans and may be located in several management areas. A WUI includes areas around human development at imminent risk from wildfire." (Forest Plan, p. 112). The Forest Plan acknowledges that not all WUIs are in this particular management area, and may be located in several management areas.

While the 1982 planning regulations require coordination with other agency, state and local governments and Indian tribes (36 CFR 219.1(b)(9) and a review of local area plans (36 CFR 219.7(b)), the record shows consideration of CWPPs during development of the Forest Plan.
In conclusion, while the Blue River/Greenlee County WUI is not displayed on any maps, WUIs and CWPPs are acknowledged in several places throughout the Plan. The record clearly shows consideration of the importance of WUI and existing CWPPs and their emphasis in both forest-wide and management-area specific management direction. While this particular Blue River/Greenlee County WUI is located in the Natural Landscapes Management Area, management direction for this area provides for restoration of ecological conditions or habitat components, soil stabilization, planned and unplanned ignitions, and hazardous fuels reduction, among other activities.

I find no violation of law, regulation, or policy.

Management Direction and Selection of Management Indicator Species

Issue: The appellants contend the Forest Service violated NFMA in its selection of Management Indicator Species (MIS) for failing to capture the range of PNVTs that host threatened and endangered species whose viability is of planning concern and failing to identify reasons for the change of management approach from the 1987 Forest Plan to the revised Forest Plan. The appellants contend:

- The revised Forest Plan significantly changed course from the 1987 Forest Plan. The 1987 Forest Plan designated 17 MIS, representing the range of habitats found on the Apache-Sitgreaves National Forests; the revised Forest Plan identifies only three (Mexican spotted owl, northern goshawk and pronghorn antelope) which do not adequately capture all PNVTs across the Forests, violating NFMA and the APA.
- The revised Forest Plan does not designate any MIS for riparian habitat, even though the Forest Service acknowledges several declining aquatic species that

depend on riparian habitat and limited distribution of riparian habitats, in violation of NEPA, NFMA and the APA.

- The revised Forest Plan does not designate any MIS for snag habitat, even though the Forest Service acknowledges the importance of snag habitat for cavity nesting species; the revised Forest Plan does not provide for the viability of snag-dependent species, in violation of NEPA, NFMA and the APA. (#0008, pp. 25-28)

Response: The agency is required to maintain species diversity and does so using a combination of management tools including laws, the agency's planning rule, and agency manual direction. In accordance with NFMA, "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area." MIS serve as a barometer for species viability at the Forest level. The planning regulations at 36 CFR 219.19 (a)(1) state: "In order to estimate the effects of each alternative on fish and wildlife populations, certain vertebrate and/or invertebrate species present in the area shall be identified and selected as management indicator species and the reasons for their selection will be stated. These species shall be selected because their population changes are believed to indicate the effects of management activities." Forest Service Manual section 2621.1(3) provides additional direction on selection of MIS including the optional selection of Ecological Indicators (EI).

The "*Report on the Selection of Management Indicator Species and Ecological Indicators for Forest Plan Revision Apache-Sitgreaves National Forests*" describes which habitats on the forest have significantly departed from historical conditions and where future management emphasis will occur. MIS were selected to track effects of activities in these habitats. This does not mean effects are not occurring elsewhere in the Forest that require monitoring, but instead reflects available resources are being directed where the majority of the management activities would likely take place. The MIS and EI that were chosen cover approximately 60 percent of the Forests. The lack of MIS for some ecosystems means that estimating effects of each alternative on fish and wildlife populations must be derived another way.

According to the "*Report on the Selection of Management Indicator Species and Ecological Indicators for Forest Plan Revision Apache-Sitgreaves National Forests*", prior to 2011, many species were listed as possible MIS and several plant communities or habitats were possible EI. The list included the 17 MIS identified by the 1987 Forest Plan. This initial list of potential indicators was reduced to a list of 4 potential MIS and 4 potential EIs in early 2012. The list was evaluated based on expected alternative outcomes related to the need to maintain species diversity, viability, and habitat across the planning unit, consideration of monitoring cost, practicality, and monitoring efficiencies. Appendix A of the above referenced report, provided the rationale used to narrow down the original list. The Forest focused management emphasis on ecosystems that have departed significantly from their pre-settlement conditions, and selected MIS and EI for high priority ecosystems where future management actions are anticipated. This list was further refined to a list of three MIS and two EIs. The rationale is provided

on page 7 of the above referenced report. The table below shows the final selection of indicators for the revised Forest Plan:

Indicator	Indicator Type	Alternative plan revision management/activity PNVT
Mexican spotted owl	MIS	dry mixed conifer forest PNVT wet mixed conifer forest PNVT
Northern goshawk	MIS	ponderosa pine forest PNVT
Pronghorn	MIS	Great Basin grassland PNVT montane-subalpine grassland PNVT
Aspen	EI	Within all forest PNVTs (ponderosa pine, dry mixed conifer, wet mixed conifer, and spruce-fir)
Riparian	EI	Cottonwood-willow riparian forest PNVT Montane willow riparian forest PNVT

There is no requirement that 100 percent of the Forest be monitored, but there is a requirement to maintain viable populations in the planning area. The collection and analysis of habitat monitoring information informs the viability requirement to monitor the condition and trend of ecosystems impacted by ephemeral human activities and Forest management actions.

The Forest Plan Monitoring Strategy identifies two relevant monitoring questions and monitoring method (Forest Plan, Table 12, p.143). The first is "What is the effect of management upon habitat and population trends of management indicator species (Mexican spotted owl, northern goshawk, pronghorn antelope) across the forests?" The associated monitoring method is annually "conduct project and non-project area monitoring of Mexican spotted owl protected activity centers and northern goshawk post-fledging areas in accordance to species' specific protocols," annually "obtain AZGFD monitoring data on pronghorn antelope populations," and every 5 years "interdisciplinary team review the annual aspen/riparian ecological indicator species monitoring reports to determine trend."

The second relevant monitoring question is, "What is the effect of management upon habitat trends of ecological indicators (aspen, riparian) across the forests?" The associated monitoring method is annually "conduct aspen/riparian monitoring in accordance with species' specific protocols in both treated and untreated areas and in burned (within large wildfire burns) and unburned areas" and every 5 years "Interdisciplinary team review the annual aspen/riparian ecological indicator species monitoring reports to determine trend."

Though the Forest is calling the riparian monitoring an Ecological Indicator, and not Management Indicator Species, it considers riparian areas of importance yet a

management challenge. The "*Report on the Selection of Management Indicator Species and Ecological Indicators for Forest Plan Revision Apache-Sitgreaves National Forests*" describes that the complexity of riparian management "makes it difficult to select a single riparian MIS, especially a fish or wildlife species […however] riparian communities have a narrow range of ecological tolerance and they readily respond to management so they can provide effective ecological indicators." Cottonwoods and Willows were chosen as EIs for riparian habitat.

Snags and snag management are a component of other habitat types, and the MIS of the forested PNVTs can use snags as part of their overall habitat requirements. In the revised Forest Plan, forestwide "Desired Conditions for All PNVTs" (Forest Plan, p. 29) include, "Old or large trees, multistoried canopies, large course woody debris and snags provide the structure, function and associated vegetation composition as appropriate for each forested and woodland PNVT." All forested and woodland PNVTs have some snag management component (Forest Plan, pp. 27-56). There are guidelines for management of snags in all PNVTs "Trees, snags, and logs immediately adjacent to active red squirrel cone caches, Abert's squirrel nests, and raptor nests should be retained to maintain needed habitat components and provide tree groupings" (Forest Plan, p. 39).

The planning regulations at 36 CFR 219.19(a)(1) do not require the agency to provide species-specific rationale for why individual species were not selected as MIS, but rather suggest that a set of "categories shall be represented where appropriate." In addition, the Forest is under no obligation to carry forward the previous set of MIS. They only need to evaluate management effects on fish and wildlife in the planning area and, if management actions are occurring in each of the ecosystems, monitor MIS to assess the effects of the actions. Management direction is included in all forested PNVTs in the form of desired conditions and guidelines to provide for snags.

I find no violation of law, regulation or policy.

Management Direction and Population Viability (Northern Goshawk and Mexican Spotted Owl)

Issue: The appellants contend the Forest Service violated NFMA for failing to ensure viability and recovery of threatened Mexican spotted owl, sensitive northern goshawk and 14 vertebrate prey species. In addition they contend the Forest Service failed to identify reasons for change of its management approach from the 1987 Forest Plan to the revised Forest Plan. The appellants contend:

- Plans must define reasons for management practices chosen and ensure fish and wildlife habitat is managed to maintain viable populations (one which has estimated numbers and distribution of reproductive individuals to insure continued existence and distribution in the planning area, according to the 1982 Planning Rule).
- The planning record contains no explanation why the Forest Service repealed standards and guidelines from the former Plan affecting management of wildlife habitat and populations.

- The "Guidelines for Wildlife and Rare Plants" in the revised Forest Plan do not ensure compliance with NFMA to ensure Mexican spotted owl viability or ESA requirements to avoid jeopardy; the conclusion reached that the revised Forest Plan will ensure Mexican spotted owl viability is arbitrary and capricious, in violation of the APA.
- The 1996 northern goshawk forest plan amendment was based on scientific recommendations and was adopted to ensure species viability. The revised Forest Plan does not address any of the scientific analysis or management recommendations relevant to northern goshawk or prey species (including the red squirrel and other prey species that prefer closed forest habitat) that were a part of the 1996 amendment.
- The FEIS ignores the best available science in its assessment of viability for northern goshawk and its prey and makes arbitrary conclusions, in violation of the NEPA and APA.
- The lack of binding management standards affecting project-level effects to goshawk habitat fails to ensure viability, violating NFMA and APA. (#0008, pp. 17-25)

Response: The FEIS, FEIS Appendices, and several additional documents clarify the role of standards and guidelines in the Forest Plan and provide rationale for why much of the previous management direction has been shifted from standards and guidelines into a combination of desired conditions and guidelines. The shift in focus to desired conditions reflects a goal of consistency and common vision among the Arizona National Forests, not a relaxation of the controls previously found in forest plan standards and guidelines (please refer to response above concerning Standards and Guidelines and riparian areas, p. 19-21 of this document).

The FEIS, Volume III, page 1073, provides a crosswalk for key standards and guidelines from the original Plan (as amended) compared to the revised Plan and the rationale for carrying forward, revising, or dropping specific direction from the 1987 Forest Plan:

> The revised plan is strategic in nature, so many of the standards and guidelines in the current plan were reframed as desired conditions or guidelines in the revised plan. In other instances, existing plan guidance was modified or removed because it reiterated other law, regulation, or policy.

The project record includes the document, *Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Scientific Basis, Updated August 2013,* which outlines the approach to developing Mexican spotted owl (MSO) and northern goshawk (NOGO) guidance for the plan revisions. This document was a result of a deliberate process to assure that the five Arizona National Forests (the Apache-Sitgreaves, Kaibab, Coconino, Prescott and Tonto) would be consistent the forest plans were revised. In 2008, the Regional Forester chartered a team to develop regional guidance necessary to achieve consistency with respect to habitats of MSO, NOGO and old-growth forests. The team concluded that the best way to achieve consistent direction for forest plans was to develop desired conditions for the relevant set of forest vegetation types. The desired conditions developed by the team of scientists and managers

established a vision for restoration of species composition, forest structure, and ecological function to address long-term sustainability of forested ecosystems, including the habitats for native and desired species. The desired conditions were based on the best available science in wildlife ecology, forest ecology, and restoration principles. The National Forests in the Southwestern Region used the desired conditions as a basis for collaborating with interested stakeholders while revising forest plans. Local adaptation of desired conditions by individual forests was expected. The *Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Scientific Basis, Updated August 2013*, (pp. 2-3) states:

> Forest Service emphasis on desired conditions has increased since the first Forest Plans were published in the 1980s. The first Plans emphasized specific activities and restrictions more than identifying the desired ecological, social, and economic conditions. The current revision of forest plans emphasizes ecological, social, and economic conditions and provides a clearer vision of what is to be achieved on the landscape over time.

Appendix G of the FEIS, describes how the plan included "fine filter" and "coarse filter" plan decisions:

> As part of the plan revision process, coarse filter plan decisions (i.e., desired condition statements) were developed that describe the desired outcomes and conditions for vegetation, riparian, and aquatic features, and other resources within the planning area. These desired conditions provide habitat for wildlife which helps to reduce risks to species and provides for their viability. Where desired conditions would result in low to moderate risk ratings for some species, meeting and maintaining those desired conditions would provide for their population viability. This is because low to moderate ratings of risk are assumed to be similar enough to normal ecosystem fluctuations and therefore within a species' ability to adjust, thus posing little risk to viability. Where the risk rating would be moderately-high, high, or very high, additional fine filter plan components (e.g., standards, guidelines) were developed to address or mitigate risk. However, the coarse-fine filter approach is not entirely discrete in that standards and guidelines can contribute to viability for some coarse filter species; while the needs of fine filter species can also be provided for, in part, by coarse filter desired conditions and PNVTs. (FEIS, Vol. II, p.877)

The crosswalk in Table 210 (FEIS, Vol. II, pp. 878-895), lists the fine filter plan components that reduce risks to species and provide for viability. Other plan decisions (objectives, special areas, suitability, and monitoring) and management area allocations also contribute to species viability and are discussed in the "Wildlife and Rare Plants" and "Fisheries" sections of chapter 3 of the FEIS.

Many places in existing law, regulation and policy clarify the Forest Service's role in providing for habitat to maintain viable populations and using scientific information to support analyses.

The 1982 Planning Rule, 36 CFR 219.19 describes that:

> Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.
> (a) Each alternative shall establish objectives for the maintenance and improvement of habitat for management indicator species selected under paragraph (g)(1) of this section, to the degree consistent with overall multiple use objectives of the alternative.

The minimum management requirements, specified in 36 CFR 219.27, to accomplish goals and objective for the National Forest System:

> Provide for adequate fish and wildlife habitat to maintain viable populations of existing native vertebrate species and provide that habitat for species chosen under Sec 219.19 is maintained and improved to the degree consistent with multiple-use objectives established in the plan. (36 CFR 219.27(a)(6))

The Forest Service Manual (FSM) provides policy to manage threatened, endangered, and sensitive species (FSM 2670.3) and establishes planning objectives for federally listed species and Forest Service sensitive species (FSM2672.3). In addition, Departmental Regulation 9500-4 directs the Forest Service to avoid actions "which may cause a species to become threatened or endangered." FSM 2670.22 states that objectives for sensitive species include the following:

1. Develop and implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions.
2. Maintain viable populations of all native and desired nonnative wildlife, fish, and plant species in habitats distributed throughout their geographic range on National Forest System lands.
3. Develop and implement management objectives for populations and/or habitat of sensitive species.

The 1996 Southwestern Region FSM Supplement No. 2600-96-1, FSM 2676.3, moves specific direction regarding management of NOGO from regional supplementation to forest plans. It states: "Forest plan direction still follows the 1992 published Goshawk Scientific Committee Recommendations (*General Technical Report, RM-217* (GTR-RM-217))."

GTR-RM-217 was developed by a team of experts and outlined habitat recommendations to be incorporated into Forest Plans as standards and guidelines. The 1987 Forest Plan incorporated the expert team's NOGO habitat management recommendations. This was to ensure population viability by preventing the degradation or destruction of important habitat elements of prey in the NOGO food web and the NOGO itself. This report remains an example of best available science for approaches to maintain NOGO viability. The crosswalk for key standards and guidelines from the 1987 Forest Plan compared to

the revised Forest Plan (FEIS, Vol. III, p. 1154) states that the "revised plan's DCs [desired conditions] and GDs [guidelines] are consistent with GTR-RM-217 and provide for healthy and sustainable NOGO habitat at multiple scales."

The appellant contends a violation of NEPA and NFMA for failing to use the best available science in the assessment of viability for NOGO and its prey. NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. In addition, NEPA documents must concentrate on the issues that are significant to the action in question, rather than amassing needless detail (40 CFR 1500.1(b) and 40 CFR 1502.24)).

The 1982 Planning Rule, section 219.12(d) describes that the "Supervisor will assure that the interdisciplinary team has access to the best available data [appropriate for planning and managing the resources under his or her administrative jurisdiction]."

Viability of Northern Goshawk

The Forest Plan, the FEIS and its Appendices (specifically Appendix I), *Wildlife Specialist report - Viability, Biological Evaluation*, the *FINAL Report on the Selection of Management Indicator Species and Ecological Indicators for Forest Plan Revision Apache-Sitgreaves National Forests*, and other specialist reports describe the plan components that contribute to species viability requirements. These documents describe the analysis approach and results for assessing viability at the plan level, as well as the monitoring approach to assure species viability is met.

The Forest Plan identifies "Elements Common to All Alternatives" (FEIS, Vol. I, p. 23). All alternatives were designed to address species viability using the following elements:

- Provide for and maintain diversity of plant and animal communities to meet overall multiple-use objectives;
- Provide for species' viability by providing appropriate habitat that is well distributed across the planning area;
- Include measures for preventing the destruction or adverse modification of critical habitat for threatened and endangered species;
- Use a common list of management indicator species (MIS);

Species viability assumptions are listed in the FEIS, Volume I, pages 236-237. These include:

> Habitat abundance and distribution similar to that which supported associated species during conditions as a consequence of evolutionary time, will likely contribute to their maintenance in the future (Haufler, 1999). Therefore, habitat abundance and distribution similar to reference condition will likely contribute to associated species maintenance in the future.

In the analysis and Forest Plan, desired vegetation conditions are modified from reference conditions to accommodate the sensitive NOGO and the threatened MSO, both species utilize some habitat conditions that were not common historically (FEIS, Vol. I, p. 144):

> In most cases, desired conditions and reference conditions are the same. However, they are not for 5 of the 14 PNVTs. In ponderosa pine and dry mixed conifer forests the desired conditions reflect contemporary landscape vegetation structural states important to northern goshawks and Mexican spotted owls.

The desired conditions for the ponderosa pine PNVT includes some current vegetation states now utilized by NOGO, (i.e., large-very large trees with closed canopies were not common historically). The desired conditions for dry mixed conifer includes some current vegetation states now utilized by MSO, (i.e., large-very large trees with closed canopies and multi-storied that were not common historically).

The species viability assumptions (FEIS, Vol. I, p. 237) also include the following important component:

> The evaluation of environmental consequences to species viability is framed as a risk assessment in terms of alternative viability effectiveness. However, there is a level of uncertainty about the projected effects of forest management and activities on species viability because of gaps in knowledge about the complex interaction between species and their habitats (Holthausen, 2002). Because of this uncertainty and impacts outside of Forest Service control, monitoring, as identified in chapter 5 of the proposed plan, will take place, thereby facilitating adaptive management and changes, as needed, to support ongoing species viability.

Additional information concerning the analysis of species viability is displayed in, "Table 66. PNVTs (course filter) and habitat elements (fine filter) of importance to species viability, showing associated forest planning species". (FEIS, Vol. I, pp. 238-240). The NOGO is a sensitive species, and it was also chosen by the Forest as a MIS (FEIS, Vol. I, pp. 260-262):

> [s]o that the effects of each alternative on wildlife populations can be estimated. The ponderosa pine, dry mixed conifer, and wet mixed conifer are forested PNVTs where substantial restoration efforts would take place to move habitat toward desired conditions (up to 55,000 acres per year). MIS selected for these two PNVTs are the northern goshawk and Mexican spotted owl, respectively.

In addressing goshawk as a MIS, the FEIS, Volume I, page 261 states:

> Population figures for NOGO on the planning unit are not available. Because NOGO post-fledging areas (PFAs) represent breeding or potentially breeding pairs, nest area habitat within PFAs is used as a measure of the population of this MIS. There are 103 NOGO PFAs encompassing 67,466 acres of which approximately 18,540 acres are considered suitable nesting habitat based on nest stands. The 2011 Wallow Fire affected 30 of these PFAs. Approximately half of the acreage in these 30 PFAs had 100 percent canopy loss so that population trend on the forests is now considered downward. Monitoring of PFAs occurred during the 2012 field season to assess the fire's impact to northern goshawks over time and is ongoing.

Chapter 5 is the monitoring strategy for the Forest Plan. The strategy is used to evaluate, document, and report how the Forest Plan is applied, how well it works, and if its purpose and direction remain appropriate. Each monitoring element presents a monitoring question, a monitoring method and a frequency of measurement. The monitoring element for NOGO asks: "What is the effect of management upon habitat and population trends of management indicator species (Mexican spotted owl, northern goshawk, pronghorn antelope) across the forests?" To help answer that question, project and non-project area monitoring of MSO protected activity centers and NOGO post-fledging areas is conducted annually in accordance to species' specific protocols.

For each alternative the affected environment and the environmental consequences were analyzed. Table 80 (FEIS, Vol. I, pp. 274-278) provides the expected viability risk rating outcomes for each species-habitat relationship by alternative at 15 years. This table shows that under all action alternatives, the risk to NOGO viability is considered low. Risk to viability of the red squirrel (a prey species found in denser habitats) is also considered low.

Effects to the NOGO from implementation of each proposed alternative for the Forest Plan are further disclosed under the MIS section (FEIS, Vol I, pp. 323-326). This section notes that all action alternatives "provide desired conditions, standards, or guidelines favorable for the northern goshawk and its habitat." Key examples include the following:

- Desired Condition: Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest.
- Desired Condition: Northern goshawk nest areas have forest conditions that are multi-aged and dominated by large trees with relatively denser canopies than the surrounding forest.
- Guideline: A minimum of six nest areas (known and replacement) should be located per northern goshawk territory. Northern goshawk nest and replacement nest areas should be located around active nests, in drainages, at the base of slopes, and on northerly (NW to NE) aspects. Nest areas should be 25 to 30 acres each in size.
- Guideline: Northern goshawk post-fledging family areas (PFAs) of approximately 420 acres in size should be designated around the nest sites.
- Guideline: Active raptor nests should be protected from treatments and disturbance during the nesting season to provide for successful reproduction. Specifically for northern goshawk nest areas, human presence should be minimized during nesting season of March 1 through September 30.
- Desired Condition: Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth forests.
- Desired Condition: Herbaceous vegetation amount and structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species.

- Guideline: Restoration methods, such as thinning or prescribed fire, should leave a mosaic of untreated areas within the larger treated project area to allow recolonization of treated areas by plants, small mammals, and insects (e.g., long-tailed voles, fritillary butterflies).
- Guideline: Trees, snags, and logs immediately adjacent to active red squirrel cone caches, Albert's squirrel nests, and raptor nests should be retained to maintain needed habitat components and provide tree groupings.

The summary of effects in this section discloses that (FEIS, Vol. I, p. 326):

> Based on habitat quality improvement…, an upward population trend for northern goshawk would be expected under all alternatives, especially for alternatives C and B, followed by alternative D, then alternative A.

Additional supporting information for the analysis of NOGO viability and monitoring protocols is provided in the *Wildlife Specialist Report – Viability* (Viability Report), *Wildlife Specialist Report - Biological Evaluation* (BE), and the *FINAL Report on the Selection of Management Indicator Species and Ecological Indicators for Forest Plan Revision Apache-Sitgreaves National Forests* (MIS Report).

Forest Plan desired conditions and guidelines pertaining to NOGO are discussed in the Viability Report (pp. 40-41). The Report includes a table (Table B1: Species crosswalk for how plan decisions meet species' viability needs.), which provides a crosswalk between various plan decisions and how they will meet species viability needs (Viability Report, pp 62-82). The crosswalk lists coarse and fine filter plan decisions that reduce risks to species and provide for viability. Other plan decisions (objectives, special areas, suitability, and monitoring) and management area allocations also contribute to species viability and are discussed in the Wildlife and Rare Plants and Fisheries sections of chapter 3 of the FEIS. The Viability Report concludes that, "based on habitat quality improvement (see alternative objectives), an upward population trend for NOGO would be expected under all alternatives [B, C, and D]" (Viability Report, May 2014, p. 41).

The BE for Sensitive Species addressed viability of 53 sensitive terrestrial species, including the NOGO and some of its prey species (i.e., red squirrel) and concluded: "While there may be some impact to individual sensitive species from implementation of any of the plan alternatives, there would be no trend toward Federal listing for the following 24 sensitive species during the 15-year plan period under all alternatives…." (BE, p. 11)

Desired conditions were designed to incorporate language similar to standards and guidelines from the 1987 Forest Plan. In addition, some guidelines were carried over from the 1987 Forest Plan. Those most pertinent to NOGO, were described in the FEIS, Management Indicator Species section (p. 323-326) (summarized above). Some key desired conditions and guidelines are further discussed below.

- The requirements in the revised plan for identification of goshawk post-fledgling family areas and nest areas are "the same as the old plan. The new plan nest areas

plus PFAs add up to 600 acres (6x30=180 acres plus 420 acres), same as in the previous direction."

- A key component of goshawk habitat is to sustain a balanced flow of tree ages from young to old (particularly regarding large trees) within the home range. Appendix I states: "The new plan direction, along with other Desired Conditions for forested types, provides the same direction as the previous plan. The previous direction specified higher canopy cover and smaller openings in post-fledgling family areas; the increased basal area will provide both, as well as the requirement for nesting areas (which are within post-fledgling family areas) to have denser canopies than surrounding stands.

During project design and implementation, reference to the specific components as described in GTR-RM-217 (and other best available science information), will ensure the necessary protection of post-fledgling family areas and nesting areas.

The Desired Condition statements for Ponderosa Pine, Dry Mixed Conifer, Wet Mixed Conifer, and Spruce-fir PNVTs includes a protective requirement to ensure higher canopy cover in nest sites. The FEIS, Appendix I is a crosswalk between the 1987 Forest Plan and the revised Forest Plan, for each resource area. Justification for the change from the 1987 Forest Plan to the revised forest plan is shown in the last column of the crosswalk table. With respect to goshawk, it says (FEIS, Vol. III, p. 1136):

> The new direction captures the degree of site variation within each vegetation type within the desired conditions themselves. The degree of site variation exhibited is based on more recent work than RM-217. See Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Science Basis (USDA, 2013) and also see Reynolds et al., 2013. Site productivity (site index) and site capability to provide the RM-217 Table 5 criteria are determined by specialists using site (stand) level data collected for project activity analysis and implementation.

The Forest Plan and the FEIS, Appendix I documents the Forests will continue to incorporate GTR-RM-217, which is the best science to provide for goshawk viability. In addition, the Forest is required by CEQ NEPA regulations to include information of "high quality" and "scientific integrity" (40 CFR 1500.1 and 1502.24). For example, in relation to surveys, Appendix I states (p. 1138): "Inventories for goshawks, while not specifically required, will need to be conducted in order to fulfill provisions of the new plan for disturbance, establishment of nest sites and PFAs, and other provisions in the new plan." To adequately complete these surveys and ensure protection of specific goshawk habitat components (such as post fledging areas) that may overlap the project area, BASI would require that survey boundaries extend beyond the project boundaries.

Viability is the combined effect of maintaining habitat components required by NOGOs across the landscape and providing strategic guidance to ensure those essential habitat features are located and managed correctly. Use of the best available science informs the maintenance of viability. Northern goshawks are wide-ranging predators that require quality forested conditions, foraging areas to produce adequate prey and to successfully

breed. In addition to habitat needs of the prey, NOGOs also have specific habitat needs (nest areas and post fledging areas) requiring special attention. Habitats of prey and predator are most stable when landscapes exhibit a sustainable flow of tree age classes, arranged in patterns typical of historical conditions, across the planning area. The Forest Plan does a good job describing generalized NOGO foraging areas in the desired conditions section of the Forest Plan. Achieving these conditions should provide prey habitat. Departure from these conditions, such as using seed tree cutting or clear cutting management techniques, will reduce the quality of the prey habitat and hunting habitat for NOGOs; the degree to which such departures occur will determine the impact to NOGO.

Because of the specific habitat needs for NOGO nest areas (higher canopy cover and more mature to old trees), professional skill will be necessary to apply desired condition descriptions to ponderosa pine management prescriptions in order to avoid lowering the quality of nest areas.

In summary, the revised Apache-Sitgreaves Forest Plan provides adequate programmatic management direction and guidance for ensuring NOGO viability. Through the plan components (Desired Conditions, Guidelines, and Monitoring and Evaluation) the Forest Plan provides for habitat of the NOGO, associated prey species, and other species. As the Apache-Sitgreaves National Forests designs and implements projects, the forests must comply with the same laws, regulations, and policies as required in forest planning. This includes requirements for maintaining viability (NFMA, FSM 2670, and Departmental Regulation 9500-4) and for incorporating high quality information (NEPA).

With respect to project level decisions, FSM 2672.24 requires that the Forest Service "Review all Forest Service planned, funded, executed, or permitted programs and activities for possible effects on endangered, threatened, proposed, or sensitive species. The biological evaluation is the means of conducting the review and of documenting the findings." Additionally, the objectives of the biological evaluation include "to ensure that Forest Service actions do not contribute to loss of viability of any native or desired non-native plant or contribute to animal species or trends toward Federal listing of any species." (FSM 2672.41)

Viability of Mexican Spotted Owl

In addition to the law, regulation, and policy outlined above for species viability in planning, there are additional requirements for threatened and endangered species under the Endangered Species Act.

Section 7(a)(1) directs that Federal departments and agencies "... Shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species..." (16 U.S.C. 1536 et seq.).

Section 7(a)(2) directs Federal departments and agencies to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued

existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats (16 U.S.C. 1536 et seq.).

The revised Forest Plan will provide for the viability and the conservation and recovery of the MSO as required by NFMA and ESA through a comprehensive list of desired conditions, objectives, standards, and guidelines found in Appendix A of the ASNF Biological Assessment, dated May 29, 2014 (BA).

The need for change includes, providing for the maintenance and improvement of ecosystem health, and specifically identifies the need to:

- Incorporate management direction to guide future projects to provide habitat to maintain viable populations of existing native and desired non-native vertebrate species in the planning area.
- Include appropriate standards and guidelines to provide direction to maintain species and viability across the planning area. (ROD, p. 5)

The ROD states that "Alternative B (Proposed Action) was designed to address the needs for change by addressing the demands for wildlife habitat, community protection, commodity outputs, and recreation opportunities with an emphasis on ecological restoration." It provides a framework for ecosystem restoration based on decades of ecological research (synthesized in *Restoring Composition and Structure in Southwestern Frequent-Fire Forests: A science-based framework for improving ecosystem resiliency* (GTR-310)) which will move frequent-fire adapted systems toward increased resiliency by restoring spatial arrangement, structure, and species composition of vegetation. The ROD describes how the revised Forest Plan restores and promotes ecosystem health, which increases resiliency in the face of climate change. Management actions which reduce the threat of uncharacteristic wildfire, promote habitat quality, increase or maintain species and structural diversity, increase water yield, and reduce fragmentation all contribute to the forests' ability to change and adapt to new climatic conditions. The revised Forest Plan promotes recovery of listed species, and where appropriate, provides for management actions to protect or enhance habitat of listed species. It retains old growth characteristics where they exist and encourages development of old growth conditions where current forests are lacking proportional representation of late seral stands and species composition on a landscape scale.

The revised Forest Plan contains standards and guidelines to protect the MSO throughout the document and these are found collectively in the BA, Appendix A, to respond to the need for change. The BA (p.41-51) analyzes the effects of the revised Forest Plan and identifies specific standards and guidelines to provide for the conservation and recovery of the MSO as required under the ESA and for the viability of the MSO under NFMA. The USFWS Biological Opinion (BO) notes that the threats to the MSO has transitioned from continued habitat loss and the threat of stand replacing fire to just the risk of stand replacing fire supporting the need for change. "Recent forest management has moved away from a commodity focus and now emphasizes sustainable ecological function and a return toward pre-settlement fire regimes, both of which have potential to benefit the spotted owl" (BO).

The revised Forest Plan directs activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans. The BO states "Over the long-term, implementing Recovery Plan guidance should result in positive impacts to the owl and its habitat for most project-specific actions associated with this program."

The BO identified a variety of actions the Forests will implement to reduce Forest Program effects to the different primary constituent elements of MSO critical habitat to increase the sustainability and resiliency of MSO habitat (BO, p. 40):

- The ASNFs has and continues to designate 600 acres surrounding known spotted owl nesting and roosting sites as PACs [protected activity center]. These PACs are intended to protect and maintain occupied Mexican spotted owl nest and roost habitat. Nesting and roosting habitat is limited and by identifying these areas for increased protection, the ASNFs are aiding in recovery.
- The ASNFs identified and is managing pine-oak, mixed-conifer, and riparian forests that have potential for becoming replacement Mexican spotted owl nest-roost habitat, or is currently providing habitat for Mexican spotted owl foraging, dispersal, or wintering habitats. As stated above, Mexican spotted owl nesting and roosting habitat is a limiting factor. By managing critical habitat for future nest and roost habitat, the ASNFs are aiding in recovery.
- The ASNFs' intent is to implement forest restoration projects. The best available Recovery Plan habitat management objectives are to be integrated where possible into forest restoration and/or fuels reduction projects. These have the overall goal to protect PACs from high-severity wildland fire and conduct actions to improve forest sustainability (e.g., thinning and prescribed burning) in order to ensure Mexican spotted owl habitat continues to exist on the forest.
- The ASNFs are implementing several on-going projects previously consulted on under site specific BOs. BOs issued for these projects have noted adverse effects to PCEs and spotted owls. However, these projects are designed to result in long-term benefits to spotted owls habitat by reducing fuels and the risk of high severity wildland fire (Nutrioso WUI Fuels Reduction Project and Chitty Creek Restoration Project). For example, the Arizona Forest Utility Hazard Tree Removal Phase II Project (USFWS 2008), though it is designed to protect infrastructure through the removal of hazard trees near utility lines, will ultimately reduce the risk of fire risk being ignited from a power line into adjacent spotted owl habitat, particularly PACs.

The BO concludes that the implementation of the revised Forest Plan will not jeopardize the MSO or designated critical habitat for the following reasons (BO, pp 153-154):

- The Forest Plan will apply habitat management objectives and species protection measures from the Mexican spotted owl recovery plan (guideline 65);
- Desired conditions and guidelines in the Forest Plan recognize the need to reduce the potential for landscape level, stand-replacing fire in ponderosa pine and mixed conifer forests that the Mexican spotted owl occupies;

- While some adverse effects may occur as part of the proposed action or under site specific actions carried out under the Forest Plan, the desired conditions, standards, guidelines, and objectives will help to minimize those effects; and
- Based on the discussion provided in the Effects to Mexican Spotted Owl Critical Habitat section above, the two CHUs affected by the Forest Plan will continue to serve the function and conservation role of critical habitat for the spotted owl;
- Many of the desired conditions and objectives in the Forest Plan, in particular desired conditions 18, 32, 40, 50, 58, 64, 65, 100, 105, 111, 112, 128, 144, 196, and 296, and objectives 11 and 13 benefit Mexican spotted owl habitat; and
- Many standards and guidelines within the Forest Plan, in particular standard 3, guidelines 32, 59, 65, 70, and 71, and 171 serve as conservation measures that are beneficial to the Mexican spotted owl.

In summary, the Record shows that the Forest Plan will provide for the viability and the conservation and recovery of the MSO as required by NFMA and ESA. This will be accomplished through a comprehensive list of desired conditions, objectives, standards, guidelines found in Appendix A of the BA, dated May 29, 2014. The ROD, page 5 identifies the need for change which provides for the maintenance and improvement of ecosystem health, and specifically identifies the need to: 1) incorporate management direction to guide future projects to provide habitat to maintain viable populations of existing native and desired non-native vertebrate species in the planning area; and 2) include appropriate standards and guidelines to provide direction to maintain species and viability across the planning area. The record shows a need for change for the MSO due to the transition of threats from commercial timber harvest to the risk of stand-replacing wildland fire. I do not find any indication that protection of the MSO has been reduced nor that standards and guidelines have been eliminated or reduced.

Conclusion

The review of the planning record found the appropriate application of management direction, including explanations of the transition from the previous Plan and how the plan components (desired conditions, objectives, standards, and guidelines) are to be applied under the revised Plan. Further, the record provides adequate information regarding assessing species viability and meeting the viability provision of the 1982 planning regulations and associated policy for NOGO and MSO. The combined management direction (desired conditions, vegetation management standards and guidelines for forested communities, and guidelines for wildlife) along with future project-level design and implementation accommodate the provisions of the 1992 Management Recommendations for NOGO (GTR-RM-217). The overall management approach provides long-term benefits for wildlife species by reducing potential impacts of uncharacteristically severe wildfire through restoration of ecosystem structure and function.

I recognize the change to less prescriptive direction at the Forest Plan level causes concern that important aspects of species conservation will be missed in project level design and implementation. I find that the Forest Plan desired conditions and guidance,

combined with requirements to follow law, regulation and policy and use best available science is sufficient to ensure species viability.

I found no violations of law, regulations, and policy.

Recommended Wilderness

Issue: The appellants contend the Forest Service violated NFMA and NEPA in its proposed wilderness recommendations. Specifically, they argue that the FEIS fails to analyze direct, indirect, and cumulative effects, fails to analyze possible conflicts between proposed wilderness and state and local land use plans, policies and controls, and fails to establish an adequate purpose and need for recommended wilderness. The appellants contend:

- The FEIS does not adequately disclose or analyze the impacts of wilderness recommendations on AZGFD's ability to manage trust wildlife resources, as previously requested during prior comment periods on draft documents.
- The FEIS does not identify potential economic impacts or conflicts with existing state plans, violating NEPA and NFMA.
- Because the Forest Service intends to manage these recommended wilderness areas to maintain their wilderness characteristics, the Forest Service must treat these recommendations as significant changes in management and therefore must ensure compliance with NEPA; this was not done.
- Wilderness designations hamper the AZGFD's ability to implement management activities in these areas, resulting in substantive and costly compliance hurdles. Establishing new wilderness direction requires appropriate public involvement, coordination with state and local governments, and conformance to NFMA, NEPA and USFS Land Management Planning Handbook chapter 70.61 - participation in the wilderness recommendation process. The Forest Service violated these laws and policies in developing the revised Plan and final EIS.
- The Forest Service failed to consider and respond to the AZGFD's special expertise, information, and requests. The Multiple Use Sustained-Yield Act and FLPMA require coordination with states.
- The Forest Service provides conflicting documentation related to the 'Needs Evaluation' for the Escudilla and Bear Wallow wilderness evaluations. These Forest Service evaluations are not based on the best available science. The Availability determinations are also based on incomplete data and the impact analysis presented in the EIS is inadequate, violating NEPA and NFMA. (#0006, pp. 20-27)

Response: When estimating effects of alternatives, the 1982 Planning Rule at 36 CFR 219.12(h) states, "the interdisciplinary team shall evaluate the significant physical, biological, economic, and social effects of each management alternative that is considered in detail. The evaluation shall include a comparative analysis of the aggregate effects of the management alternatives and shall compare present net value, social and economic impacts, outputs of goods and services, and overall protection and enhancement of environmental resources." Furthermore, "each alternative considered in

detail shall be estimated and compared according to NEPA procedures" (The 1982 Planning Rule at 36 CFR 219.12(g)).

More specific to wilderness, as part of the potential wilderness evaluation process, effects of recommendation must be discussed for each alternative. This includes "the impact on the area if it were designated as wilderness and the impact on the area if it were managed as non-wilderness. Show the social and economic effects in each case" (FSH 1909.12, 74(5)).

The wilderness evaluation process outlined in FSH 1909.12, Chapter 70 (2007) involves three steps: inventory; evaluation of capability, availability, and need; review and recommendation. The inventory step, in part, requires that each area not have any forest roads (36 CFR 212.1) or other permanently authorized roads. The inventory process is summarized in the 2014 Wilderness Report on page 8. The record illustrates that GIS was used to identify those areas on the forests that meet the inventory criteria, including the criterion for lack of authorized roads. This is repeated in each of the *Apache-Sitgreaves National Forests Wilderness Evaluation Report*s included in the project record. This indicates that motorized access (either for public motorized recreational use or agency administrative use) is likely low; if existing roads exist they would be 'cherry-stemmed to remain outside of the actual Recommended Wilderness boundary). In addition, as described in the ROD, page 22: "Alternative B provides the framework to guide future changes to the transportation system. Specifically, the plan identifies existing Forest Service roads and motorized trails, as well as designated motorized areas, as being suitable for motorized travel, while identifying the rest of the Forest as being unsuitable for motorized travel unless specific exemptions apply. Restrictions on motorized travel in areas deemed to be unsuitable cannot be enforced until the implementation of the Travel Management Rule (36 CFR § 212) and its associated NEPA environmental effects analysis, as required by Executive Order 11644. The result of Travel Management Rule analysis will be a Motor Vehicle Use Map (MVUM) displaying where motorized travel is allowed (ROD, p. 22)"

This means that if there are any existing roads in recommended wilderness, or in any area on the forest (regardless of what Management Area they might fall within), they can only be closed to motorized vehicle use after going through the travel management process. The travel management process is a site-specific analysis and requires NEPA, including public involvement. Therefore, even if the Forest Plan indicates that certain Management Areas are closed to motor vehicle use this direction cannot be enforced and the roads not closed until that site-specific process concludes.

In addition, as disclosed in the ROD, page 20: "This (wilderness) recommendation is a preliminary administrative recommendation that will receive further review and possible modification by the Chief of the Forest Service, the Secretary of Agriculture, and the President of the United States. Congress has reserved the authority to make final decisions on wilderness designation."

The effects of wilderness and non-wilderness designation are discussed for each potential wilderness area in the *Apache-Sitgreaves National Forests Wilderness Evaluation Report* documents, including reports specific to Escudilla Wilderness Addition Southeast, Escudilla Wilderness Addition Northwest, Escudilla North, Hulsey, Bear Wallow Wilderness Addition Southeast and Bear Wallow Wilderness Addition Northwest. Sections titled "Effects of Recommendation" address social and economic effects as well as the effect of wilderness recommendation and non-wilderness management on resources and uses such as water quality and quantity, recreation, and fire. For the wildlife habitat category, the reports read: "Wilderness designation would provide greater protection for wildlife and wildlife habitat. Wildlife would not be harassed by motorized uses and habitat fragmentation would be minimized. Repair and replacement of existing wildlife improvements may be allowed, but new improvements and habitat enhancements would be rare and would be authorized only to protect and improve management of the wilderness resource."

The effects of wilderness recommendations, by alternative, are included in the 2014 Wilderness Resources and Inventoried Roadless Areas Specialist Report. This report, which is summarized in the FEIS (Chapter 3, pages 392-395), includes an analysis of management for recommended wilderness areas with a focus on protection of wilderness characteristics and to provide for existing uses where compatible. This section of the FEIS and the 2014 Wilderness Specialist Report document that motorized and mechanized travel and transport would generally not be allowed in Recommended Wilderness but that any special circumstances would be evaluated using the 2012 Minimum Requirements Decision Guide. Other resource sections of FEIS chapter 3 include an analysis of each alternative, which included varying levels of wilderness recommended wilderness. Social and economic resources are described on pages 513-520 of the FEIS.

The FEIS did consider related planning efforts by AZGFD. A review of coordination with Arizona wildlife strategic plans (*Wildlife 2012: The Arizona Game and Fish Department's Strategic Plan for the years 2007-2012* and *Arizona's Comprehensive Wildlife Conservation Strategy: 2005-2015)* can be found in the FEIS at pages 842-843, and according to the *Wilderness Resources and Inventoried Roadless Areas Specialist Report* (October 2014) "there are no known wilderness management conflicts with other land use plans or policies" (p. 20). Furthermore, the record shows changes were made based on requests from AZGFD to modify references to the *Arizona Wildlife and Fisheries Comprehensive Plan* to the more updated *State Wildlife Action Plan* and *Wildlife 20/20 Strategic Action Plan* (FEIS pp. 673-674).

The AZGFD alleges the EIS fails to include an adequate response to its comments regarding the needs of AZGFD to perform wildlife management activities.

In their scoping comment letter, dated May 5, 2010, AZGFD provided 2 site specific comments related to wilderness recommendations. First, they "oppose[d] any change that would result in the closing of Forest Road 54 to motorized vehicle traffic." Alternative B, as described on page 390 of the FEIS, proposed the addition of "two small parcels

between the southeastern wilderness boundary and FR 54," leaving Forest Road 54 open to motorized vehicle traffic.

Second, AZGFD "oppose[d] the inclusion of Chevelon Canyon Lake into a wilderness area." While Chevelon Lake was listed as a potential wilderness area on page 384 of the FEIS, it was not proposed for recommendation, as acknowledged in AZGFD's comment letter, dated May 15, 2013.

Finally, in AZGFD's 2010 and 2013 letters, the department provided a list of "specific management actions which may be necessary, and may necessitate the use of motorized equipment." The interdisciplinary team responded to this list of activities by stating that "[s]pecific proposed actions would be considered on a case-by-case basis with use of the 'Minimum Requirements Decision Guide'" (FEIS p. 717).

In addition to responding to the points raised in AZGFD's letters, the team also responded to emails from the Department regarding specific questions about management impacts if the Blue Range Primitive Area were to be designated as wilderness (April 22, 2010) and potential public confusion due to a "doughnut hole shaped exclusion" in the proposed addition to Bear Wallow Wilderness (April 29, 2013).

The project record contains records indicating coordination with AZGFD through emails, public meetings, and also individual meetings with the Department. In one such correspondence, the Department cancelled a meeting with the forest "[d]ue to a lack of sustentative [sic] questions regarding the Forest Plan" (April 11, 2013).

The AZGFD in their appeal letter (p. 24), "perceives the conversion of public lands to a special use status is a breach of the Federal Lands Policy and Management Act (FLPMA) mandate, with those lands designated as wilderness forever lost for multiple-use." The Multiple-Use Sustained-Yield Act (MUYSA) is "an act to authorize and direct that the national forests be managed under principles of multiple use and to produce a sustained yield of products and services, and for other purposes." 16 U.S.C. 528-531. MUSYA further reads, "the establishment and maintenance of areas of wilderness are consistent with the purposes of this Act." 16 U.S.C. 529. NFMA requires forest plans, "provide for multiple use and sustained yield of the products and services obtained therefrom in accordance with the Multiple-Use Sustained-Yield Act of 1960, and in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness." 16 U.S.C. 1604(e)(1). Wilderness is, therefore, an accepted use under the multiple-use mandate of MUSYA and NFMA.

The appellant alleges the FEIS failed to establish adequate purpose and need for recommended wilderness areas and that "expansion of designated wilderness is an overreach of the A-S and disingenuous to the public" (#0005, p. 26). The appellant correctly cites Council on Environmental Quality (CEQ) regulations at 40 C.F.R. 1502.13, which says that, "[t]he statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action."

The 1982 planning regulations at 36 C.FR. 219.17(a) state, "[u]nless otherwise provided by law, roadless areas within the National Forest System shall be evaluated and considered for recommendation as potential wilderness areas during the forest planning process…" The responsible official is, therefore, obligated and required to consider potential areas for wilderness recommendation.

As required by the 1982 planning regulations at 36 CFR 219.17(a), roadless areas within the Apache-Sitgreaves NF were considered for potential wilderness recommendation. Under the ROD's revision topic 2 "Managed Recreation." is a bullet that provides the plan will "evaluate lands for wilderness potential and, if determined to be appropriate by the responsible official, recommend designation by Congress and provide interim management guidance" (ROD, p. 6). The FEIS states that, "[a]/s required by the provisions of the 1982 Planning Rule, all Apache-Sitgreaves NFs lands were evaluated for wilderness character. Thirty-eight areas (totaling approximately 700,000 acres) were identified as potential wilderness which could be recommended to Congress for designation" (FEIS, p. 6).

Of 714, 938 acres of potential wilderness evaluated, the selected alternative, alternative B, includes 7,074 acres of recommended wilderness. The evaluation of potential wilderness area (PWA) need is documented in the record in the *Apache-Sitgreaves Wilderness Evaluation Report* (2012) under a section titled "need evaluation" for each PWA. These need ratings were developed following protocol and factors outlined in Forest Service Handbook (FSH) 1909.12, Chapter 72.31. Although overall need ratings for the PWAs recommended in alternative B, Escudilla and Bear Wallow Wildernesses, did not exceed "medium," rationale for alternative B recommendations can be found in the project record. The responsible official's decision was based on the fact that "there is some local public support for enlarging Escudilla Wilderness" (*EIS*, p. 389) and because the areas recommended are adjacent to existing wilderness, they "would provide for better manageability of the existing wilderness because boundaries would be more identifiable by the public and Forest Service employees" (ROD p. 20; also found in *Wilderness Resources and Inventoried Roadless Areas Specialist Report*, 2014, p. 13 and FEIS, p. 389).

The appellant claims that the capability rating for the Escudilla potential wilderness area was misapplied. Specifically, AZGFD contends that characteristic number 5 under the natural category of the capability rating is incorrect.

When evaluating capability, the Forest followed FSH 1909.12, Chapter 72.1(1) and regional guidance provided by *R3 Capability Rating Criteria* (2010)**.** This regional guidance outlines Factor 5 of the natural characteristic category in the regional guidance is: "area provides elements of biological diversity and naturalness including unique habitats, TES or rare plants and wildlife" (p. 1). The guidance describes a "Medium" rating as land that "has a mix of habitats and ecological conditions" (p. 1). The record explains the rating of Escudilla PWA by stating, "[t]he potential wilderness would supplement the existing biological diversity and naturalness of Escudilla Wilderness.

Additional areas of spruce-fir, ponderosa pine, and wet mixed conifer forests increase the vegetation diversity" (Apache-Sitgreaves National Forests Wilderness Evaluation Report, p. 37). Although the appellant argues that "supplementing the existing wilderness elements does not add to the overall wilderness system nor does it justify a need rating higher than 'Low,'" the additional areas described in the evaluation report that would add vegetation diversity reasonably contribute to a "mix of habitats and ecological conditions," adequately justifying a "Medium" rating.

The appellant also contends that the availability of potential wilderness areas should be reassessed as "Low" due to the needs of AZGFD to perform wildlife management activities. This concern was addressed in the FEIS response to comments. Designation as Wilderness does not automatically disallow wildlife management activities and should therefore not necessarily reduce the availability of potential wilderness areas. Rather, "specific proposed actions would be considered on a case-by-case basis with use of the 'Minimum Requirements Decision Guide'" (FEIS p. 717). Availability was adequately assessed following FSH 1909.12 Chapter 72.2 and 72.4(3) guidelines.

Lastly, the appellant claims that there was no justification for need ratings of factors 4 and 6 to be revised from "Low" to "Medium" between the 2010 and 2012 *Apache-Sitgreaves National Forests Wilderness Evaluation Reports* and requests that the rating be reverted to "Low." Factor 4 is "the need to provide a refuge for those species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific values or phenomena and Factor 6 is, "an area's ability to provide for preservation of identifiable landform types and ecosystems." The appellant is correct is citing that both of these factors were rated "Low" in the 2010 version and "Medium" in the 2012 version.

Although not explicitly stated in the *Wilderness Evaluation Reports*, Factor 4 was revised due to newly listed threatened and endangered species. There was an increase in the number of species that would benefit from primitive surroundings (Iterative Update to Species Considered and Identification of 'Forest Planning Species' and their Existing Condition 2013). Factor 6 was revised due to the effects of the 538,000 acre Wallow fire in 2011. After this fire, it became apparent that some of the potential natural vegetation type (PNVT) classification had been done in error. Reclassification post-fire increased the percentage of potential wilderness areas containing underrepresented ecosystems (See Appendix B, Wallow Fire Changed Condition Assessment 2012).

Based on this wilderness evaluation process that was followed, the supporting documentation in the record, and the rationale described to decide which areas to include as recommended wilderness in the ROD, it was within the discretion of the responsible official to recommend these areas. Wilderness is an accepted use under the multiple-use mandate, adequate purpose and need for additional recommended wilderness was established, and potential wilderness areas were assessed following FSH 1909.12 Chapter 70 guidelines.

I found no violations of law, regulation or policy.

Economic Impacts

Issue: The appellants contend the Forest Service violated NFMA and NEPA for failing to adequately analyze and disclose the local economic impacts from Plan implementation. The appellants contend:

- The Forest Service did not make a reasonable effort to present future levels of commodity production from the Forest but instead displayed how implementation of the Plan will limit the use of commodity production.
- The Forest Service failed to work with local governments and members of the public to address and mitigate local economic concerns, violating NFMA and NEPA. (#0005, pp. 12-13)

Response: Forest Service planning regulations at 36 CFR 219.12(h)(1982) state that:

> The evaluation shall include a comparative analysis of the aggregate effects of the management alternatives and shall compare present net value, social and economic impacts, outputs of goods and services, and overall protection and enhancement of environmental resources.

NEPA regulations at 40 CFR 1508.8(b) state:

> Effects and impacts as used in these regulations are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

The socioeconomic section of the FEIS (Vol. 1, p. 513) discloses that,

> Regional economic impacts are estimated based on the assumption of full implementation of each alternative… If market conditions or trends in resource use are not conducive to developing some opportunities, the economic impact would be different than estimated here

The financial efficiency analysis looked at the following commodity programs: grazing, recreation, minerals, and wood products. Tables 172-176 of the FEIS compare the programs' employment, labor income, the Forest's program expenditures, the Forest's program revenue, and present net value impacts across all the alternatives (FEIS Vol. I, pp. 514-517).

This information was used by the Responsible Official in his rationale for choosing Alternative B: "[a]nalysis in the FEIS shows that Alternative B will contribute to social and economic sustainability. It is expected to produce approximately 3,800 jobs and $118 million in labor income for the local economy, a 1 percent increase over the 1987 Forest Plan, mostly generated through the recreation, livestock grazing, minerals, and wood products programs" (ROD, p. 23).

Relative to the allegation that the Forest Service failed to work with local governments and members of the public to address and mitigate local economic concerns, there are

numerous citations in the Public Comments and Responses section of the FEIS (Appendix A) where the interdisciplinary team addressed public concerns, including the appellant's, on this issue.

The following concern statement is one example:

> The forest should be managed for the benefit of humans including: (1) current and future generations, (2) provision of goods and services, (3) balance ecological sustainability with economic uses and social sustainability, (4) multiple use.

The team responded by stating:

> The plan contributes to ecological, social, and economic sustainability focused on meeting the needs of the present generation without compromising the ability of future generations to meet their needs. The plan gives direction to manage the forest consistent with the Multiple Use-Sustained Yield Act of 1960 and provides goods and services including outdoor recreation, timber, range, watershed, wildlife, and fish. (FEIS Vol. I, p. 591).

Similar comments and responses on the socio-economic effects of the proposed plan can be found on pages 593-4; 610; and 749-51 of the FEIS, Appendix A.

In conclusion, the socioeconomic analysis assessed the aggregate impacts of the alternatives, per Forest Service planning regulations. The analysis specifically looked at impacts from commodity programs including grazing, recreation, minerals, and wood products. This information was used to inform the Responsible Official's rationale for choosing Alternative B. The project record also shows that the interdisciplinary team addressed the public and the appellant's concerns related to socio-economic impacts of the proposed plan.

I find no violation of law, regulation, or policy.

Travel Management Rule

Motor Vehicle Use Restrictions as a Component of Management Area Prescriptions

Issue: The appellants contend the Forest Service violated the 2012 Travel Management Rule by incorporating motor vehicle use restrictions as components of Management Area prescriptions rather than through the travel management planning process. They argue there is no authority for the Forest Service to arbitrarily adopt this process, similar to community planning and zoning, as a means to facilitate land management planning. The appellants contend:

- The Forest Service identifies and places motor vehicle use requirements and restrictions on a large portion of the forest (approximately 472,000 acres) through the revised Plan, which violates 36 CFR 212. (#0005, p. 4-5)

Response: In establishing management areas during the forest plan revision process, the 1982 Planning Rule, Section 219.1(b) Purpose and principles states:

> Plans guide all natural resource management activities and establish management standards and guidelines for the National Forest System. They determine resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management.

Furthermore, under Sec. 219.21 Recreation resource. (g)

> Off-road vehicle use shall be planned and implemented to protect land and other resources, promote public safety, and minimize conflicts with other uses of the National Forest System lands. Forest planning shall evaluate the potential effects of vehicle use off roads and, on the basis of the requirements of 36 CFR part 295 of this chapter, classify areas and trails of National Forest System lands as to whether or not off-road vehicle use may be permitted.

Current guidance on the relationship between travel planning and Forest Land Management Plans is found in FSH 7709.55 Chapter 10, 11.2, Land Management Plans which state:

> 1. Land management plans are strategic documents. They establish desired conditions and objectives, identify the suitability of land for various uses, and describe guidelines for resource protection (FSM 1920). Approval of a plan, plan amendment, or plan revision should not include a final decision designating roads, trails, or areas for motor vehicle use or OSV use or otherwise restricting those uses. Rather, the land management plan provides information and guidance for travel management decisions.
>
> 2. Travel management decisions are made at the project level. They must be consistent with land management plans (FSM 7712.2).

The 2005 Travel Management Rule was published to improve management of off-highway vehicles and to signal an agency shift away from the development and construction of new roads to the maintenance of needed roads and the reduction of the overall environmental effects of the roads system. The Forest Service travel management regulations, 36 CFR § 212.50 (a) Purpose, scope, and definitions, states:

> This subpart provides for a system of National Forest System roads, National Forest System trails, and areas on National Forest System lands that are designated for motor vehicle use. After these roads, trails, and areas are designated, motor vehicle use, including the class of vehicle and time of year, not in accordance with these designations is prohibited by 36 CFR 261.13. Motor vehicle use off designated roads and trails and outside designated areas is prohibited by 36 CFR 261.13.

The revised Forest Plan provides programmatic decisions that establish desired conditions, objectives, standards, guidelines, special areas, suitability, and monitoring. The revised Forest Plan provides a broad framework that guides project-level decisions but does not authorize, fund, or carry out any site-specific activities, including route and area designations for motorized use. Instead, the land management plan establishes limitations on what actions may be authorized and what conditions must be met during project-level decision making. As stated in the FEIS Purpose and Need:

> The Forest Service proposes to revise the 1987 plan for the Apache-Sitgreaves NFs. The proposal updates the desired conditions, objectives, standards, guidelines, special areas, suitability, and monitoring requirements that will guide management of the Apache-Sitgreaves NFs for the next 10 to 15 years. It also changes the description and allocation of the management areas to achieve forestwide desired conditions and to provide opportunities for a range of activities. (FEIS, Chapter 1, p. 8)

In addition to establishing forestwide desired conditions, the FEIS Purpose and Need also addresses recreation related activities, including the suitability for motorized vehicle use:

> There is a need to update the spectrum of recreation opportunities to reflect current and projected recreation needs, natural resource impacts, and public input. This includes identification of areas that are developed for high use and areas that resemble more natural landscapes. There is also a need to identify the suitability of areas for motorized vehicle use and other recreational activities. (FEIS, Vol. 1, p. 6)

The revised Forest Plan describes the suitability of areas in the "Motorized Uses Suitability" section in Chapter 4. Related to the identified Management Areas, certain areas may be determined suitable for the development of new roads, and there may be specific locations where standards and guidelines would restrict the development of new roads. The revised Forest Plan provides a framework to guide future changes to the transportation system. Potential changes to the forests' transportation system, including route and area designations, would be evaluated in future project-level decision making through the implementation of the Travel Management Rule (36 CFR §212). Those decisions would be consistent with the NEPA, including analysis and opportunity for public involvement:

> This plan provides the framework to guide future changes to the transportation system. Once the final decision of this plan has been made, potential changes to the forests' transportation system will be evaluated under this framework and through implementation of the Travel Management Rule (36 CFR § 212) as required by Executive Order 11644. Upon completion of travel management planning, the associated motor vehicle use map (MVUM) would be printed. The MVUM would display the roads, trails, and areas that are designated for motorized vehicle use. Travel management planning is not a static process. Based on public input, monitoring, and site-specific analysis, the MVUM could be adjusted. The annual reissuing of the MVUM would reflect any changes made through the NEPA process. Use inconsistent with those designations, and inconsistent with this plan, would be prohibited. (Forest Plan, Chapter 2, p. 77)

Current laws and regulations for motor vehicle use will remain in place as stated in the Record of Decision:

> Alternative B provides the framework to guide future changes to the transportation system. Specifically, the plan identifies existing Forest Service roads and motorized trails, as well as designated motorized areas, as being suitable for motorized travel, while identifying the rest of the Forest as being unsuitable for motorized travel unless specific exemptions apply. Restrictions on motorized travel in areas deemed to be unsuitable cannot be enforced until the implementation of the Travel Management Rule (36 CFR § 212) and its associated NEPA environmental effects analysis, as required by

> Executive Order 11644. The result of TMR analysis will be a Motor Vehicle Use Map (MVUM) displaying where motorized travel is allowed. (ROD, p. 22)

In conclusion, the establishment of desired conditions, objectives, standards, and guidelines for Management Areas as part of the forest planning process is appropriate and provides a broad framework intended to provide guidance on future transportation system changes, in compliance with the 1982 Planning Rule. The ROD clearly states that no changes to the existing transportation system will be implemented or enforced as a result of this Forest Plan decision; any future site-specific travel management decisions that allow or prohibit motor vehicle use will be determined through implementation of the Travel Management Rule procedures and its associated NEPA analysis, including public involvement.

I find no violation of law, regulation, or policy.