

Apache-Sitgreaves National Forests Travel Management Plan Revised DEIS

October 29, 2019

Apache-Sitgreaves National Forests

30 S. Chiricahua Dr.

Springerville, AZ 85938

Submitted electronically to: <https://cara.ecosystem-management.org/Public//CommentInput?Project=22692>

Re: Travel Management Plan Revised DEIS Comments

Dear Supervisor Best and the Travel Planning team,

Thank you for the opportunity to provide our comments on the Apache-Sitgreaves National Forests Revised Draft Environmental Impact Statement (RDEIS) for the forests' ongoing travel management planning process. This letter provides comments on behalf of the Center for Biological Diversity, WildEarth Guardians, Western Environmental Law Center, White Mountain Conservation League, Wild Arizona, Wildlands Network, Defenders of Wildlife, Sierra Club, The Wilderness Society, and Grand Canyon Wolf Recovery Project. The 60-day comment period began on August 30, 2019,¹ making these comments timely. Previous comments have been submitted by members of this coalition during the scoping process of 2008,² and on the earlier version of the DEIS in 2010.³ We ask that those comments be made part of this record.

In addition to comments submitted during previous National Environmental Policy Act (NEPA) comment periods, a separate request for immediate closure of segments of the San Francisco and Blue River corridors to motorized recreation use was submitted on November 16, 2007.⁴ We appreciate that the Forest Service has elected to not open routes in the sections of these river corridors which we requested vehicle closure, and we hope that resources will be committed to monitoring for vehicle trespass and enforcing the Forest Service's ultimate decision. In our 2007 request, we reviewed the ecological and quiet-use recreational values of the Blue and San Francisco Rivers. We ask that those comments be made part of this record.

¹ https://www.fs.usda.gov/nfs/11558/www/nepa/42951_FSPLT3_4779392.pdf

² Center for Biological Diversity, Grand Canyon Wildlands Council, White Mountain Conservation League, The Arizona Wilderness Coalition, Public Employees for Environmental Responsibility, Sierra Club, Sky Island Alliance, The Wilderness Society, and WildEarth Guardians. Comments prepared for the United States forest service's proposed action for the Apache-Sitgreaves National Forest, Arizona, [72 fed. reg. 57514 (October 10, 2007) as modified 73 fed. reg. 11088 (February 29, 2008)], dated March 14, 2008; hereafter "scoping comments" or "CBD et al. 2008."

³ The Arizona Wilderness Coalition, Arizona Zoological Society, Center for Biological Diversity, Defenders of Wildlife, Grand Canyon Wildlands Council, Grand Canyon Wolf Recovery Project, Great Old Broads for Wilderness, New Mexico Wilderness Alliance, Public Employees for Environmental Responsibility, Rewilding Institute, The Sierra Club, Sky Island Alliance, Sky Island Watch, Southwest Environmental Center, The White Mountain Conservation League, WildEarth Guardians, The Wilderness Society, Winter Wildlands Alliance. Comments prepared for the United States forest service's draft environmental impact statement for the Apache-Sitgreaves National Forests, Arizona [75 fed. reg. 209, 66756 (October 29, 2010)], dated December 13, 2010; hereafter "DEIS comments" or "AWC et al. 2010."

⁴ Center for Biological Diversity, Amigos Bravos, Arizona Wilderness Coalition, Forest Guardians, the Gila Conservation Coalition, Grand Canyon Wildlands Council, New Mexico Wilderness Alliance, Sierra Club, Sky Islands Alliance, the Upper Gila Watershed Alliance, and the Wilderness Society. A request for immediate closure of segments of the San Francisco and Blue River corridors to motorized recreation, submitted on November 16, 2007 to Elaine Zieroth, Supervisor, Apache-Sitgreaves National Forest and Richard Markley, Supervisor, Gila National Forest.

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These comments are based on decades of place-based experience in the planning area, and reflect sincere concern for the wildlife, wild places, flowing waters, and diverse ecosystems which make the Apache-Sitgreaves National Forests so ecologically and culturally significant. We look forward to further correspondence regarding the ongoing planning process. Please do not hesitate to contact the authors of this letter, listed below, and please take note of the referenced attachments which have been submitted electronically.

Respectfully yours,



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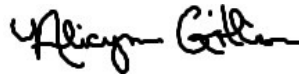
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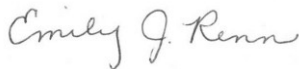
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I. Forest Service Should Immediately Close the Forest to Cross-Country Motorized Travel.

As an initial matter, we wish to call the Forest's attention to the obvious fact that we are now nearly 15 years past the promulgation of the Travel Management Rule ("TMR"), and yet the Apache-Sitgreaves National Forest still does not have a travel management plan in place as required by the TMR. Indeed, the TMR requires the Forest close cross-country travel on the Forest, and yet, nearly 15 years after the promulgation of the TMR, the Apache-Sitgreaves National Forest ("ASNF") has yet to meet this mandate. In fact, the ASNF is, sadly, one of only a handful of National Forest system lands that has not yet implemented this mandate. The damage that has occurred to Forest resources over the last 15 years as a result of the ASNF's failure to timely comply with the TMR, as nearly every other Forest in the National Forest System has managed to do, is unacceptable.

We therefore respectfully request that the Forest immediately issue an administrative closure order prohibiting cross-country motorized travel on the Apache-Sitgreaves National Forest pending the issuance of a final Record of Decision ("ROD") for travel management on the Forest. Given that we will not realistically have a final decision until 2021 at the earliest, it is imperative to take this much needed, and much delayed action. Leaving the ASNF open to cross-country motorized travel violates the spirit of the TMR and there is simply no excuse for the ASNF's nearly 15-year delay in implementing one of the TMR's core resource protection measures. Attached to these comments⁵ are examples of closure orders from other Forests showing that this is not an extreme or unusual approach to managing cross-country travel on National Forest lands, and is well within the Forest Service's authority to implement.

II. Failure to Provide Specialist Reports is a Violation of NEPA.

We note that to our knowledge, the Forest Service has not provided any of the specialist reports to the public. These reports are mentioned in the RDEIS and relied on for environmental effects analysis, yet are not posted on the travel management website for public review and comment. The Council on Environmental Quality's NEPA regulations directs that information used to inform NEPA analysis "must be of a high quality" and that "[a]ccurate scientific analysis . . . [is] essential to implementing NEPA."⁶ Toward that end, the regulations also allow federal agencies to incorporate information by reference, but, "[n]o material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment."⁷

The Forest Service has violated NEPA by failing to provide these documents to the public and allowing the public to comment on them, considering that courts have found that the "Forest Service violated NEPA by failing to make the Specialist Reports accessible to the public."⁸ Should the Forest Service intend to rely on any material contained in one of these specialist reports, or otherwise incorporate this material by reference into any subsequent NEPA document, it needs to provide them to the public and allow an additional round of public comment on them. Any reports "prepared in connection with," or pertaining "directly to the

⁵ See Attachments 1 and 2.

⁶ 40 C.F.R. § 1500.1(b).

⁷ 40 C.F.R. § 1502.21.

⁸ See *League of Wilderness Defenders/Blue Mountains Biodiversity Proj.*, No. 12-cv-2271-HZ, 2014 WL 6977611, at *14-19 (D. Or. 2014).

preparation of the EIS” should by nature be placed in an Appendix to the EIS.⁹ As such, we explicitly ask for digital copies of any specialist report the Forest Service believes contains analysis of environmental effects or compliance with the law (such as the Travel Management Rule) and that an additional comment period be provided to allow us to provide comment on any such documents. If the Forest Service fails to do so, it cannot incorporate any of the contents of the specialist reports into any subsequent NEPA document as contemplated by NEPA regulations.¹⁰

The screenshot below comes from the Forest Service’s ASNF Travel Management Plan project website, and shows all of the documents containing substantive analysis or data related to the RDEIS.¹¹ No specialist reports are included.

Apache-Sitgreaves National Forests Public Motorized Travel Management Plan

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 A proposal to designate motorized travel routes (roads and trails) in areas on federal lands administered by the Forest Service within the Apache-Sitgreaves National Forests in order to comply with the Travel Management Rule (36 CFR 212). Additional information is available at: <http://www.fs.usda.gov/goto/TMPHomePage>.

Location Summary
 National Forest System (NFS) lands within the Apache-Sitgreaves National Forests (Forests)
District: Apache-Sitgreaves National Forests All Units

Project Documents

Scoping | Analysis | Supporting

Analysis

| | <i>Date Published</i> |
|---|-----------------------|
| • Comment Period Cover Letter (August 2019) (PDF 148kb) | 08-30-2019 |
| • Revised DEIS - Volume 1 (August 2019) (PDF 11823kb) | 08-30-2019 |
| • Revised DEIS - Volume 2 (August 2019) (PDF 11166kb) | 08-30-2019 |
| • Alternative 1: Apache Large Map (28x48") (PDF 9062kb) | 08-30-2019 |
| • Alternative 1: Sitgreaves Large Map (28x44") (PDF 8706kb) | 08-30-2019 |
| • Alternative 2: Apache Large Map (28x48") (PDF 10217kb) | 08-30-2019 |
| • Alternative 2: Sitgreaves Large Map (28x44") (PDF 9182kb) | 08-30-2019 |
| • Alternative 3: Apache Large Map (28x48") (PDF 7186kb) | 08-30-2019 |
| • Alternative 3: Sitgreaves Large Map (28x44") (PDF 5947kb) | 08-30-2019 |
| • GIS Data Instructions (PDF 102kb) | 09-16-2019 |
| • Travel Management GIS Geodatabase (PDF 8649kb) | 10-08-2019 |

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⁹ See 40 C.F.R. §§ 1502.18(a) & (d); FAQ, 46 FR at 18034.

¹⁰ *Id.* at *17 (quoting 40 C.F.R. § 1502.18(a) & (d)).

¹¹ See <https://www.fs.usda.gov/project/?project=22692> (accessed October 24, 2019).

III. Forest Service failed to consider a reasonable range of alternatives and too narrowly defined the project's Purpose and Need.

A. Forest Service erred by omitting Subpart A of the Travel Management Rule.

The Forest Service faces many challenges with its vastly oversized, under-maintained, and unaffordable road system. The impacts from roads to water, fish, wildlife, and ecosystems are tremendous and well documented in scientific literature. See The Wilderness Society, *Transportation Infrastructure and Access on National Forests and Grasslands: A Literature Review* (May 2014) (Attachment 3) (literature review surveying the extensive and best-available scientific literature—including the Forest Service's 2000 General Technical Report synthesizing the scientific information on forest roads—on a wide range of road-related impacts to ecosystem processes and integrity on National Forest lands).¹² To address its unsustainable and deteriorating road system, the Forest Service promulgated the Roads Rule (referred to as “Subpart A”) in 2001.¹³ After 18 years, the Apache-Sitgreaves National Forest has yet to fully comply with these regulations, and this travel management planning process provides an opportunity for the Forest Service to finally identify a minimum road system (MRS) for the forest, as well as unneeded roads that the ASNF could close or decommission. Including Subpart A compliance in the purpose and need, as we urged in previous comments, is necessary given the rationale to exclude its consideration in the range of alternatives.

Under NEPA, the Forest Service's environmental analysis must include a discussion of “alternatives to the proposed action.”¹⁴ The analysis of alternatives “is characterized as ‘the heart’ of the environmental impact statement.”¹⁵ In the EIS, the agency must “[r]igorously explore and objectively evaluate all reasonable alternatives” in response to a “specif[ie]d ... purpose and need.”¹⁶ The ASNF explains that “[n]ine alternatives were considered, but dismissed from detailed consideration.”¹⁷ Among the alternatives the Forest Service deemed unreasonable are those specific to providing an environmentally and fiscally sustainable road system. Specifically alternatives that “...Bases the Motorized Transportation System Solely on Annual Funding for Road Maintenance;” and “An Alternative that Uses the Minimum Road System Based Solely on TAP Recommendations...”¹⁸

To be clear, identifying and implementing a minimum road system would necessarily reflect long term funding expectations under the regulations and therefore would incorporate annual road maintenance funding. As such, an alternative based solely on annual funding for road maintenance would be duplicative with an alternative that fulfils the need to comply with the Travel Management Rule (TMR) under Subpart A at 36 C.F.R. 212.5(b). Yet, the Forest Service did not consider such an alternative as it should.

Identification of the minimum roads system MRS and consideration of unneeded roads for closure or decommissioning requires a NEPA-supported decision. In other words, the Forest Service should include in each of its action alternatives an analysis of the recommendations made in its travel analysis report (TAR) in

¹² Hermann Gucinski *et al.*, *Forest Roads: A Synthesis of Scientific Information*, Gen. Tech. Rep. PNW-GTR-509 (May 2001), available at <http://www.fs.fed.us/pnw/pubs/gtr509.pdf>.

¹³ 66 Fed. Reg. 3206 (Jan. 12, 2001); 36 C.F.R. part 212, subpart A.

¹⁴ 42 U.S.C. § 4332(2)(C).

¹⁵ *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1174 (10th Cir.1999) (quoting 40 C.F.R. § 1502.14).

¹⁶ 40 C.F.R. §§ 1502.13, 1502.14(a).

¹⁷ RDEIS at 21.

¹⁸ *Id.*

order to make a decision that identifies the MRS and justifies its off-road vehicle designations. The EIS would then explain any departures from recommendations in the TAR and then demonstrate how each road in the proposed action MRS meets the TMR Subpart A direction that requires protection of forest resources.

Such analysis would follow from a clear purpose and need statement that includes complying with both Subparts A and B of the TMR. As it stands, the Forest Service explains that “[t]he purpose of this project is to comply with the TMR by providing a system of roads, trails, and areas designated for motor vehicle use (36 CFR 212) and for that system to reduce impacts to biological, physical, and cultural resources in the Apache-Sitgreaves National Forests.” Even though the Forest Service references the travel management rule, it only describes Subpart B, and actually cites to the constrained purpose as the rationale for not considering any alternative that meets Subpart A requirements:

The minimum necessary road system was analyzed in the Travel Analysis Process in 2008. This alternative was considered but eliminated from detailed study based on comments received from the public from 2005 through 2008, which indicated a strong desire for increased motorized access for dispersed camping and motorized big game retrieval that exceeded the minimum road system.¹⁹

With this explanation Forest Service demonstrates how it arbitrarily narrows the project’s purpose so as to exclude other reasonable alternatives, and erroneously elevates an unquantifiable desire for motorized access above regulatory requirements in the TMR. Dismissing the need and opportunity to comply with Subpart A is both arbitrary and capricious, especially considering other ongoing Forest Service travel planning processes that incorporates both Subparts A and B. For example, Forest Service staff on the Pike San-Isabel National Forest provide the following rationale:

There is a need to balance the current and future recreational desires of the public with Forest Service responsibilities for wildlife and fisheries management, water resources management, and forest management as well as the desires of local communities and affected private landowners.... Under 36 CFR part 212.5(b) there is a need to identify the minimum road system (MRS) needed for safe and efficient travel and for administration, utilization, and protection of NFS lands; and to identify roads under Forest Service jurisdiction that are no longer needed to meet forest resource management objectives and that, therefore should be decommissioned or considered for other uses, such as for trails.²⁰

The ASNF should follow this example instead of relying on an unmeasured and nebulous desire for motorized access to ignore its two main obligations under Subpart A. To clarify, one obligation is to identify unneeded roads to prioritize for decommissioning or to be considered for other uses.²¹ Another obligation is to identify the MRS needed for safe and efficient travel and for the administration, utilization, and protection of National Forest System lands.²² The MRS is the road system, determined by the Forest Service, as needed to:

¹⁹ RDEIS Appendix A at 55.

²⁰ Pike-San Isabel Public Motor Vehicle Use EIS, August 2019 at 1-9.

²¹ 36 C.F.R. § 212.5(b)(2).

²² *Id.* § 212.5(b)(1). In promulgating its rules, the Forest Service indicated that “[t]he requirement to identify roads for decommissioning is ‘[e]qually important’ as the overall identification of the minimum road system.” *Center for Sierra Nevada v. U.S. Forest Service*, 832 F. Supp. 2d 1138 (E.D. Cal. 2011) (quoting 66 Fed. Reg. at 3207).

- Meet resource and other management objectives adopted in the relevant land and resource management plan,
- Meet applicable statutory and regulatory requirements,
- Reflect long-term funding expectations, and
- Ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance.²³

The goal of subpart A is “to maintain an appropriately sized and environmentally sustainable road system that is responsive to ecological, economic, and social concerns.”²⁴ The Forest Service’s Washington Office issued a series of directive memoranda that outline how the agency expects forests to comply with subpart A.²⁵ First, each forest was required to submit its TAR by September 30, 2015.²⁶ Next, pursuant to its own regulations and directive memoranda, the Forest Service must consider the valid portions of its TAR and begin to determine the MRS in its analysis of projects of the appropriate geographic size, subject to review under NEPA.²⁷ By analyzing whether a proposed project is consistent with the relevant portions of the TAR, and considering the MRS factors under 36 CFR 212.5(b)(1), the Forest Service expects each forest to identify the MRS for particular forest segments.²⁸ The ASNF cannot continue to ignore its obligations under the TMR, especially given the agency’s ability to maintain its current road system.

The Forest Service is obligated to consider “the availability of resources for . . . maintenance and administration”²⁹ of system roads and trails. Unfortunately, the RDEIS does not consider a road system based on what the Forest Service can reasonably maintain. An economically sustainable road system was one of five alternatives that were dismissed from consideration based on rationalizations in the 2010 DEIS. In the 2010 DEIS (at 25) the Forest Service dismissed considering an alternative that would cap the miles of road based on what the Forest Service could afford to maintain. The DEIS points out the Forest Service can only afford to maintain 28% of the road system or 850 miles³⁰. Nonetheless they dismissed that alternative in a

²³ *Id.* (hereafter, MRS factors). *See also* Memorandum from Leslie Weldon to Regional Foresters *et al.* on Travel Management, Implementation of 36 C.F.R., Part 212, Subpart A (Mar. 29, 2012) (hereafter, 2012 Weldon Memo) (see Attachment 4)

²⁴ 2012 Weldon Memo at 1 (“The national forest road system of the future must continue to provide needed access for recreation and resource management, as well as support watershed restoration and resource protection to sustain healthy ecosystems.”). *See also* 66 Fed. Reg. 3206, 3207 (Jan. 12, 2001) (noting the 2001 rules “signal the shift away from development and construction of new roads to maintaining needed roads and decommissioning unneeded roads.”); Memorandum from Joel Holtrop, U.S. Forest Service Washington Office, to Regional Foresters *et al.* (Nov. 10, 2010) (hereafter, 2010 Holtrop Memo) (“Though this process points to a smaller road system than our current one, the national forest road system of the future must provide needed access for recreation and resource management and support watershed restoration and resource protection to sustain healthy ecosystems and ecological connectivity.”).

²⁵ 2010 Holtrop Memo; 2012 Weldon Memo; Memorandum from Leslie Weldon, U.S. Forest Service Washington Office, to Regional Foresters *et al.* (Dec. 17, 2013) (hereafter, 2013 Weldon Memo) (supplementing and reaffirming the 2012 Weldon Memo).

²⁶ *See* 2013 Weldon Memo.

²⁷ *See* 2012 Weldon Memo at 2 (directing forests to “analyze the proposed action and alternatives in terms of whether, per 36 C.F.R. 212.5(b)(1), the resulting [road] system is needed”).

²⁸ *Id.* (“The resulting decision [in a site-specific project] identifies the MRS and unneeded roads for each subwatershed or larger scale”).

²⁹ 36 C.F.R. § 212.55(a)

³⁰ There are some anomalies when comparing the maintenance cost estimates between 2010 DEIS and 2019 RDEIS. One of the most notable is that in 2010 the DEIS indicated that there were 49 miles of ML #5 and 88 miles of ML #4 (p. 39). In the 2019 DEIS they indicate that while there are still 88 miles of ML #4 roads there are no miles of ML #5 roads (p.34). The cost of maintenance per mile seems to have changed more than the roughly 20% inflation rate from

brief statement that does not include a single reference to support their claim of user opposition. The RDEIS does not provide any improvement on this issue, and in fact is forthright in dismissing the seriousness of this shortfall by conducting the analysis based on fiscal fantasies:

“Even though current funding levels may not support fully maintaining all NFS roads, **the economic comparison of alternatives assumes all designated NFS roads would be fully maintained fully.**”³¹

It appears that the Forest Service is ignoring a fiscally honest and sustainable plan. The RDEIS does not explain how the preferred alternative would address the gap between the funding needed to maintain a sustainable road system, and the funding that is budgeted, currently averaging \$1.41 million year. While no figure for deferred maintenance is given in the RDEIS, the 2010 DEIS (at 39) listed the deferred maintenance level at over \$52.5 million. At that time, the maintenance budget was \$2.1 million a year, and the increase in that deficit was \$2.6 million each year. Since then, the annual maintenance budget has decreased to \$1.41 million (down a third from 2010 DEIS values) and the yearly deficit has increased to over \$5.4 million, more than double what it was in DEIS (2010). As a result, the cost of deferred maintenance continues to grow.

None of the alternatives presented in the RDEIS address this lack of needed maintenance. Alternative 2 would reduce the current deficit of more than \$5.4 million/year to \$5.07 million/year. Alternative 3 would provide a slightly better improvement by reducing the deficit to \$4.8 million/year.³² Regardless, neither alternative would pay for more than a third of the cost of maintaining the proposed road system³³. This lack of maintenance will ultimately result in even more damage to the road system and resources which are damaged by erosion, sedimentation, and habitat fragmentation. The RDEIS recommends:

“Perform maintenance when needed. **DO NOT WAIT!** The longer you wait, the more onsite damage and off-site sedimentation will occur and repairs will be more costly.”³⁴

The dramatic maintenance backlog and funding shortage means that waiting is the only option. While neither Alternative comes close to proposing a system that is economically sustainable, Alternative 3 is the better choice, purely in that it proposes fewer miles to remain open. While the difference between the two alternatives is small, Alternative 3 pays for a slightly larger percentage of road maintenance cost. In addition, by restricting off-road travel for dispersed camping and big game retrieval, Alternative 3 would reduce the damage done to improved roads by vehicles breaking down road shoulders as users head off-road. Collectively, the reduced open-road mileage, constrained MBGR and dispersed camping areas, and lower density/mile² provided for in Alternative 3 benefits a number of ecological resources and moves towards a more fiscally sustainable system. Elements of Alternative 3 which provide for reduced open-road mileage, constrained MBGR and dispersed camping areas, and lower density/mile² should be incorporated into a revised preferred alternative in any subsequent NEPA document.

2007 to 2019, would explain. For example in the 2010 DEIS the cost of maintaining an ML #4 road was set at \$4,501. In the 2019 DEIS that same cost is set at \$10,479. Other ML levels have similar problems.

³¹ RDEIS at 33, emphasis added.

³² RDEIS at 38

³³ The current budget allocation of \$1.4 million would pay only 29% of the cost to maintain roads proposed in Alternative 2. Alternative 3 would increase the percentage covered to 31%.

³⁴ RDEIS, Appendix D at 216, emphasis in original

The National Forest road system is in a serious state of disrepair, and the ASNF is no exception. The growing backlog of unmaintained or under-maintained roads results in serious resource impacts. The desire for more motorized access is no reason to keep roads the Forest Service cannot maintain, especially where the backlog of maintenance results in deteriorating environmental conditions.

This project is a major opportunity for the Forest Service to close the gap between the cost of maintaining its massive forest road system and the limited funding it receives from Congress. We cannot emphasize enough that the ASNF must start taking actions that will put the forest on a trajectory towards achieving a sustainable roads system. Should the ASNF not utilize this project to identify and implement the MRS, then upon completion of this new round of Subpart B designations, we urge the Forest Service to immediately begin district-level projects that utilizes a project-level TAR, and identifies and implements the MRS through the NEPA process.³⁵

B. Forest Service Should Include Compliance with Subpart C of the Travel Management Rule.

Our previous comments urged the Forest Service to utilize this travel planning project to designate specific areas and trails that proper analysis demonstrates would be appropriate for over-snow vehicle use. In our comments on the DEIS in December 2010, we wrote that “routes for over snow vehicles (OSVs) should be designated as part of this project.” In addition, our comments of December, 2010 stated that “[i]f the Forest Service has made a decision to exclude OSV use from the Travel Management Planning process, the Forest Service must include documentation of that decision, along with the rationale for that decision, in the project record.” No such documentation has been provided, other than a cursory dismissal of our comments, wherein the Forest Service explains:

Over-snow vehicles have not been excluded in this process and are specifically exempted by 36 CFR 212.51. Use by over-snow vehicles will be considered under a separate planning process (see 36 CFR 212.81).³⁶

The Forest Service response failed to explain how OSV use was being addressed in the travel planning process, but regardless, it is now inaccurate and fails to adequately address our comments. To clarify, at the time of the earlier DEIS in 2010, the applicable rule under Subpart C gave the Forest Service the option for such designations, but it did not require publication of an OSV use map showing specific designations that met the same criteria listed under 36 C.F.R. 212.55. The Winter Wildlands Alliance successfully challenged the referenced exemption in federal court, resulting in a 2013 court order finding that Subpart C of the rule violated the mandatory executive order requirement that the Forest Service designate a system of areas and routes – based on the minimization criteria – where OSVs are permitted.³⁷ The court directed the agency to issue a new rule consistent with the executive orders. The agency finalized the revised Subpart C in January 2015.

³⁵ See 2012 Weldon Memo (“The next step in identification of the MRS is to use the travel analysis report to develop proposed actions to identify the MRS . . . at the scale of a 6th code subwatershed or larger. Proposed actions and alternatives are subject to environmental analysis under NEPA. Travel analysis should be used to inform the environmental analysis.”).

³⁶ RDEIS Appendix A at 185.

³⁷ Winter Wildlands Alliance v. U.S. Forest Service, No. 1:11-CV-586-REB, 2013 U.S. Dist. LEXIS 47728, at *27- 36 (D. Idaho Mar. 28, 2013).

The new rule requires each national forest unit with adequate snowfall to designate and display on an OSV use map a system of areas and routes where OSVs are permitted to travel, and OSV use outside the designated system is prohibited.³⁸ Thus, rather than allowing OSV use largely by default wherever that use is not specifically prohibited, the rule changes the paradigm to a “closed unless designated open” management regime. Forests must apply and implement the minimization criteria when designating each area and trail where OSV use is permitted.³⁹ Any areas where cross-country OSV use is permitted must be “discrete, specifically delineated space[s] that [are] smaller...than a Ranger District” and located to minimize resource damage and conflicts with other recreational uses.⁴⁰

Upon public notice, Subpart C does permit the Forest Service to grandfather previous decisions made with public involvement that restrict OSV use to designated areas and routes.⁴¹ Prior to adopting any existing winter travel management decisions on an OSV use map, however, the Forest Service must ensure that those decisions were subject to the executive order minimization criteria and satisfy other requirements of Subpart C. To date, the Forest Service has not demonstrated how existing over-snow vehicle use meets the minimization requirements specified in the TMR. Therefore the forest may not utilize the rule’s grandfathering provision without facing significant legal liability and must conduct a comprehensive winter travel planning process prior to relying on existing management decisions for authorizing continued OSV use. Our previous comments demonstrate the need to incorporate Subpart C compliance into this travel planning process.

Specifically, improper management of OSV use continues to persist on the forest, specifically in the Alpine, Black Mesa and Springerville Ranger Districts where recreational use conflicts are common. By not including winter travel planning to generate an OSV use map, the Forest Service will:

1. continue to allow resource damage from unanalyzed and unregulated OSV use, including negative impacts to wildlife and on vegetation in low-snow areas;
2. encourage recreational use conflicts by allowing OSV use in adjacent areas meant for quiet, non-motorized winter recreation; and
3. continue delaying compliance with the TMR Subpart C.

To reiterate, the Forest Service has stated that consideration of over-snow vehicles is specifically exempted by 36 CFR 212.51 and will be addressed in a separate planning process. The exemption that the Forest Service has cited (36 CFR 212.51) was superseded by a later regulatory change, which is codified at 36 CFR 212.81. We suspect that the Forest Service will argue that the current analysis is exempted because the travel management process began before the adoption of the newer regulations, and that the Forest Service will comply with Subpart C at a future date. Indeed, this rule became effective February 27, 2015, after the original initiation of this analysis in 2007. However, this travel management planning process resumed in the fall of 2016, after the Forest Service Manual was amended in July 2016 to reflect the over snow vehicle changes. Further, a final notice of intent to revise the DEIS was published in the Federal Register on October 2, 2017, more than two years after the over snow vehicle changes had taken effect.

³⁸ 36 C.F.R. §§ 212.81, 261.14.

³⁹ 36 C.F.R. §§ 212.81(d), 212.55(b).

⁴⁰ 36 C.F.R. §§ 212.1, 212.81(d), 212.55(b).

⁴¹ 36 C.F.R. § 212.81(b).

As the RDEIS recognizes (at page 3), “significant new circumstances or information” triggers the agency’s continuing obligation under the National Environmental Policy Act (NEPA) to supplement its previous analyses.⁴² Agencies must take a “hard look” at new information that bears on the environmental impacts of their actions, and either prepare a supplemental NEPA analysis or explain why the new information is not significant. For example, courts have determined that an agency’s failure to address new information related to sensitive species or new documentation of habitat damage violates NEPA.⁴³

The RDEIS provides a list (at page 3) of the “significant new information relevant to environmental concerns bearing on the proposed action” which include; 1) a revised Forest Plan (October, 2015), 2) changes to listed species and critical habitats, some of which have occurred since 2015⁴⁴, and 3) most notably, updates to the Clean Water Rule which took effect on August 28, 2015. The failure to consider the revised Subpart C as reflected in 36 CFR 212.81 conflicts with the Forest Service’s consideration of other rule changes which in fact took effect *after* the Subpart C revisions. We’ve highlighted the changes to the Clean Water Rule as notable because this example clearly exhibits that the Forest Service has chosen to supplement the travel management plan to include some, but not all, regulatory changes which have taken effect in recent years.

Recommendation: For these reasons, the Forest Service must revise the purpose of this project to clarify it will meet all requirements under Subparts A, B and C of the Travel Management Rule, and incorporate such compliance into each action alternative.

IV. Meaningfully apply the minimization criteria.⁴⁵

When designating trails and areas for off-road vehicle use the Forest Service must acknowledge the desire for motorized recreation is subordinate to the requirements under the TMR and the agency’s obligation to actually minimize impacts to natural resources and wildlife, and minimize conflicts among recreational uses. Collectively, these regulatory requirements are known and referred to as the “minimization criteria.”

A string of federal court cases invalidating Forest Service travel management decisions confirm the substantive nature of the agency’s obligation.⁴⁶ To satisfy its obligation, the Forest Service must apply a transparent and common sense methodology for meaningful application of each minimization criterion to each area and trail being considered for designation for off-road vehicle use.⁴⁷ That methodology should

⁴² 40 C.F.R. § 1502.9(c)(1)(ii).

⁴³ See *Sierra Club v. Bosworth*, 456 F. Supp. 2d 931, 939 (N.D. Cal. 2006); *Or. Nat. Des. Ass’n v. Sabo*, 854 F. Supp. 2d 889, 922-24 (D. Or. 2012); *Cascadia Wildlands v. BLM*, No. 6:12-CV-00095-AA, 2012 WL 6738275, at *10-11 (D. Or. 2012).

⁴⁴ For example, the New Mexico meadow jumping mouse critical habitat rule was published in 2016; see USDI Fish and Wildlife Service. 2016, Final Rule. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the New Mexico Meadow Jumping Mouse. Docket No. FWS-R2-ES-2013-0014; p. 195

⁴⁵ We note that the comments in this section are portrayed as ways the Forest Service violated the TMR, however each instance of failure to conduct an analysis also serves as a NEPA violation for failure to take a hard look at the environmental effects of the Forest Service’s proposed action.

⁴⁶ See *WildEarth Guardians v. Jeffries*, 370 F. Supp. 3d 1208, 1249-51 (D. Or. 2019); *WildEarth Guardians v. U.S. Forest Serv.*, 790 F.3d 920, 932-34 (9th Cir. June 22, 2015); *Friends of the Clearwater v. U.S. Forest Serv.*, No. 3:13-CV-00515-EJL, 2015 U.S. Dist. LEXIS 30671, at *37-52 (D. Idaho Mar. 11, 2015); *The Wilderness Soc’y v. U.S. Forest Serv.*, No. CV08-363-E-EJL, 2013 U.S. Dist. LEXIS 153036, at *22-32 (D. Idaho Oct. 22, 2013); *Cent. Sierra Envtl. Res. Ctr. v. U.S. Forest Serv.*, 916 F. Supp. 2d 1078, 1094-98 (E.D. Cal. 2013); *Idaho Conservation League v. Guzman*, 766 F. Supp. 2d 1056, 1071-74 (D. Idaho 2011).

⁴⁷ *Idaho Conservation League*, 766 F. Supp. 2d at 1071-74 (agency may not rely on “Route Designation Matrices” that fails to show if or how the agency selected routes with the objective of minimizing their impacts).

include several key elements, including providing opportunities for public participation early in the process;⁴⁸ gathering and applying site-specific data, the best available information, and best management practices;⁴⁹ minimizing site-specific and larger-scale impacts;⁵⁰ accounting for projected climate change impacts,⁵¹ and accounting for available resources for monitoring, enforcement and impacts from unauthorized motorized use.⁵² Courts recognize that the Travel Management Rule explicitly and substantively mandates the Forest Service to apply the minimization criteria to the location of designated routes and affirmatively explain—on a route-by-route and area-by-area basis—how the agency did so.⁵³ This analysis must not just explain how the minimization criteria was applied, but also explain how trail and area designations minimize impacts to various resources, wildlife, wildlife habitat, and conflicts between recreational uses.⁵⁴ Additionally, the Forest Service cannot simply assert it is complying with the TMR because it is complying with some other legal requirement, but rather must affirmatively demonstrate consideration and application of the minimization criteria.⁵⁵

To reiterate, the Forest Service must meaningfully apply the minimization criteria to show how it located each distinct, specifically designated area and trail with the objective of minimizing impacts. Proper application of the minimization criteria requires the Forest Service to get out on the ground, gather site-specific information, and apply the criteria to minimize resource damage and recreational use conflicts associated with each designated trail and area. Importantly, this information and analysis needs to be provided to the public for review and comment prior to any decision. Without completing the requisite analysis that demonstrates compliance with the TMR, conclusions that the proposed action meets the purpose and need are arbitrary and capricious in violation of NEPA.

A. The Forest Service Should Generate and Incorporate a New Travel Analysis Report.

The Forest Service prepared a Revised DEIS because of significant new information since the previous analysis in 2010, among which is the “[c]hange in baseline conditions as a result of the 2011 Wallow Fire, including wildlife habitat, aquatic habitat, cultural resources, and vegetation conditions.⁵⁶ We agree a Revised DEIS was warranted, and as such, the ASNF should have also prepared a new travel analysis report to inform

⁴⁸ 36 C.F.R. § 212.52(a).

⁴⁹ *Idaho Conservation League*, 766 F. Supp. 2d at 1074-77 (agency failed to use monitoring and other site-specific data showing resource damage); *Friends of the Clearwater*, 2015 U.S. Dist. LEXIS 30671, at *24-30, 40-52 (agency failed to consider best available science on impacts of motorized routes on elk habitat effectiveness or to select routes with the objective of minimizing impacts to that habitat and other forest resources); see also Switalski, T. A. and A. Jones, *Off-road vehicle best management practice for forestlands: A review of scientific literature and guidance for managers*, J. Cons. Planning 8:12-25 (2012) (Attachment 5). (outlining BMPs based on peer-reviewed science for OHV designations that are intended to minimize conflicts with other recreational uses and impacts to wildlife, water quality, soils, and vegetation).

⁵⁰ *Idaho Conservation League*, 766 F. Supp. 2d at 1066-68, 1074-77 (invalidating travel plan that failed to consider aggregate impacts of short motorized routes on wilderness values or site-specific erosion and other impacts of particular routes).

⁵¹ See Council on Environmental Quality, *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews* (Aug. 2016).

⁵² *Sierra Club v. U.S. Forest Serv.*, 857 F. Supp. 2d 1167, 1176-78 (D. Utah 2012) (NEPA requires agency to take a hard look at the impacts of illegal motorized use on forest resources and the likelihood of illegal use continuing under each alternative).

⁵³ *Jeffries*, 370 F. Supp. 3d at 1249.

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ RDEIS at 3-4.

the RDEIS that also reflected the change in baseline conditions. In preparing the proposed action (Alt. 2), the Forest Service explains, “[t]he modified proposed action from the 2010 DEIS and Travel Analysis Report for Apache-Sitgreaves National Forests (Bielecki 2008) were used as the foundation to develop this alternative.”⁵⁷ It then explains resource specialists reviewed the proposed action utilizing three screens:

- 1) a review of the proposed action from 2010 to evaluate the need for changes to match the existing condition;
- 2) completion of a preliminary effects analysis to identify any unacceptable environmental effects and to ensure that the project was meeting the specific criteria for designating trails, areas, and roads contained in 36 CFR 212.55; and
- 3) a review of the resulting proposed action to ensure the Forest Service considered specific road and trail comments from the last public comment period.⁵⁸

Certainly these screening criteria were necessary to make changes to the previous DEIS, but they do not replace the need to revise the Apache-Sitgreaves National Forest 2008 Travel Analysis Report. Specifically, the RDEIS lacks sufficient information demonstrating the “preliminary effects analysis” meets the Forest Service Handbook’s direction for conducting travel analysis, and producing the requisite products to inform the RDEIS. Further, the 2008 Travel Analysis Report (TAR) suggests the process was utilized to support compliance with both Subparts A and B of the TMR, but still relied on the old FS-643 report. 2008 TAR at 6,8. It is important to mention that FS-643 was essentially replaced with the Travel Analysis Process, which offers a broader scope than previously completed roads analysis reports.

Since the 2008 TAR appears to support decisions for both TMR Subpart A and B compliance, it is important that all current system roads and motorized trails be included in a new TAR for the purposes of achieving a comprehensive analysis. Further, given the proposed action under the RDEIS includes opening 152 miles of closed roads to the public, adding 19 miles of unauthorized roads to the transportation system along with 81 miles of unauthorized trails, these changes must be supported by analysis in a new TAR.⁵⁹ The new TAR must also include all the following components per the Forest Service Handbook (FSH) 7709.55, Chapter 21.2:

- A map displaying the recommended minimum road system;
- A list of unneeded roads;
- A list of the key issues;
- A prioritized list of the risks and benefits associated with changing the part of the forest transportation system under analysis;
- A prioritized list of opportunities for addressing those risks and benefits;
- A prioritized list of actions or projects that would implement the minimum road system; and
- A list of proposed changes to current travel management direction, including proposed additions to or deletions from the forest transportation system.

A new TAR is also necessary to incorporate the best available science, which certainly has progressed since the initial process completed in 2008. Toward this end, we urge the Forest Service to consider the report we

⁵⁷ RDEIS at 13.

⁵⁸ RDEIS at 13-14.

⁵⁹ RDEIS at 13, Table 2.

provide in Attachment 3⁶⁰ which indeed provides “new information” since the production of the original travel analysis report. For example, a positive correlation exists between lightning fire frequency and road density due to increased fine fuel accumulation along roads, and human-ignited wildfires are strongly associated with access to natural areas, especially in urban areas (i.e. within the wildland urban interface). The 2008 TAR failed to consider roads and motorized access as a vector for increased wildland fire risk, instead it only considered roads as a benefit to wildland fire suppression or, where access may be limited, as a risk to firefighter and public safety.⁶¹ Since the 2008 TAR was produced, new science has documented that 84% of all wildfires are started by humans,⁶² which should be no surprise to a National Forest that has experienced such large human started fires as the Rodeo-Chediski and Wallow Fires.

Further, the risks to wildlife need reevaluation due to the changes in baseline conditions, especially to habitats of threatened, endangered and sensitive species, and the designation of critical habitat for New Mexico meadow jumping mouse. Finally, the economic costs and benefits, and the ability of the ASNF most certainly have changed in the last 10 years, especially given the decline of the Capital Improvement and Maintenance budgets, and Congress’s defunding the Legacy Roads and Trails Program the last three budget years. The ability to properly maintain the existing road and motorized trail system must be incorporated into a new TAR, especially where the lack of capacity will exacerbate risks to aquatic and terrestrial resources.

B. Minimizing Damage to Soil, Watershed, Vegetation, and Other Forest Resources.

In designating off-road vehicle use on trails and in areas the Forest Service must “minimize damage to soil, watershed, vegetation, and other forest resources...”⁶³ This includes highly or moderately erosive soils, watershed function as assessed under the Watershed Condition Framework, in riparian areas and wetlands, and habitats for sensitive plant species. While we recognize the proposed action would reduce the harmful environmental consequences to these resources compared to the existing condition, the Forest Service must demonstrate such a reduction does in fact achieve minimization as required by the TMR Subpart B.

Here the Forest Service fails to do so primarily because the analysis does not differentiate between roads and trails, instead it combines them into a generic term “route” throughout Chapter 3. Given the specific criteria under 36 C.F.R. 212.55(b) applies to trails, not routes, this deficiency precludes our ability to discern if the proposed action does in fact meet the threshold of minimizing damage, thus preventing us from providing informed and meaningful comment on specific trail designations. This is especially concerning given “[i]t is recognized that there are, and would continue to be, localized direct and indirect negative impacts to these [soils, riparian, water] resources as a result of all the alternatives.”⁶⁴

The Forest Service recognizes the risks from motorized use on soil resources noting, “[o]ff-road travel on soils with moderate or high erosion hazard is more likely to channelize water and increase surface runoff,

⁶⁰ See The Wilderness Society, *Transportation Infrastructure and Access on National Forests and Grasslands: A Literature Review* (May 2014) (Attachment 3).

⁶¹ 2008 TAR at 62.

⁶² Balch, J.K., B.A. Bradley, J.T. Abatzoglou, R.C. Nagy, E.J. Fusco, and A.L. Mahood. 2018. Human-started wildfires expand the fire niche across the United States. *PNAS* 114(11): 2946-2951. Provided as Attachment 6.

⁶³ 36 C.F.R. 212.55(b).

⁶⁴ RDEIS at 166.

resulting in accelerated erosion.”⁶⁵ The risk from cross-country travel, and therefore the area designations under the proposed action are a serious concern as the RDEIS explains:

Effects of motorized cross-country travel (for the purposes of dispersed camping and big game retrieval to soil productivity include soil compaction, loss of vegetative ground cover, decreased soil porosity, increased soil bulk density, displacement of litter or duff layers leaving bare soil exposed, soil displacement, reduced infiltration rates, reduced percolation rates, decreased plant growth, disturbance to soil biotic crusts and reduced nutrient cycling. All of these effects lead to increased and concentrated overland flow, erosion, and sediment transport to downslope areas and connected stream courses following storm events, which pose a risk to long-term soil productivity, downstream water quality and overall watershed condition (Cole and Monz 2003, USDA Forest Service 2008a). Impacts from motorized cross-country travel are most pronounced when soils are wet, and are minimized under dry soil conditions.⁶⁶

The RDEIS also notes the harmful effects motorized use has on riparian resources explaining, “[o]ff-road motorized use and soil and vegetation disturbance has been observed to be highest in montane meadows compared to all other Forest vegetation types and poses the greatest threat to soil productivity, vegetation, and wildlife (USDA Forest Service 2008b).”⁶⁷ The Forest Service concludes that under all alternatives, “[r]epeated off-road motorized travel in meadows would continue to cause soil compaction. Although such compaction is not irreversible, it is a long-term adverse effect.”⁶⁸ Harmful effects to water quality are well known: “[t]he primary effect to water quality related to a motorized route system is sedimentation originating from road erosion. Roads contribute more off-site sediment than any other land management activity (Gibbons and Salo 1973; Meehan 1991).”⁶⁹ Yet, given the acknowledged harmful effects from motorized use on trails and areas designated for cross-country travel, the Forest Service fails to demonstrate how the proposed action actually minimizes damage to these resources. Rather, the RDEIS simply lists the miles of routes and acres affected under specific resources with corresponding percent decreases compared to the no action alternatives.⁷⁰ Simply listing acres and percent reductions is not sufficient to demonstrate compliance with agency’s duty to minimize damage to these resources. For example, the RDEIS states, “[i]n riparian areas, the acreage potentially impacted by motorized big game retrieval in action alternative 2 (16,899 acres) is 19 percent less than the alternative 1 (33,177 acres).”⁷¹ Yet, for Alternative 3 there would be no damage to riparian resources because it does not contain an exemption to the prohibition to cross-country travel for big game retrieval. The Forest Service fails to demonstrate how the 19% reduction is better than a 100% reduction in meeting the TMR requirements. This is a systemic flaw throughout the analysis.

Further, the RDEIS fails to explain how the location of the unauthorized routes that are proposed to be added to the designated motorized system as trails comply with the TMR requirements, or contribute towards the minimization of damage to soil, watersheds, vegetation, and other forest resources.

⁶⁵ RDEIS at 174.

⁶⁶ RDEIS at 173-74.

⁶⁷ *Id.* at 175.

⁶⁸ *Id.*

⁶⁹ *Id.* at 176.

⁷⁰ RDEIS at 178-181, and Table 83.

⁷¹ *Id.* at 179.

C. Minimize Harassment of Wildlife, and Significant Disruption of Wildlife Habitats.

As presented in our 2013 Comments on the Draft Environmental Impact Statement for Revision of the Apache-Sitgreaves National Forests,⁷² and our 2010 comments on the DEIS,⁷³ we again reiterate our support for route density standard of 1.0 mile/square mile (a standard supported by a large and influential number of scientists),⁷⁴ for the protection of threatened, endangered and sensitive species (including but not limited to Mexican spotted owl, Mexican gray wolf, New Mexico meadow jumping mouse, yellow-billed cuckoo, northern goshawk, lesser long-nosed bat, southwestern willow flycatcher, Chiricahua leopard frog, Gila chub, Little Colorado River spinedace, spikedace, Apache trout, loach minnow, pronghorn, black bear, and mountain lion).⁷⁵ The preferred alternative does not make meaningful progress towards this standard, and as such threatens the viability of numerous wildlife species.

Road density is a good predictor of habitat suitability for large mammals, with habitat effectiveness and population viability declining as road density increases.⁷⁶ Habitat models for elk have shown that road densities higher than one mile per square mile dramatically diminishes habitat quality.⁷⁷ In another study, mountain lions avoided improved dirt and hard-surfaced roads and selected home range areas with lower densities of these road types.⁷⁸ Related studies demonstrated that lions on the Kaibab Plateau and southern Utah avoided logging areas and established home ranges in areas with lower road densities.⁷⁹ A study conducted in North Dakota reported that mule deer avoid human activity associated with roads and energy production facilities. Other researchers observed that active deer used habitat within 0.06 mile of a road less than its availability, indicating that bedded deer avoid habitat within 0.03 miles of a road.⁸⁰

Because of changes to the environment and danger resulting from roads, many wildlife species have learned to partially or completely avoid roads. For example, elk,⁸¹ mountain lions,⁸² bears,⁸³ small rodents^{84,85} and likely many other animals all show partial or total aversion to roads, to the extent that they either will not

⁷² Sierra Club et al. 2013.

⁷³ AWC et al. 2010, Comments Prepared for the United States Forest Service's Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests, Arizona. Sent to the Forest Supervisor December 13, 2010.

⁷⁴ Union of Concerned Scientists. 2004. Letter to the USDA Forest Service Content Analysis Team, Salt Lake City, dated October 19th, 2004, from 123 concerned scientists regarding proposed rule making changing the 2001 Roadless Conservation Rule.

⁷⁵ AWC et al. 2010 comments on the DEIS.

⁷⁶ Noss, Reed F., and A.Y. Cooperrider. 1994. Saving Nature's Legacy: Protecting and Restoring Biodiversity. Washington, D.C.; Covelo, CA: Island Press.

⁷⁷ Lyon L. J. 1979. Habitat Effectiveness for Elk as Influenced by Roads and Cover. *Journal of Forestry*, October, 658-660.

⁷⁸ VanDyke, F. G., Brocke, R. H., and Shaw, H. G. 1986. Use of road track counts as indices of mountain lion presence. *Journal of Wildlife Management*. 50(1): 102-109.

⁷⁹ VanDyke, F.G., R.H. Brocke, H.G. Shaw, B.B. Ackerman, T.P. Hemker, and F.G. Lindzey. 1986. Reactions of mountain lions to logging and human activity. *Journal of Wildlife Management*. 50(1): 95-102.

⁸⁰ Fox, R.A. 1989. Mule Deer (*Odocoileus hemionus*) Home Range and Habitat Use in an Energy-Impacted Area of the North Dakota Badlands. M.S. Thesis, University of North Dakota. Grand Forks, ND.

⁸¹ Lyon L.J. 1979. Habitat Effectiveness for Elk as Influenced by Roads and Cover. *Journal of Forestry*, October, 658-660.

⁸² VanDyke, F.G., R.H. Brocke, and H.G. Shaw. 1986. Use of road track counts as indices of mountain lion presence. *Journal of wildlife Management* 50(1): 102-109.

⁸³ McLellan, B.N. and D. M. Shackleton. 1988. Grizzly bears and Resource-Extraction Industries: Effects of Roads on Behaviour, Habitat Use and Demography. *Journal of Applied Ecology* 25: 451-460.

⁸⁴ Garland, T. and G. Bradley. 1984. Effects of a Highway on Mojave Desert Rodent Populations. *American Midland Naturalist* 111(1): 47-55.

⁸⁵ Kozel, R.M. and E.D. Fleharty. 1979. Movements of Rodents across Roads. *The Southwestern Naturalist* 24(2): 239-248.

cross roads at all, creating a complete dispersal barrier, or use roadside habitat less extensively, effectively reducing total habitat area. Roads result in frequent and often negative encounters between wildlife and humans. Wildlife biologists have recognized problems with open roads that expose large mammals such as elk, deer, pronghorn, cougar and bighorn sheep to heavy hunting pressure, poaching, and harassment.⁸⁶ Other studies indicate that habitats with low road density better protect species sensitive to legal or illegal hunting and persecution.^{87,88}

Many other more common wildlife species, including mule deer^{89,90} and elk,^{91,92,93} avoid roads and prefer roadless areas, all of which is well documented in the literature.⁹⁴ Interestingly, road closures may result in greater hunting success rates and perceived improved hunting quality.⁹⁵ Increasing the amount of time hunters leave the vehicle and walk probably increases the number of animals seen and the likelihood of a kill.⁹⁶ Unroaded areas possibly attract higher-skilled hunters, contributing to greater hunting success.⁹⁷ Hunting management through road closures may be appealing to wildlife management agencies and the public because hunting opportunities remains relatively great compared to limiting numbers of hunters by controlled hunts or reducing season length.⁹⁸

1. Concerns Specific to Mexican Gray Wolf.

The Forest Service must ensure that specific trail and area designations minimize harassment of wildlife and significant disruption of wildlife habitats.⁹⁹ To be clear, this is an additional substantive duty separate from the agency's obligation to ensure compliance with the Endangered Species Act. In other words, findings that the action alternatives are not likely to jeopardize a specific species, here Mexican gray wolves, does not

⁸⁶Trombulak, S.C. and C.A. Frissell. 2000. Review of Ecological Effects of Roads on Terrestrial and Aquatic Communities. *Conservation Biology* 14(1): 18-26.

⁸⁷Thiel, R.P. 1985. Relationship Between Road Densities and Wolf Habitat Suitability in Wisconsin. *American Midland Naturalist* 113: 404-407.

⁸⁸Mech, L.D., S.H. Fritts, G.L. Raddle, and W.J. Paul. 1988. Wolf Distribution and Road Density in Minnesota. *Wildlife Society Bulletin* 16: 85-87.

⁸⁹Rost, G.R., and J.A. Bailey. 1979. Distribution of Mule Deer and Elk in Relation to Roads. *Journal of Wildlife Management* 43(3): 634-641.

⁹⁰Yarmoaloy, C., M. Bayer, and V. Geist. 1988. Behavior Responses and Reproduction of Mule Deer, *Odocoileus hemionus*, Does Following Experimental Harassment with an All-terrain Vehicle. *Canadian Field Naturalist* 102: 425-429.

⁹¹Thiessen, J.L. 1976. Some Relations of Elk to Logging, Roding and Hunting in Idaho's Game Management Unit 39. Pages 3-5 in S.R. Hieb and J.M. Peak (Ed. and Chairman). *Proceedings of the Elk-Logging-roads Symposium. Moscow, Idaho.* December 16-17, 1975. Forest, Wildlife and Range Experiment Station, University of Idaho, Moscow. 142 pp.

⁹²Rowland, M.M., M.J. Wisdom, B.K. Johnson, and M.A. Penninger. 2005. Effects of Roads on Elk: Implications for Management in Forested Ecosystems. Pages 42-52 in Wisdom, M.J., technical editor, *The Starkey Project: A Synthesis of Long-term Studies of Elk and Mule Deer*. Reprinted from the 2004 Transactions of the North American Wildlife and Natural Resources Conference, Alliance Communications Group, Lawrence, Kansas, USA.

⁹³Berry, C., and R. Ovely. 1976. Impacts of Roads on Big Game Distribution in Portions of the Blue Mountains of Washington. Pages 62-68 in Hieb, S.R. editor. *Proceedings of the Elk-Logging-Roads Symposium. Moscow Idaho.* December 16-17, 1975. Forest, Wildlife and Range Experiment Station, University of Idaho, Moscow. 142 pages.

⁹⁴See also, Lyon 1979, Lyon 1983 and Thiel 1985.

⁹⁵Gratson, M.W., and C.L. Whitman. 2000. Road Closures and Density and Success of Elk Hunters in Idaho. *Wildlife Society Bulletin* 28(2): 302-310.

⁹⁶Lyon et al. 1985.

⁹⁷Gratson and Whitman 2000.

⁹⁸Gratson and Whitman 2000.

⁹⁹36 C.F.R. 212.55(b).

necessarily demonstrate compliance with the requirement to minimize harassment of wildlife. This is most evident in the discussion of effects to Mexican grey wolves from motorized use:

“Wolves can experience disturbance from the presence and activities of humans and thus avoid areas used by humans such as roads and areas adjacent to them, especially when this noise produces noises such as those of vehicles. Areas with a high level of disturbance can become unavailable to wolves for activities such as hunting. Wolves are sensitive to disturbance during denning season, generally April 1 through July 31, and at rendezvous sites generally from June 1 through September 30. During this time, packs remain near the den site or may congregate at rendezvous sites, and disturbance may adversely affect reproductive success, natural behavior, or persistence of Mexican wolves (USDI Fish and Wildlife Service 2014a).”¹⁰⁰

When discussing the effects on Mexican gray wolves from the action alternatives, the RDEIS explains each alternative “...reduce the miles of motorized roads and trails that are open to the public. This may change wolf use patterns based on changes associated with road use or maintenance, but such changes would be temporary and would not interfere with wolves’ ability to carry out essential life functions.”¹⁰¹ The Forest Service appears to conflate the ability to carry out unspecified “life functions” with the specific action of minimizing harassment to individual wolves or significant disruption of their habitat. This is evident by the Forest Service’s own acknowledgment that motorized recreation can adversely affect Mexican wolf “reproductive success, natural behavior, or persistence.”¹⁰² This arbitrary and capricious error is most egregious in regard to the proposed action’s allowance for big game retrieval where 1,073,765 acres of suitable Mexican grey wolf habitat would be affected by motorized disturbance. Again generalized reductions in miles of routes or acres affected between Alternatives 1 and 2 fail to adequately demonstrate compliance with the TMR’s specific trail and area designation criteria. Especially since the RDEIS again combines roads and trails into the generic “route” term, and fails to account for specific harmful effects from each designation.

Further, the RDEIS contains outdated and inaccurate information related to Mexican gray wolves. Generally, the RDEIS’ analysis of effects to Mexican wolves is woefully inadequate and does not contain sufficient detail about potential impacts to the species, and the importance of ASNF as a corridor for wolf dispersal to other parts of Arizona, or the effects of the various alternatives on Mexican gray wolf habitat and dispersal. This violates NEPA.

In earlier comments¹⁰³ we thanked the ASNF staff for acknowledging “[i]t has been found that wolves are at risk from roads and open visibility that exposes them to danger from vehicle collisions and shootings. These types of mortality account for 65 percent of known Mexican wolf mortality since reintroduction.”¹⁰⁴ As credible research demonstrates, wolves avoid roaded areas and can be displaced by roads when road densities

¹⁰⁰ RDEIS at 138.

¹⁰¹ RDEIS at 138.

¹⁰² *Id.*

¹⁰³ Sierra Club Grand Canyon Chapter; Grand Canyon Wildlands Council; White Mountain Conservation League; Arizona Wilderness Coalition; Great Old Broads For Wilderness; Grand Canyon Wolf Recovery Project; Defenders of Wildlife; Sky Island Alliance; and Public Employees for Environmental Responsibility. 2013. Comments on the Draft Environmental Impact Statement for Revision of the Apache-Sitgreaves National Forests Plan. May 17, 2013.

¹⁰⁴ USFWS 2011. Mexican Wolf Web Site at <http://www.fws.gov/southwest/es/mexicanwolf>. Accessed September, 2012. Cited in Forest Service 2013 at p. 245.

surpass about one mile per square mile.¹⁰⁵ Roads enable human access to wolf habitat, increasing the likelihood for conflicts in areas occupied by wolves.

In fact, high road densities are a known cause of extirpation of wolves,¹⁰⁶ a serious concern for land as well as wildlife managers within the endangered Mexican wolf recovery zones such as the entire ASNF.

Although less visible than habitat destruction, illegal killing is a serious threat to many wildlife species and would be next to impossible without roads. For example, illegal killing is the leading cause of wolf mortalities in the Mexican Wolf Experimental Population Area of Arizona and New Mexico.¹⁰⁷ In addition, illegal shooting was found to be the primary cause of death for two small populations of grizzlies in Montana over four years of study, resulting in mortality for five out of 19 radio-collared bears.¹⁰⁸

Importantly, the RDEIS references the 1998 10(j) rule and 1996 Mexican gray wolf EIS.¹⁰⁹ Any subsequent NEPA document should be updated to reference the 2015 10(j) rule and accompanying NEPA analyses. Failure to do so violates the Forest Service's NEPA obligations. As part of this analysis, the Forest Service should also review the 2015 10(j) rule's analysis of road densities specific to the ASNF, and how the proposed designated route system comports with that analysis, and whether it remains accurate based on the preferred alternative. The Forest Service should also explain that the 2015 10(j) rule was recently found to be illegal by a federal court in Arizona, and that a new 10(j) rule will be issued by 2021, with additional NEPA analysis. Further, the federal court determined that the U.S. Fish and Wildlife's failure to make an essentiality determination for Mexican gray wolves was illegal, and therefore a new decision will be made in the future that *may* result in Mexican gray wolves being classified as an essential experimental population under the ESA.

2. Concerns Specific to Mexican Spotted Owl.

The systemic flaw in the project's analysis continues in regards to other threatened and endangered species, especially where the Forest Service acknowledges the action alternatives are likely to adversely affect listed species and their associated critical habitats.¹¹⁰ Should the U.S. Fish and Wildlife Service even find these harmful effects acceptable, the fact that such a cursory and generalized analysis finds the action alternatives will adversely affect listed species shows the agency wholly fails to minimize harassment to wildlife and significant disruption of their habitat. One example of this failure is in regards to Mexican spotted owl. Here the proposed action "may provide an overall benefit to the species through potential reduced disturbance from vehicle use via closing routes to the public. However, the action alternatives also propose to change the status of routes from closed to open or propose new routes in PACs. To mitigate potential impacts, it is recommended that seasonal closures during the breeding and nesting season (March 1 through August 31) be implemented or that new proposed routes remain closed."¹¹¹

¹⁰⁵ Thiel 1985; Mech et al. 1988.

¹⁰⁶ Thiel 1985; Mech et al. 1988.

¹⁰⁷ USFWS. Mexican Wolf Recovery Area Statistics: Mortalities 1998 2016. Accessed September 20, 2019. https://www.fws.gov/southwest/es/mexicanwolf/pdf/MW_mortality_web.pdf.

¹⁰⁸ Knick, S.T. and W. Kasworm. 1989. Shooting Mortality in Small Populations of Grizzly Bears. *Wildlife Society Bulletin* 17: 11-15.

¹⁰⁹ RDEIS at 138.

¹¹⁰ RDEIS at 161, Table 73.

¹¹¹ RDEIS at 142.

The Forest Service fails to demonstrate its mitigation measures will effectively meet the TMR's mandates as we explain below, and further, the mitigation measures shown in Table 64 are specific to the roads and trails the agency would open or construct under the proposed action, which fails to address the potential adverse effects to Mexican spotted owls from the continued motorized use on specific trails and from area designations. In fact, the analysis fails to specify the miles of trails the Forest Service would designate in Mexican spotted owl critical habitat under each alternative. Rather, the agency limits its analysis to primary activity centers (PACs), which is necessary but hardly sufficient since it fails to specify the miles of trails, and how many the agency would designate in primary constituent element or other habitats necessary for the species' recovery. In regards to area designations, under the proposed action "... approximately 1,943 acres of camping corridors would exist with PACs."¹¹² Yet, under Alternative 3 there would only be 5 acres.¹¹³ The allowance for big game retrieval would affect 58,302 acres with PACs under the proposed action, but none under Alternative 3. Again, the Forest Service fails to explain how its area designation would meet the minimization criteria, suggesting a reduction in acres with PACs compared to Alternative 1 would suffice.

The ASNF Forest Plan states that "New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified."¹¹⁴ Surprisingly, "the proposed action would add both new routes with new camping corridors within six PACs."¹¹⁵ In addition, the preferred alternative would create eight new motorized trails, one new road, and upgrade use status on twenty routes within MSO PACs.¹¹⁶ The expansion of road systems into PACs does not comport with the reasonable and prudent measures to eliminate or minimize adverse effects to Mexican spotted owls and their habitat on the ASNF.¹¹⁷

3. Concerns Specific to New Mexico Meadow Jumping Mouse.

The systemic flaws noted here for the Mexican spotted owl also apply to other species listed under the ESA, especially for the New Mexican Meadow Jumping Mouse where the action alternatives hardly depart at all from the existing condition, which the analysis fails to sufficiently explain in regards to motorized effects on the species' recovery and its ability to migrate to other areas of critical habitat.¹¹⁸

The New Mexico meadow jumping mouse (NMMJM) is highly imperiled, and is likely to become extinct in the next several years.¹¹⁹ The ASNF should be taking extraordinary efforts to improve species viability, but in fact the RDEIS does not suggest such actions are being taken. The RDEIS states that "While localized effects of camping corridors may occur, overall use would have minimal effects on the mouse and its critical habitat."¹²⁰ This statement stands in stark contrast to the well-known threats to NMMJM, which include dispersed camping and vehicle use off roads (which would include MBGR). The Biological Opinion for the ASNF Forest Plan states that "Dispersed recreational activities such as camping, hiking, fishing, and off-road

¹¹² RDEIS at 145.

¹¹³ RDEIS at 146, Table 66.

¹¹⁴ ASNF Forest Plan at 76.

¹¹⁵ RDEIS at 145.

¹¹⁶ RDEIS at 142-143, Table 64.

¹¹⁷ See 2015 Biological Opinion, at 44.

¹¹⁸ RDEIS at 140, Table 62.

¹¹⁹ USDI Fish and Wildlife Service. 2014b. Species Status Assessment Report New Mexico meadow jumping mouse (*Zapus hudsonius luteus*). Southwest Region (Region 2), Albuquerque, NM. Available online at: <https://www.fws.gov/southwest/docs/NewMexicomeadowjumpingmousefinalSSA.pdf>.

¹²⁰ RDEIS at 140.

vehicle use can reduce or eliminate the dense herbaceous riparian vegetation needed by the jumping mouse. Streamside trails and open barren areas in jumping mouse habitat are documented on the ASNFs.”¹²¹

Despite the direct take that may occur because of recreational motor vehicle use, the preferred alternative maintains 64 acres of occupied habitat open to dispersed camping, 1,456 acres of occupied habitat open to MBGR.¹²² Also, the preferred alternative provides no reduction in open route miles in occupied habitat, and a mere 6% reduction in critical habitat.¹²³ But worse, the Forest Service has proposed to open a currently closed route in occupied and critical habitat. The preferred alternative does not do enough to reduce threat of vehicular harm to NMMJM, is not consistent with the plan components reviewed in the 2015 Biological Opinion, and is likely to result in adverse modification of habitat for a species that has already experienced a “significant reduction in occupied localities likely due to cumulative habitat loss and fragmentation across the range of the jumping mouse.”¹²⁴ This is reflected in the May Affect, Likely to Adversely Affect determination. Any subsequent NEPA document should close additional roads in NMMJM critical habitat, avoid establishment of new routes, as well as eliminate dispersed camping and MBGR.

4. Sensitive Species Analysis Insufficient and Misleading.

Finally, in regards to Regional Forester sensitive species (RFSS) for alternatives 2 and 3, the analysis finds each may impact individuals, will not cause a trend toward future listing. Here the difference between ESA and TMR compliance is most stark since the Forest Service fails to provide sufficient evidence, analysis or discussion proving that not causing a trend toward future listing meets the mandate to minimize harassment of wildlife or significant disruption of their habitat.

Ultimately, the cumulative effects analysis demonstrates our overall concern and fundamental flaw with the action alternatives when it concludes:

Cumulatively, alternatives 2 and 3 may reduce potential habitat and PCEs, increase habitat fragmentation for wildlife, and increase visual and noise disturbance. Depending on the species, these activities can have both short-term and long-term impacts. Wildlife may be temporarily displaced from areas, depending on the recreational activity and duration, but they may also permanently abandon areas where continued use occurs. Creating well defined routes, recreational sites, and camping areas may reduce the potential for the creation of unmanaged areas that have the potential to encroach into important wildlife areas.¹²⁵

The finding here, even with such insufficient analysis, demonstrates the Forest Service failed to demonstrate its compliance with the TMR. Further, the RDEIS fails to explain how the location of the unauthorized routes that are proposed to be added to the designated motorized system as trails comply with the TMR requirements, or contribute towards the minimization harassment of wildlife and disruption of wildlife habitats.

¹²¹ USDI Fish and Wildlife Service. 2015. Biological Opinion for Land Management Plan for the Apache-Sitgreaves National Forests, Arizona Ecological Services Office, Phoenix, AZ.

¹²² RDEIS at 140, Table 63.

¹²³ RDEIS at 140, Table 62.

¹²⁴ USDI Fish and Wildlife Service. 2014. Recovery Outline: New Mexico Meadow Jumping Mouse. N.M. Ecological Services Field Office, Albuquerque, New Mexico: p. 6.

¹²⁵ RDEIS at 157.

The Forest Service’s “assumed occupancy” approach linked to PNVT’s vastly overestimates the potential occurrence of sensitive species across the planning area. To use the northern goshawk as an example, the scale of analysis used in the RDEIS is the PNVT, but that dramatically over-represents the spatial extent of goshawk habitat, which is not just a vegetation type but rather it is a subset of vegetation types that possess certain characteristics (nesting habitat requiring large and old trees, mature structures, higher density, etc). Without a specific analysis of road status effects on goshawk PFAs, it is premature to determine that the proposed action “Will not alter forest-wide habitat and population trends.”¹²⁶ This deficiency in the analysis undermines the premature determinations for all 39 Region 3 sensitive species listed in the RDEIS in table 52. Similar shortcomings can be identified for each sensitive species, as many require specific habitat elements, conditions, successional stages, moisture regimes, or soils.

Without identifying the spatial occurrence of proposed open roads on the actual habitats for these species (not just vague/coarse scale PNVTs), the analysis mischaracterizes the effects of the proposed action and dramatically underestimates the degree to which roads may affect these species. The RDEIS does not specifically analyze the effects of the proposed action on the goshawk, or any other Region 3 sensitive species, so the public has no way to evaluate the degree to which these species’ habitats are affected. However, Alternative 2 increases open road miles over current management in dry mixed conifer forests where goshawks occur.¹²⁷ Any subsequent NEPA document should utilize a finer scale analysis approach which actually quantifies the effects of the proposed action on actual functional habitat of each species, not generalized PNVTs or other landscape-scale methods of vegetation mapping.

- 5. Preferred Alternative Fails to Address Needs Related to Aquatic and Riparian Wildlife and Habitats.**
 - a. Alternative 2 Does Not Meet the Objectives and Management Approaches Contained in the ANSF Forest Plan.**

The 2015 ANSF Forest Plan, Slightly Revised in October 2017, recognizes the importance of riparian habitats and requires they be protected along with the species that depend upon them:

Fish, most wildlife, and many plant species depend on riparian areas for their existence. Riparian areas provide important habitat connectivity for terrestrial and aquatic species...

Riparian areas are important because water is rare in the Southwest. Four specific PNVTs occur on the Apache-Sitgreaves NFs: montane willow riparian forest, cottonwood-willow riparian forest, mixed broadleaf deciduous riparian forest, and wetland/cienega. These riparian areas cover less than 3 percent of the forests; however, they represent a major portion of the riparian areas within the ecoregion. Because they cover such a small area and have a shallow saturated zone beneath them, they are vulnerable to disturbance. The interface between riparian areas and uplands provides important wildlife habitat and helps filter sediment. Compared to surrounding uplands, riparian areas have characteristics (e.g., surface water, saturated soils) that reduce fire frequency and fire intensity.¹²⁸

¹²⁶ RDEIS at 162, Table 74.

¹²⁷ RDEIS at 150, Table 67.

¹²⁸ ANSF Forest Plan at 32.

The ANSF Forest Plan explains the critical need for improving riparian habitats due to the departed conditions in the overwhelming majority of riparian vegetation types:

All of the riparian PNVTs' overstory vegetation, except for the cottonwood-willow riparian forest PNVT, are considered departed from reference conditions. Most of this departure has occurred in response to past grazing and water diversions for agriculture. Many riparian areas are not in proper functioning condition (PFC). Changes in watershed conditions have resulted in altered canopy cover, including a loss of mature trees and saplings; a change in vegetation species composition, including a shift toward increasing conifer dominance; and a reduction in the amount and composition of herbaceous vegetation. In addition, riparian tree species are not successfully reproducing in many areas. During drought conditions, riparian areas are more susceptible to damage from wildfire than under normal conditions.

Based on range conditions and ecological status, the majority (approximately 59 percent) of herbaceous understory vegetation within the riparian forested PNVTs is highly to severely departed from desired conditions. The ecological status of herbaceous understory vegetation within the wetland/cienega riparian areas is split, nearly equally, between low to moderately departed and high to severely departed from desired conditions.¹²⁹

The Forest Service realizes that poor stream health is a systemic problem that must be addressed throughout the Forests:

Most streams have been altered from reference conditions, resulting in reduced quality of fish habitat. Inventoried streams have exhibited reduced habitat capabilities. Native fish populations and distributions are decreasing range-wide, and the resiliency of all fish species has been impacted. The alteration of habitats, isolation of populations, and introduction of nonnative species have contributed to the decline of native fish habitat and populations.¹³⁰

The ANSF Forest Plan also identifies the specific need to address sedimentation and soil compaction in its Mid-Scale Desired Conditions:

Sedimentation and soil compaction from forest activities (e.g., vehicle use, recreation, livestock grazing) do not negatively impact riparian areas.¹³¹

The Objectives for Riparian Areas in the ANSF Plan aim to remove roads from waterways and again explain how roads are degrading stream and riparian habitats:

- 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.

¹²⁹ ANSF Forest Plan at 33.

¹³⁰ ANSF Forest Plan at 25.

¹³¹ ANSF Forest Plan at 34.

- 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.”¹³²

And finally, in its Management Approach, the ASNF Plan again recognizes that “eliminating roads” will improve riparian conditions.¹³³

Yet, the Forest Service supports Alternative 2, which it admits will harm native fish and increase stream sediment loads:

For the Apache trout and Gila chub, the increases in open road miles would directly and indirectly contribute additional fine sediments to these species habitats.

For alternative 2, road stream-crossings would be opened for all of the aquatic species, resulting in direct and/or indirect impacts. For the Gila chub, Gila trout, and spikedace, they would not be impacted by alternative 3, as they have no road-stream crossings added. For the remaining species, alternative 3 would add open road-stream crossings, although they are substantially less than what is proposed for alternative 2. These additional stream-road crossings would add to the current level of direct, indirect, and cumulative impacts by increasing the levels of fine sediments currently being added to streams and aquatic habitats, and increase the risk and opportunity to introduce nonnative species.¹³⁴

In this way, the Forest Service has chosen in its Travel Management Plan to do what it identified as problematic in its Forest Plan. Despite the recognition by the Forest Service that riparian habitats are in trouble, followed by a clear call to revitalize riparian and aquatic habitats, the Forest Service has chosen an alternative that harms riparian and aquatic ecosystems and is planning to impair these important resources.

b. Alternative 2 Does Not Meet the Need of the Travel Management Plan and it Harms Riparian and Aquatic Habitats.

The RDEIS Purpose and Need section includes the need to improve the condition of streams and riparian habitats on the Apache-Sitgreaves National Forests:

There is a need to counter adverse effects to resources from continued use of some roads and motorized trails, as well as cross-country travel. Some detrimental effects from motorized use of the Apache-Sitgreaves include increased sediment deposits in streams, which degrade water quality and fish habitat; the spread of invasive plants; disturbances to a variety of plant and wildlife species; and the continued risk of damaging cultural resource sites.¹³⁵

Yet, as previously stated, the Forest Service supports Alternative 2, which it admits will harm native fish and increase stream sediment loads:

¹³² ASNF Forest Plan at 35.

¹³³ ASNF Forest Plan at 36.

¹³⁴ RDEIS at v-vi.

¹³⁵ RDEIS at iii.

For the Apache trout and Gila chub, the increases in open road miles would directly and indirectly contribute additional fine sediments to these species habitats.

For alternative 2, road stream-crossings would be opened for all of the aquatic species, resulting in direct and/or indirect impacts. For the Gila chub, Gila trout, and spikedace, they would not be impacted by alternative 3, as they have no road-stream crossings added. For the remaining species, alternative 3 would add open road-stream crossings, although they are substantially less than what is proposed for alternative 2. These additional stream-road crossings would add to the current level of direct, indirect, and cumulative impacts by increasing the levels of fine sediments currently being added to streams and aquatic habitats, and increase the risk and opportunity to introduce nonnative species.¹³⁶

The Forest Service clearly states that Alternative 3 approaches the resource protection Need for the Travel Management Plan and Alternative 2 does not. If there is an option, in this case Alternative 3, that comes closer to meeting the Purpose and Need for this action, that is the alternative that should be favored.

In discussing Soil and Water, USFS goes on to explain why Alternative 3 should be preferred, with modifications:

Alternative 3 would result in the greatest beneficial effects to soil health, riparian conditions, and water quality as compared to the other alternatives. Alternative 3 indicators were all lower when compared to the no action alternative with exception of the impaired water bodies within 300 feet of a route indicator, which was the same for all alternatives. The most dramatic differences in indicators between the action and no action alternatives was for off road designated dispersed camping and motorized big game retrieval. This is especially true for alternative 3, where off road motorized big game retrieval is excluded.¹³⁷

The Forest Service is failing to meet its own Purpose and Need by choosing Alternative 2, and clearly admits that Alternative 3 would come close to meeting that Purpose and Need.

c. Alternative 2 Prevents Impaired and Non-Attaining Streams from Improving.

Roads “in close proximity to drainages” is a top non-point pollution source on the Apache-Sitgreaves, which still has 49.3 miles of impaired and non-attaining streams, 14 miles of which are not attaining due to turbidity.¹³⁸ Turbidity and sedimentation can be improved by removing roads from streams and riparian areas, as the RDEIS points out:

The effects of roads and motorized trails on water quality can include sedimentation (deposited solids), turbidity (suspended solids), and pollutants within affected watersheds. Turbidity reduces in-stream photosynthesis and results in reduced food supply and aquatic habitat.¹³⁹

¹³⁶ RDEIS at v-vi.

¹³⁷ RDEIS at vi.

¹³⁸ RDEIS at 170, 171.

¹³⁹ RDEIS at 176.

The primary effect to water quality related to a motorized route system is sedimentation originating from road erosion. Roads contribute more off-site sediment than any other land management activity (Gibbons and Salo 1973; Meehan 1991). Motorized routes can cut across hillsides, often intercepting precipitation, surface runoff, and subsurface water flow and transmit it directly into ditches and through culverts where entrain sediment and coalesce with sediment laden runoff from the roadbed and cut banks before entering a stream. Research has shown that sediment from roads can result in adverse effects to streams and aquatic habitat (Meehan 1991; Dissmeyer 2000; Gucinski et al. 2001; MacDonald and Stednick 2003).¹⁴⁰

The Forest Service is well aware of the damage these roads are doing to water quality:

Existing roads and trails serve as a conduit by capturing and delivering sediment into connected stream courses, and pairing water quality from a suspended sediment standpoint...

Effects of motorized cross-country travel (for the purposes of dispersed camping and big game retrieval to soil productivity) include soil compaction, loss of vegetative ground cover, decreased soil porosity, increased soil bulk density, displacement of litter or duff layers leaving bare soil exposed, soil displacement, reduced infiltration rates, reduced percolation rates, decreased plant growth, disturbance to soil biotic crusts and reduced nutrient cycling. All of these effects lead to increased and concentrated overland flow, erosion, and sediment transport to downslope areas and connected stream courses following storm events, which pose a risk to long-term soil productivity, downstream water quality and overall watershed condition (Cole and Monz 2003, USDA Forest Service 2008a).¹⁴¹

The Forest Service expounds on the negative impacts of roads and motorized trails in riparian areas and wetlands:

Roads and motorized trails in riparian areas have many of the same effects as those in upland sites; however they compound these effects by disrupting many of the natural beneficial functions provided by riparian areas. A motorized route system can affect riparian areas and wetlands/wet meadows directly or indirectly by inducing changes to natural hydrologic functions. Motorized routes that are adjacent to, or that intersect portions of riparian areas including wetlands/wet meadows alter surface and subsurface hydrology and water flow causing disruption of drainage patterns, decrease in infiltration and loss of water storage. Motorized routes can directly damage riparian vegetation by the action of tires churning up and removing vegetation within or near wet meadows and stream channels, resulting in these systems not functioning properly. Soil rutting, compaction and detachment of soils, and accelerated erosion may occur, as well as sediment transport and sediment deposition occurring into connected waters, reducing water quality on-site and downstream.

Riparian areas are popular recreation sites because of the cool and shady environment they provide in an otherwise hot and arid area. Roads in riparian areas facilitate recreational access to these areas which compounds the effects of the roads themselves. Off-road motorized use and soil and vegetation disturbance has been observed to be highest in montane meadows compared to all other

¹⁴⁰ RDEIS at 176.

¹⁴¹ RDEIS at 173-174.

Forest vegetation types and poses the greatest threat to soil productivity, vegetation, and wildlife (USDA Forest Service 2008b). Repeated off-road motorized travel in meadows would continue to cause soil compaction. Although such compaction is not irreversible, it is a long-term adverse effect.¹⁴²

...The effects of roads and motorized trails on water quality can include sedimentation (deposited solids), turbidity (suspended solids), and pollutants within affected watersheds. Turbidity reduces in-stream photosynthesis and results in reduced food supply and aquatic habitat. Roads increase nutrient delivery to streams by removing vegetation, re-routing water flow paths, and increasing sediment delivery (Gucinski et al. 2001). Nutrients discharged into aquatic systems can cause algal blooms, which reduce water clarity and deplete oxygen (ADOT 1995). Pollutants associated with leaks and spills of petroleum products may be adsorbed to sediments, absorbed by plant material, or dissolved in runoff; once mobilized, these contaminants may enter aquatic systems (Ouren et al. 2007). Roads can lead to water temperature changes by removal of streamside vegetation where roads encroach on channels, and alter streamflow regimes through processes described earlier. Water quality can also be adversely affected when fugitive dust and contaminants enter aquatic systems. Airborne dust and contaminants adsorbed to dust particles raised by OHV traffic may eventually settle directly onto wetlands.

The primary effect to water quality related to a motorized route system is sedimentation originating from road erosion. Roads contribute more off-site sediment than any other land management activity (Gibbons and Salo 1973; Meehan 1991). Motorized routes can cut across hillsides, often intercepting precipitation, surface runoff, and subsurface water flow and transmit it directly into ditches and through culverts where entrain sediment and coalesce with sediment laden runoff from the roadbed and cut banks before entering a stream. Research has shown that sediment from roads can result in adverse effects to streams and aquatic habitat (Meehan 1991; Dissmeyer 2000; Gucinski et al. 2001; MacDonald and Stednick 2003).

Stream crossings create the most vulnerable point on the stream channel to adverse impacts from a motorized route system. They directly impact the stream by the action of vehicle tires disturbing and mobilizing stream bank and substrate sediments. Crossings, additionally, indirectly effect water quality by providing a direct hydrologic connection from the route into the stream, without a vegetative filter that might remove suspended sediments. Unless hydrologically disconnected, the route will continue to funnel sediment-laden runoff into the stream.

Water quality can also be indirectly affected through the connectivity of the road system to the drainage network. The greater distance a road is from a stream channel, the lower probability of depositing sediment directly into the drainage. The closer a road is to a stream channel, the shorter the distance for vegetation to filter out sediment that mobilized during runoff events. Literature supports that disturbances within 300 feet of streams have the greatest potential to impact water quality, via overland flow (Burroughs and King 1989; Belt et al. 1992). Roads located near a stream can also modify hydrologic response of streamflow from runoff events by responding more rapidly to runoff events, increasing peak stream flows. Stream channels may respond to increases in peak

¹⁴² RDEIS at 175.

flows by widening or deepening in order to carry these greater flow rates, which may then lead to a higher rate of channel bank erosion and bed mobilization.

Road closures do not immediately eliminate hydrologic impacts and improve water quality. Rather, the disturbed surface takes years to stabilize depending on the level of success in the closure, soil characteristics, vegetative recovery, and other such factors. Proper road or decommissioning, which returns the road bed to a more natural state offers the best opportunity to restore health to heavily roaded watersheds and to aquatic habitat downstream. Dispersed camping can have the direct effect of disturbing the vegetative ground cover, exposing bare soil, causing soil compaction and rutting on wet soils and causing accelerated sheet and rill erosion, loss of soil and vegetation productivity (Cole and Monz 2003, USDA Forest Service 2008a), and localized sediment delivery into connected perennial waters.¹⁴³

The Forest Service is being negligent by refusing to take action to protect resources and improve water quality when they clearly know that road removal will help prevent turbidity and sedimentation problems while improving water filtration and water quality.

The Forest Service has an obligation to protect natural resources and must assist the State in achieving restoration of impaired and non-attaining streams. Instead, in the preferred alternative, the Forest Service is not making any changes to motorized routes near impaired waters, allowing a stream crossing to remain on an impaired stream and 2.6 miles of motorized routes within 300 feet of impaired waterbodies.¹⁴⁴ The Forest Service did not analyze removing stream crossings or closing motorized routes near impaired waterbodies under any alternative. Under the proposed alternative, the Forest Service is only eliminating 6% of routes within 300 feet of perennial streams and 7% of routes within 300 feet of lakes.¹⁴⁵ Alternative 3 would clearly result in the greatest improvement to watershed health; according to its own assessment, the Forest Service is committing to resource damage if it adopts Alternative 2.¹⁴⁶ In National Forests where 78% of the watersheds are classified as “Functioning at Risk” or “Impaired Function”, it is imperative that the Forest Service take all actions possible to improve watershed function, and the Forest Service is failing to protect resources when it chooses Alternative 2 despite having identified roads “in close proximity to drainages” as one of the “most prevalent non-point source[s] of pollution”.¹⁴⁷

Since the source of non-attainment for two of the waterways in the Apache-Sitgreaves National Forests is turbidity, the obvious solution to improve these waterways and comply with the Clean Water Act is to remove roads from their proximity.¹⁴⁸

d. Alternative 2 will cause direct harm to Threatened, Endangered, and Sensitive Riparian and Aquatic Species.

The Forest Service offers an excellent review of the myriad ways that roads harm wildlife, from direct mortality resulting from vehicle collisions to alteration of the physical and chemical environment of a stream,

¹⁴³ RDEIS at 176-177.

¹⁴⁴ RDEIS at 180.

¹⁴⁵ RDEIS at 180.

¹⁴⁶ RDEIS at 185.

¹⁴⁷ RDEIS at 170, 187.

¹⁴⁸ RDEIS at 171.

to alteration of the watershed and its ability to collect and transport water.¹⁴⁹ Yet the Forest Service is evading its responsibilities under the Endangered Species Act by choosing a preferred alternative that increases impacts to six out of thirteen special status riparian and aquatic species on the Forest and offers less than a two percent decrease in route miles affecting another three special status species.¹⁵⁰ Although the Forest Service claims that species action areas all have decreases in the numbers of open roads under Alternative 2, it is unclear how there could be any improvement to the action areas since the number of road crossings in every single aquatic species action area increases.¹⁵¹

The Forest Service admits this is a huge problem for species recovery:

Stream crossings create the most vulnerable point on the stream channel to adverse impacts from a motorized route system. They directly impact the stream by the action of vehicle tires disturbing and mobilizing stream bank and substrate sediments. Crossings, additionally, indirectly effect water quality by providing a direct hydrologic connection from the route into the stream, without a vegetative filter that might remove suspended sediments. Unless hydrologically disconnected, the route will continue to funnel sediment-laden runoff into the stream.¹⁵²

e. The Forest Service Should Do More to Protect Special Status Riparian and Aquatic Areas.

The San Francisco River is Impaired and is also critical habitat for the endangered spikedace and loach minnow. The San Francisco River is also eligible for Wild and Scenic designation and part of an Audubon Important Bird Area.¹⁵³ Southwestern willow flycatchers have nested at a site near the San Francisco headwaters and 1,327 acres of critical habitat for yellow-billed cuckoo has been proposed along the San Francisco River.¹⁵⁴ According to the RDEIS, “Roads along the Blue River, Eagle Creek, and San Francisco River have had considerable negative impacts to the fish species and populations within these drainages, along with the associated riparian habitat and corridors. The endangered loach minnow and spikedace populations have likely been impacted the greatest in these areas, along with the Gila and roundtail chubs.”¹⁵⁵ We are grateful for the removal of NFS Road 212 from the San Francisco River between Martinez Ranch and the Forest Service boundary. Yet, the preferred alternative actually slightly increases the road density in the San Francisco River-Luna Lake watershed.¹⁵⁶ The Blue and San Francisco Rivers Complex, along with all other Important Bird Areas in the Forest have new routes proposed under all alternatives, and Alternative 2 has minimal road closures within Important Bird Areas.¹⁵⁷ The Forest Service must protect resources by closing more routes within these essential areas.

¹⁴⁹ RDEIS at 211-214 and elsewhere.

¹⁵⁰ Table 99, RDEIS at 215.

¹⁵¹ Table 102, RDEIS at 218.

¹⁵² RDEIS at 176.

¹⁵³ RDEIS at 56, 134.

¹⁵⁴ RDEIS at 146, 149.

¹⁵⁵ RDEIS at 208.

¹⁵⁶ RDEIS at 247.

¹⁵⁷ RDEIS at 155

The Forest Service can and should do far more to protect Wild and Scenic Rivers. Less than 4 miles of routes in eligible Wild and Scenic River corridors are proposed to be closed under Alternative 2.¹⁵⁸ Roads interfere with both “Wild” and “Scenic” values by bringing motorized vehicles into the river corridor and marring viewsheds.

6. RDEIS Does Not Address Wildlife Habitat Connectivity.

We previously commented that the travel planning process offers an opportunity to reduce wildlife habitat fragmentation and decommission roads in key wildlife corridors in order to improve connectivity and increase the resilience of wildlife to climate change. We encouraged the Apache-Sitgreaves National Forests to incorporate information generated from the Arizona Wildlife Linkages Assessment¹⁵⁹, and other regional conservation plans such as the Sky Islands Wildlands Network. Relatively recent modeling depicts ASNF’s wildlife connectivity value,^{160,161} while conservationists have long described and documented for the forest’s staff wildlife linkages and designation proposals.¹⁶² It does not appear that these products were referenced or utilized, nor does the agency’s response to our comments address these available planning products. Considering and planning for habitat connectivity is an effective means to minimize disruption of wildlife habitats. Connectivity is defined as “the degree to which the landscape facilitates or impedes movement.”¹⁶³ Permeability is essentially synonymous with connectivity, referring to the degree to which regional landscapes, encompassing a variety of natural, semi-natural, and developed land cover types, are conducive to wildlife movement and to sustain ecological processes. There are two ways to increase connectivity: (1) focus on conserving areas that facilitate movement, and (2) mitigate landscape features that impede movement, such as roads.¹⁶⁴ Both strategies together produce the most effective results.¹⁶⁵

A long history of ecological and conservation science has addressed questions of reserve design, extinction risks from isolation, and the value of connectivity (for example, see Newmark 1995,¹⁶⁶ Quammen 1996,¹⁶⁷ and Soulé and Terborgh 1999). The preponderance of relevant, peer-reviewed articles reveals that the most

¹⁵⁸ RDEIS at 60, 64, 69.

¹⁵⁹ Nordhaugen, S.E., E. Erlandsen, P.I. Beir, B.D. Eilerts, R. Schweinsburg, T. Brennan, T. Cordery, N. Dodd, M. Maiefski, J. Przybyl, S. Thomas, K. Vacariu, and S.t Well. 2006. Arizona’s Wildlife Linkages Assessment: http://conservationcorridor.org/cpb/Nordhaugen_et_al_2006.pdf

¹⁶⁰ Belote, R.T., M.S. Dietz, B.H. McRae, D.M. Theobald, M.L. McClure, G.H. Irwin, P.S. McKinley, J.A. Gage, and G.H. Aplet. 2016. Identifying Corridors Among Large Protected Areas In the United States. *PLoS ONE* 11(4): e0154223. doi:10.1371/journal.pone.0154223.

¹⁶¹ Fields, K., D.M. Theobald, and M. Soulé. 2010. Modeling Potential Broad-scale Wildlife Movement Pathways Within the Continental United States. Whitepaper, July 2, 2010. Wildlands Network and Colorado State University. http://rewilding.org/rewildit/images/Wild-LifeLines_Wildlands-Network_White-Paper_low-res-copy.pdf

¹⁶² See: Grand Canyon Wildlands Council. 2008. Mogollon Wildlife Conservation Area: Coconino and Apache-Sitgreaves National Forests. Submitted to the ASNF Planning staff, July 2008; and Grand Canyon Wildlands Council, Center for Biological Diversity, and Arizona Wilderness Coalition. 2008b. Mogollon and Chevelon Wilderness: A Proposal for the Apache-Sitgreaves National Forests. Submitted to the ASNF planning staff, February 1, 2008.

¹⁶³ Taylor, P.D., L. Fahrig, K. Henein, G. Merriam. 1993. Connectivity is a Vital Element of Landscape Structure. *Oikos* 68: 571-573.

¹⁶⁴ Ament, R., R. Callahan, M. McClure, M. Reuling, G. Tabor. 2014. *Wildlife Connectivity: Fundamentals for Conservation Action*. Center for Large Landscape Conservation. Bozeman, MT.

¹⁶⁵ Soulé, M.E., and J. Terborgh. 1999. *Continental Conservation: Scientific Foundations of Regional Reserve Networks*. Washington, D.C.; Covelo, CA: Island Press.

¹⁶⁶ Newmark, W.D. 1995. Extinction of Mammal Populations in Western North American National Parks. *Conservation Biology* 9(3): 512-526.

¹⁶⁷ Quammen, D. 1996. *The Song of the Dodo: Island Biogeography in the Age of Extinctions*. London: Hutchinson.

frequently cited recommendation for protecting biodiversity is protection and restoration of connectivity to allow species to move and adapt in response to habitat degradation and climate-induced changes (for example, see Soulé and Terborgh 1999, Heller and Zavaleta 2009, Mawdsley et al. 2009,¹⁶⁸ Hagerman and Satterfield 2014,¹⁶⁹ IPCC 2014,¹⁷⁰ and Schmitz et al. 2015¹⁷¹). In the research cited here, conservation scientists emphasize the importance of maintaining a connected network of protected areas to prevent ecosystems and populations from becoming isolated, reduce the risk of extinction, and ultimately sustain biodiversity. Climate change further exacerbates the problem of isolation as fragmented landscapes are less resilient to ecological disturbances, to resisting native species loss, and to reducing emerging threats, such as disease. The research cited here establishes that the combined threat of climate change and fragmentation is the most important conservation challenge we face. It follows that creating, restoring, and maintaining large, connected networks of protected areas has emerged as one of the highest priorities for conservation in the age of climate change.

Researchers have concluded that wildlife corridors increase movement between habitat patches by approximately 50%, compared to patches that are not connected by corridors.¹⁷² Linking protected areas, such as wilderness and primitive areas, as well as other crucial habitats like riparian systems, ensures larger, cohesive landscapes of high biological integrity that allow for the migration, movement, and dispersal of wildlife and plants. Improving connectivity is a strategic and proven method of allowing wildlife to move in response to environmental change. Effective connectivity also facilitates maintenance and restoration of strongly interactive species, which, once ecologically effective populations are achieved, significantly contribute to sustaining ecological resilient habitats.¹⁷³

Properly designed networks of wildlife corridors represent one of the best strategies to mitigate the negative impacts of habitat fragmentation and help wildlife species adapt to climate change. Strategies that seek to maintain or restore connectivity between protected or otherwise intact natural areas are now considered critical to biodiversity conservation.^{174,175} Conservation scientists have long agreed “the preponderance of evidence is that corridors almost certainly facilitate travel by many species.”¹⁷⁶ Scientists have formulated a number of analytical frameworks for prioritizing specific habitat corridors to preserve landscape connectivity

¹⁶⁸ Mawdsley, J.R., R. O’Malley, and D.S. Ojima. 2009. A Review of Climate Change Adaptation Strategies for Wildlife Management and Biodiversity Conservation. *Conservation Biology* 23(5):1080-1089.

¹⁶⁹ Hagerman S.M., and T. Satterfield. 2014. Agreed but not preferred: expert views on taboo options for biodiversity conservation, given climate change. *Ecological Applications* 24: 548–559.

¹⁷⁰ IPCC. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Ipcc. 2014.

¹⁷¹ Schmitz, O.J. J.J. Lawler, P. Beier, C. Groves, G. Knight, D.A. Boyce Jr., J. Bulluck, K.M. Johnston, M.L. Klein, K. Muller, D.J. Pierce, W.R. Singleton, J.R. Strittholt, D.M. Theobald, S.C. Trombulak and A. Trainor. 2005. Conserving biodiversity: practical guidance about climate change adaptation approaches in support of land-use planning. *Natural Areas Journal* 35(1): 190-203.

¹⁷² Gilbert-Norton, L., R. Wilson, J.R. Stevens, and K.H. Beard. 2010. A Meta-analytic Review of Corridor Effectiveness. *Conservation Biology* 24(3): 660-668.

¹⁷³ Soulé, M.E., and R. Noss. 1998. Rewilding and Biodiversity: Complementary Goals for Continental Conservation. *Wild Earth* 8(3):18-28.

¹⁷⁴ Hilty, J., W. Lidicker, and A. Merenlender. 2006. *Corridor Ecology: The Science and Practice of Linking Landscapes for Biodiversity Conservation*. Island Press, Washington, D.C.

¹⁷⁵ Taylor, P.D., L. Fahrig, and K.A. With. 2006. Landscape Connectivity: A Return to the Basics, in K.R. Crooks, and M. A. Sanjayan, editors. *Connectivity Conservation*. Cambridge University Press, Cambridge, UK.

¹⁷⁶ Beier, P. and R.F. Noss. 1998. Do Habitat Corridors Provide Connectivity? *Conservation Biology*. 12(6): 1241-1252

(e.g., Compton et al. 2007¹⁷⁷; Carroll et al. 2011¹⁷⁸; McRae et al. 2008¹⁷⁹; Walker and Craighead 1997¹⁸⁰), and this area of conservation science continues to see intense growth. Although the particulars of wildlife responses to climate change are largely unknown,^{181,182,183} establishment of landscape connectivity via corridors is the most frequently cited strategy for combating the impacts of climate change on biodiversity.¹⁸⁴

We appreciate the ASNF's emphasis on safe wildlife passage among habitat areas to preserve species viability,¹⁸⁵ strongly support classification of pronghorn, Mexican wolf, beaver, Gunnison's prairie dog, mountain lion, and black bear as "Highly [strongly¹⁸⁶] Interactive Species,"¹⁸⁷ and support the objectives including the emphasis on large blocks of interconnected habitat.¹⁸⁸ However, it is not clear to us how these commitments affected the development of alternatives in the RDEIS.

"Strongly interactive"—also called keystone or foundation species—are species whose absence or substantial reduction across the landscape leaves a functional void that, over time, can create changes leading to degraded or simplified ecosystems.¹⁸⁹ The ecological function of these species may take the form of altering habitat in a manner benefiting other species or in the form of affecting prey species, who may in turn affect habitat structure and function. In addition, species that range widely to meet their needs are also considered strongly interactive species.

Strongly interactive species examples found on the ASNF include pronghorn antelope and wolves. The former, pronghorn, are far ranging in order to meet seasonal needs for nutrition, fawning, and wintering

¹⁷⁷ Compton, B.W., K. McGarigal, S.A. Cushman, and L.R. Gamble. 2007. A Resistant-kernel Model of Connectivity for Amphibians that Breed in Vernal Pools. *Conservation Biology* 21:788-799.

¹⁷⁸ Carroll, C., B. McRae, and A. Brookes. 2011. Use of Linkage Mapping and Centrality Analysis Across Habitat Gradients to Conserve Connectivity of Gray Wolf Populations in Western North America. *Conservation Biology* 26(1): 78-87.

¹⁷⁹ McRae, B.H., B.G. Dickson, T.H. Keitt, and V.B. Shah. 2008. Using Circuit Theory to Model Connectivity in Ecology, Evolution, and Conservation. *Ecology* 89: 2712-2724.

¹⁸⁰ Walker, R.S., and L. Craighead. 1997. Analyzing Wildlife Movement Corridors in Montana Using GIS. *Proceedings of the 1997 International ESRI Users Conference*. Environmental Sciences Research Institute, Redlands, California.

¹⁸¹ Root, T.L. J.T. Price, K.R. Hall, S.H. Schneider, C. Rosenzweig, and J.A. Pounds. 2003. Fingerprints of Global Warming on Wild Animals and Plants. *Nature* 421: 57-60.

¹⁸² Travis, J.M.J. 2003. Climate Change and Habitat Destruction: A Deadly Anthropogenic Cocktail. *Proceedings of the Royal Society of Biological Sciences* 270: 467-473.

¹⁸³ Jarema, S.I., J. Samson, B.J. McGill, and M.M. Humphries. 2009. Variation in Abundance Across a Species' Range Predicts Climate Change Responses in the Range Interior Will Exceed Those at the Edge: A Case Study with North American Beaver. *Global Change Biology* 15: 508-522.

¹⁸⁴ Heller, N.E. and E.S. Zavaleta. 2009. Biodiversity Management in the Face of Climate Change: A Review of 22 Years of Recommendations. *Biological Conservation* 142: 14-32.

¹⁸⁵ Page 252 in US Forest Service Draft Environmental Impact Statement for the Apache Sitgreaves National Forests Land Management Plan. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5407539.pdf

¹⁸⁶ Soulé, Michael E., James A. Estes, Brian Miller, and Douglas L. Honnold. 2005. Strongly Interactive Species: Conservation, Policy, Management, and Ethics. *BioScience* 55(2):168-176. [https://doi.org/10.1641/0006-3568\(2005\)055\[0168:SISCPM\]2.0.CO;2](https://doi.org/10.1641/0006-3568(2005)055[0168:SISCPM]2.0.CO;2)

¹⁸⁷ Page 293 in Forest Service. 2013. Programmatic Draft Environmental Impact Statement For the Apache Sitgreaves National Forests Land Management Plan.

¹⁸⁸ Page 294 in Forest Service. 2013. Programmatic Draft Environmental Impact Statement For the Apache Sitgreaves National Forests Land Management Plan.

¹⁸⁹ Soulé, M.E., J.A. Estes, J. Berger, and C.M. Del Rio. 2003. Ecological Effectiveness: Conservation Goals for Interactive Species. *Conservation Biology* 17: 1238-1250. DOI: 10.1111/j.1523-1739.2006.00449.x

areas.¹⁹⁰ The latter, wolves, can strengthen the health of prey herds by culling compromised animals (e.g., the old and weak) and help to keep herds actively moving, thereby preventing overuse of prey habitat areas.^{191,192,193} Wildlife managers increasingly recognize that control of deer and elk populations through hunting by humans is not functionally equivalent to predation by large carnivores.^{194,195,196,197} Humans generally kill the very individuals that nature would have selected to propagate the species—big males and females—raising concerns of undesirable evolutionary consequences from trophy hunting.¹⁹⁸ Natural predation, on the other hand, often affects sex-age classes that are most vulnerable and that also contribute relatively little to population growth, including very young and very old individual.¹⁹⁹

Another advantage of natural predation includes its positive effect on controlling chronic wasting disease (CWD). This debilitating disease affecting deer, elk, moose, and bighorn sheep^{200,201,202} has been found in all the intermountain states except Arizona.²⁰³ That fortunate situation most likely will change since the disease is especially prevalent in western Colorado.²⁰⁴ In addition, the disease is reported in other adjacent states

¹⁹⁰ O’Gara, Bart W., and Jim D. Yoakum. 2004. *Pronghorn: Ecology and Management*. University Press of Colorado. 944 pages. ISBN:978-0-87081-757-1

¹⁹¹ Ripple, W.J., J.A. Estes, R.L. Beschta, C.C. Wilmers, E.G. Ritchie, M. Hebblewhite, J. Berger, B. Elmhagen, M. Letnic, M.P. Nelson, O.J. Schmitz, D.W. Smith, A.D. Wallach, and A.J. Wirsing. 2014. Status and Ecological Effects of the World’s Largest Carnivores. *Science* 343: 124184-1 through 124184-11.

¹⁹² Beschta, R.L., and W.J. Ripple. 2011. The Role of Large Predators in Maintaining Riparian Plant Communities and River Morphology. *Geomorphology* doi:10.1016/j.geomorph.2011.04.042

¹⁹³ Ripple, W.J., T.P. Rooney, and R.L. Beschta. 2010. Large Predators, Deer, and Trophic Cascades in Boreal and Temperate Ecosystems. Pages 141-161. In Terborgh, J. and J.A. Estes. 2010. *Trophic Cascades: Predators, Prey and Changing Dynamics of Nature*. Washington, DC: Island Press.

¹⁹⁴ Berger, J. 2005. Hunting by Carnivores and by Humans: Is Functional Redundancy Possible and Who Really Cares? Pages 316-341. In J. Ray, K.H. Redford, R. Steneck and J. Berger (eds). *Large Carnivores and the Conservation of Biodiversity*. Washington, D.C.: Island Press.

¹⁹⁵ Berger, J. 2010. Fear-Mediated Food Webs. In Terborgh, J. and J.A. Estes. 2010. *Trophic Cascades: Predators, Prey and Changing Dynamics of Nature*. Washington, DC: Island Press

¹⁹⁶ Logan, K.A., and L.L. Sweanor. 2001. *Desert Puma: Evolutionary Ecology and Conservation of an Enduring Carnivore*. Washington, London, Covelo, CA: Island Press.

¹⁹⁷ Darimont, C.T., S.M. Carlson, M.T. Kinnison, P.C. Paquet, T.E. Reimchen, and C.C. Wilmers, 2009. Human Predators Outpace Other Agents of Trait Change in the Wild. *Proceedings of the National Academy of Science*. 106: 952–954.

¹⁹⁸ Logan and Sweanor 2001; Darimont 2009.

¹⁹⁹ Festa-Bianchet, M. 2013. Why Evolutionary Biology is Important for Conservation: Toward Evolutionary Sustainable Harvest Management. In Bekoff, M. (editor). 2013. *Ignoring Nature No More: The Case for Compassionate Conservation*. University Chicago Press: Chicago and London.

²⁰⁰ Spraker, T.R., M.W. Miller, E.S. Williams, D.M. Getzy, W.J. Adrian, G.G. Schoonveld, R.A. Spowart, K.I. O’Rourke, J.M. Miller, and P.A. Merz. 1997. Spongiform Encephalopathy in Free-ranging Mule Deer (*Odocoileus hemionus*), White-tailed Deer (*Odocoileus virginianus*) and Rocky Mountain Elk (*Cervus elaphus nelsoni*) in Northcentral Colorado. *Journal of Wildlife Diseases* 33: 1–6.

²⁰¹ Baeten, L.A., B.E. Powers, J.E. Jewell, T.R. Spraker, and M.W. Miller. 2007. A Natural Case of Chronic Wasting Disease in a Free-Ranging Moose (*Alces alces shirasi*). *Journal of Wildlife Diseases* 43: 309–314.

²⁰² Williams, E.S., and S. Young. 1980. Chronic Wasting Disease of Captive Mule Deer: A Spongiform Encephalopathy. *Journal of Wildlife Diseases* 16: 89–98.

²⁰³ USGS. 2018. Distribution of Chronic Wasting Disease in North America. February 2018.

<https://www.usgs.gov/media/images/distribution-chronic-wasting-disease-north-america-february-2018..>

²⁰⁴ Finley, B. 2018. A Disease that Attacks the Brains of Deer, Elk and Moose Has Hit 16 Percent of Male Animals Tested in Colorado—and Hunters Need to be Cautious: CPW Task Force Mulls Increased Monitoring, Increased Hunting on Infected Herds, Limits on Deer, Elk and Moose Congregation The Could Spread Deadly Prion Disease. Denver Post. May 21, 2018. <https://www.denverpost.com/2018/05/21/chronic-wasting-disease-deer-elk-moose-colorado/>.

including three different geographic areas within Utah,²⁰⁵ and New Mexico has reported CWD in at least three counties.²⁰⁶ Studies indicate that predation could markedly decrease prevalence of CWD under certain conditions.²⁰⁷ Predators' high predation success with diseased prey is likely due to poorer body condition of the prey and consequently their slower avoidance behavior, decreased awareness, or reduced stamina. Studies suggest that predators may also use visual pattern, scent, or behavioral cues to select compromised prey.²⁰⁸ Researchers consider wolves, a large coursing predator, to be effective in selective removal of CWD infected deer.²⁰⁹ Mountain lions and most likely coyotes (*Canis latrans*) benefit from lack of vigilance by CWD-affected deer as well. In any event, credible studies indicate that selective predation could dampen or eliminate the emergence of CWD in new locations (e.g., Arizona), supporting speculation that had wolves been present at ecologically effective levels, CWD might never have been established where it has.²¹⁰ In any event, some scientists are advocating the reintroduction of wolves to parts of their historic ranges, not simply for the sake of wolves, but to repair ecosystems that have been damaged by an absence of large predators.²¹¹

Without a robust analysis of habitat fragmentation and areas important to wildlife connectivity, the Forest Service cannot demonstrate compliance with several authorities. NEPA requires the agency to consider connectivity in this planning process. The direct and cumulative impacts analysis is particularly relevant. When designating trails and areas for motorized use, Executive Orders 11644 as amended by 11989 require the Forest Service to minimize harassment of wildlife and disruption of wildlife habitat.²¹² This would include fragmentation associated with trail, road, and area designation.

Belote and colleagues (2016) have identified corridors between large protected areas, including the Blue Range Primitive Area and other wilderness units in the southwest. Their research is provided as Attachment 9. Additionally, habitat linkage modelling specific to the Mexican gray wolf recovery area has identified habitat linkage corridors across the recovery area, including a number through the ASNF. This research is provided as Attachment 10. We request that these linkage modelling studies are reviewed and that any subsequent NEPA document address how habitat connectivity, linkages, and corridors are addressed and protected.

²⁰⁵ Utah Division of Wildlife Resources . 2018. Chronic Wasting Disease in Utah. September 10, 2018. <https://wildlife.utah.gov/diseases/cwd/>.

²⁰⁶ New Mexico CWD Information. 2016. Locations Where CWD Was Found: Dona Ana, Otero, and Socorro. <http://cwg-info.org/category/new-mexico/>.

²⁰⁷ Wild, M.A., N.T. Hobbs, M.S. Graham, and M.W. Miller. 2011. The Role of Predation in Disease Control: A Comparison of Selective and Nonselective Removal on Prion Disease Dynamics in Deer. *Journal of Wildlife Diseases* 47(1): 78–93.

²⁰⁸ *Id.*

²⁰⁹ *Id.*

²¹⁰ Samuel, M.D., D.O. Joly, M.A. Wild, S.D. Wright, D.L. Otis, R.W. Werge, and M.W. Miller. 2003. Surveillance Strategies for Detecting Chronic Wasting Disease in Free-ranging Deer and Elk. US Geological Survey, National Wildlife Health Center, Madison, Wisconsin.

²¹¹ Licht, D., J. Millspaugh, K. Hunkel, C. Kochanny, and R. Peterson. 2010. Using Small Populations of Wolves for Eco-System Restoration and Stewardship. *BioScience* 60(2): 147-158.

²¹² Exec. Order No. 11644, § 3(a).

7. Preferred Alternative Fails to Protect Threatened, Endangered and Sensitive Species.

The Endangered Species Act establishes an affirmative obligation for the federal government to use “all methods and procedures which are necessary to bring any [listed] species to the point at which the measures provided in this [act] are no longer necessary,”²¹³ and states that “all federal departments and agencies shall seek to conserve endangered ... and threatened species.”²¹⁴ “Conserve” and “conservation” are defined by the statute as using “all methods and procedures which are necessary to bring any endangered ...or threatened species to the point at which the measures provided” by the statute are no longer necessary.²¹⁵

The ESA requires all federal agencies to utilize their authorities to carry out programs for the conservation of threatened and endangered species.²¹⁶ The ESA requires the Forest Service, in consultation with the U.S. Fish and Wildlife Service (FWS), to “insure that any action authorized, funded, or carried out by” the Forest Service “is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification” of the critical habitat of such species.²¹⁷ FWS and the Forest Service must use the best scientific data available during the consultation process.

For formal consultation, as is the case here, the FWS must provide a biological opinion (BiOp) to the Forest Service that explains how the proposed action will affect listed species and habitat. If FWS concludes that the proposed action “will jeopardize the continued existence” of a listed species or result in the destruction or adverse modification of critical habitat, the biological opinion must outline “reasonable and prudent alternatives.”²¹⁸ Additionally, when authorizing incidental take within the BiOp, the FWS must specify the amount or extent of incidental take, any “reasonable and prudent measures” that FWS considers necessary or appropriate to minimize such impact, and any “terms and conditions” that the Forest Service must comply with.²¹⁹

The preliminary determination of “Likely to Adversely Affect” for so many species is simply shocking.²²⁰ The TMR provides an analytical framework for minimizing harassment and disruption to wildlife and their habitats, but the ASNF apparently chose not to pursue a plan to match the urgency of the climate-induced changes occurring on the landscape. We anticipate that significant reductions in road density and closure of specific roads in strategically identified areas or watersheds are needed to minimize the adverse effects of the proposed action. Any subsequent NEPA document needs to provide for these much needed reductions, and provide justification for the remaining road systems left in place.

²¹³ 16 U.S.C. §1532(3). The goal of the statute is not to “list” species but to recover their populations so that they can be “delisted”.

²¹⁴ 16 U.S.C. § 1531(c).

²¹⁵ 16 U.S.C. § 1532(3).

²¹⁶ 16 U.S.C. § 1536(a)(1)

²¹⁷ 16 U.S.C. § 1536(a)(2).

²¹⁸ 16 U.S.C. § 1536(b)(3)(A).

²¹⁹ 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(i).

²²⁰ RDEIS at 237-238, Table 120.

D. Minimize Conflicts of Recreational Uses.

Conflict between motorized and nonmotorized uses is asymmetrical, “meaning that motorized users affect other recreationists more than they are affected by other recreationists, and often, this leads to displacement of non-motorized recreationists (Adams and McCool 2009, Stokowski and LaPointe 2000, McCay and Moeller 1976, Lynn and Brown 2003).”²²¹ For this reason, it is crucial for the Forest Service to preserve the natural, quiet settings recreationists expect when they visit specific areas of the forest. These include designated Wilderness areas, primitive and semi-primitive nonmotorized areas classified under the recreation opportunity spectrum (ROS), eligible Wild and Scenic Rivers, and specific Inventoried Roadless Area. Minimizing conflicts between these incompatible uses is absolutely necessary to ensure compliance with the TMR and also to provide for the type of experience most people expect when recreating in the forest, as the RDEIS explains:

Because the Apache-Sitgreaves National Forests are used more for non-motorized recreational purposes, and the large majority of the Forests is open to motorized use; it is not surprising that conflict between motorized and non-motorized users is common (USDA Forest Service 2011). Furthermore, this level of conflict is likely to grow as unrestricted motorized use continues and increases across most parts of the Forests, and as non-motorized nature-based recreation activities continue to grow.

Yet the Forest Service fails to properly disclose how motorized designations would affect nonmotorized recreation, and what the RDEIS does disclose demonstrates the proposed action fails to minimize conflicts among recreational uses. The Forest Service only provides a table summarizing existing motorized designations without fully explaining how existing motorized use affects the characteristics that make these places special.²²²

Specifically, the Forest Service fails to disclose the amount of primitive and semi-primitive nonmotorized (SPNM) acres that are within IRAs, and how many of those acres would be subject to motorized use from dispersed camping and big-game retrieval. This is important because the Forest Service did not analyze how motorized designations would affect each of the nine IRA characteristics that includes the primitive and SPNM settings, as well as the natural-appearing landscapes with high scenic quality.²²³ The Forest Service does show there would be a decrease of 4.64% of motorized designations in IRAs, but it’s unclear how many trails would be designated or the amount of acres available for motorized use.

The analysis does disclose that under the proposed action 3.99 miles of roads in the primitive ROS setting would have motorized designations, as would 83.22 miles in SPNM settings. While the minimization criteria does not apply to specific road designations, it does apply to the 300 ft area open to motorized use for dispersed camping and the 1.2 million acres open to motorized use for big-game retrieval. As such, the RDEIS should have specified the number of acres within the primitive and SPNM ROS settings open to motorized use, and then provided a discussion of how those designations would achieve minimization of conflicts between recreational uses.

²²¹ RDEIS at 62.

²²² RDEIS at 59, Table 23.

²²³ RDEIS at 57.

The Forest Service failed to adequately analyze how motorized designations would affect Wild and Scenic River corridors, which are “[o]ne-half-mile-wide corridors, one-quarter mile on each side of eligible and suitable rivers, [that] are managed to protect the identified river values.”²²⁴ The Forest Service did provide a table disclosing that there are “83.95 miles of motorized routes within the eligible and suitable wild and scenic river corridors.” *Id.* at 59, Table 23. Yet, the analysis fails to differentiate between roads and trails, or provide the number of acres available to motorized use under the proposed action. Rather the agency simply states Alt. 2 “...would also allow for 80.55 miles of motorized routes within the eligible and suitable wild and scenic river corridors” representing a small decrease in motorized use *Id.* at 64.

In sum, the Forest Service shows that under the proposed action there would be only slight decreases in motorized use where people expect to experience a nonmotorized setting. Given the fact that most people recreate in the forest for nonmotorized purposes, and the Forest Service must show how the reduced motorized designations will minimize conflict between recreational uses. Further, the Forest Service must show—on a trail by trail and area by area basis—how trail and area designations would minimize conflict between recreational uses. Here the agency fails to do so, and in fact acknowledges that cumulatively under the proposed action there is a possible increase in conflicts.²²⁵ The Forest Service’s generalized statements regarding minimizing user conflict do not comport with the TMR’s requirement that the Forest Service demonstrate how it considered effects and located routes with the objective of minimizing conflicts between motor vehicle use and existing non-motorized recreational uses of the ASNF.

Further, the RDEIS fails to explain how the location of the unauthorized routes that are proposed to be added to the designated motorized system as trails comply with the TMR requirements, or contribute towards the minimization of conflicts between recreational uses.

E. Demonstrating Compliance of the Minimization for Area Designations.

The ASNF has decided to allow motorized big game retrieval (MBGR) for the purposes of recovering legally harvested elk on the Forest for one mile off any road or trail designated for motorized use, and also dispersed camping corridors off more than 1,000 miles of motorized roads. This results in more than 1.2 million acres of the Forest being open to cross-country motorized travel, including through habitat for ESA-listed species like the Mexican gray wolf, Mexican spotted owl (and its designated critical habitat and PACs), and the New Mexico meadow jumping mouse. It also allows such travel through rivers, streams, and other sensitive riparian areas. Critically, this also places the burden on hunters to know where the specific boundaries for wilderness areas are so that they do not accidentally trespass into those areas. The RDEIS fails to explain how this allowance for MBGR and dispersed camping corridors will protect these areas or how motorized recreationists are to know exactly where they can and cannot drive for these limited purposes. Nor does the RDEIS explain how this allowance is limited and employed sparingly, as required by the TMR. This is an incredibly large allowance, and seems to be imposed without consideration or application of the Forest Service’s own guidance for how to deal with MBGR and dispersed camping corridors. As such, the ASNF is violating both the TMR and NEPA, and risks violating the NHPA.

²²⁴ RDEIS at 55.

²²⁵ RDEIS at 73, Table 29.

The TMR generally prohibits cross-country motor vehicle use.²²⁶ The Rule provides an exception to this prohibition for the “limited use of motor vehicles within a specified distance of certain designated routes” for purposes of retrieving downed big game or dispersed camping.²²⁷ The Forest Service is to apply the exception “sparingly,” and only after conducting site-specific environmental analysis.²²⁸ While we support hunting as an important use of our public lands – and collaborate closely with conservation-minded sportsmen groups on many initiatives – we are deeply concerned about the significant adverse impacts associated with cross-country motorized use by the public for any purpose. We want to make clear that we do not oppose hunting on our public lands, but we do oppose allowing nearly unrestricted motorized use under the guise of facilitating hunting opportunities on the Forest. Indeed, our organizations include many members that are active hunters, including on the ASNF, many of whom chose to hunt without the assistance of motorized vehicles. These hunters are no less worthy of consideration and their interests should also be respected by the Forest Service. The Forest Service acknowledged the same concerns in the Travel Management Rule by placing stringent restrictions on the use of the motorized big game retrieval and dispersed camping exceptions.

Other National Forests and Regional Offices have recognized the inherent flaw of such broad MBGR and dispersed camping corridor designations. Indeed, the Forest Service recently noted:

[A] broad designation allowing dispersed camping along all or most designated routes is not consistent with long-term objectives for travel management. Direction from the Chief of the Forest Service indicates that the allowance of dispersed camping by general designation along roads and trails should be used sparingly.²²⁹

Here, the ASNF should heed the advice of its colleagues working on other Forests to not allow such a broad allowance of cross-country motorized travel for MBGR and dispersed camping.

Further, the Forest Service should implement the recommendations included in the Travel Management Rule Guidelines (dated June 30, 2008 and attached to these comments as Attachment 7) from the Forest Service Regional Office. Notably, this Guidance (the Forest Service routinely relies on Regional Office and other Forest Service Guidance to support its decision) notes that for elk, MBGR should not be allowed between one hour before sunrise and 10am.²³⁰ The Guidance also recommends differentiating between high country and low country game management units, and imposing different end dates for allowing MBGR (either third Thursday in October or first Thursday in November, depending on management unit). The Forest Service has not explained why it is not following its own Regional Office guidance on how to implement MBGR. This violates the TMR and NEPA.

The Forest Service’s Travel Management Rule Guidelines also notes that for dispersed camping fixed distance corridors, as is proposed by the ASNF, the Forest Service expects individual forests to “apply the provision sparingly.”²³¹ Additionally, the Guidelines explain “the draft directives at FSM 7703.22 clarify that proposals

²²⁶ 36 C.F.R. § 212.50(a).

²²⁷ 36 C.F.R. § 212.51(b).

²²⁸ Forest Service Manual 7703.11(4).

²²⁹ Reviewing Officer Recommendation, Sawtooth National Forest, Travel Plan Revision, Appeals #08-04-14-0035-A215, #08-04-14-0038-A215, and #08-04-14-0039-A215 at 17.

²³⁰ See Guidance at 12.

²³¹ Guidance at 8.

to include fixed distance corridors should be supported by travel analysis, appropriate site-specific environmental analysis, and public involvement.”²³² “A proposal to designate a fixed distance corridor would require analysis of the resources within the designated corridor and the anticipated effects to those resources resulting from motorized uses associated with accessing dispersed camping opportunities within the corridor.”²³³ The Guidelines also note that “while the majority of use will occur at existing locations, it should be assumed that dispersed camping could occur anywhere within the corridor, not just at existing locations.”²³⁴ Here, the Forest Service has not provided any such site-specific analysis of environmental effects, and is therefore violating NEPA.

As such, the Forest Service must conduct additional analysis—including site-specific NEPA effects analysis, and allow the public to comment on that analysis—as to why it is not complying with the Regional Office guidance related to MBGR, and should reevaluate an allowance for one mile off every open route on the Forest, as it does not meet the limited and sparingly applied criteria of the TMR.

Of note, the ASNF has not imposed any restrictions on MBGR aside from the fact that it is only allowed for 1-mile off any road or trail where motorized travel is allowed, and only for legally harvested elk. The ASNF asserts it needs to allow MBGR for elk to match what other forests have done in Arizona, but this ignores that other Forests have added at least some minimal restrictions on MBGR. For example, the Williams Ranger District on the Kaibab National Forest imposed the following restrictions on MBGR:

- Only one vehicle (one trip in and one trip out) would be allowed for MBGR per harvested animal.
- Hunters must use the most direct and least ground disturbing route in and out of the area.
- MBGR is not allowed when conditions are such that travel would cause damage to natural or cultural resources (such as during wet weather events).
- Motorized vehicles would not be allowed to cross riparian areas, streams, and rivers except at hardened crossings or crossings with existing culverts.

While we do not believe these are sufficient restrictions on MBGR, nor do they sufficiently limit MBGR as required by the TMR, they at least impose some restriction on MBGR on that Ranger District. The ASNF should add these restrictions at a minimum, and likely add additional restrictions to MBGR based on the specifics of the ASNF to ensure that forest resources are adequately protected. Indeed, this is in line with Forest Service guidance, which explains that “[c]ross-country MBGR should not be allowed when conditions are such that cross-country travel would cause unacceptable natural and/or heritage resource damage, and existing resource protection regulations should be enforced when conditions warrant.”²³⁵ Forest Service Guidelines also note “[t]he open road density in any given big game hunt unit should be a prime consideration in the determination of whether or not cross-country MBGR is authorized.”²³⁶ Here, however, the Forest Service has not explained how its MBGR allowance corresponds to big game hunt units, and how the open road density in those units relates to where MBGR is allowed. This violates NEPA and the TMR. Indeed, the Regional Office also explains that while cross-country MBGR can be considered in a travel

²³² Guidance at 8.

²³³ Guidance at 9.

²³⁴ Guidance at 9.

²³⁵ Guidance at 10.

²³⁶ Guidance at 11.

planning process, “it must be needs based.”²³⁷ Generic statements about generic need for MBGR is insufficient. The RDEIS does not contain any specifics about the needs for MBGR on the Forest and how that matches with the proposal in the Forest Service’s preferred alternative here.

Further, to the extent the ASNF is unwilling to make any changes to MBGR or dispersed camping corridors, we ask the Forest to consider a permit system for such use. This could be similar to a wilderness permit system, and would allow the ASNF to actually monitor how much people are using these provisions for motorized cross-country access, and where such use may be concentrated. This would provide the Forest with a better picture of where potential resource damage may be occurring, and where additional protections may be needed. It would also provide the Forest an opportunity to educate hunters on restrictions for off-road travel for MBGR, including on whether weather conditions may make MBGR inadvisable.

F. Mitigation is Not Minimization.

We caution the Forest Service not to confuse mitigation with the executive orders’ and Travel Management Rule’s requirement to minimize conflicts at the time routes and areas are designated. Indeed, Executive Order No. 11644, § 3(a) states that “[a]reas and trails shall be located to minimize” impacts to natural resources, wildlife, and conflicts among uses).²³⁸ To avoid any confusion, the agency should approach application of the minimization criteria in two steps. First, the Forest Service should locate areas and trails in a way that seeks to minimize impacts and conflicts, and then establish site-specific management actions to reduce or mitigate remaining impacts supported by evidence or analysis demonstrating their minimization success.²³⁹ We are observing an increasing trend where the Forest Service proposes Project Design Features, Best Management Practices or mitigation actions to prevent adverse effects from the proposed actions without the supporting discussion, evidence or analysis that demonstrates their effectiveness. In other words, simply providing a list of mitigation actions is not sufficient to demonstrate compliance with the TMR. This is especially important in regards to assumptions that seasonal use restrictions and trail closures will effectively minimize harassment of wildlife or significant disruption of wildlife habitat. For example, the Forest Service states “[a] seasonal closure (March 1 to August 31) is required on ... motorized trails 8758ATV, 2751ATV, 88SATV, and 64EATV to protect Mexican spotted owls during the breeding and nesting season.”²⁴⁰ To ensure the effectiveness of these closures, the Forest Service must provide results from monitoring reports demonstrating successful protection of Mexican spotted owl during these seasons and compliance with seasonal closures. The Forest Service cannot simply assume a culture of compliance and fail to account for unauthorized use of closed trails.²⁴¹ The agency explains:

The proliferation of unauthorized routes has introduced the sights and sounds of motor vehicle use in areas that previously provided seemingly undisturbed natural settings. As a result, the ability to

²³⁷ Guidance at 11.

²³⁸ 36 C.F.R. §§ 212.51(a)(3), 212.55(b). See also *Sierra Club v. U.S. Dep’t of Agric.*, No. 96-2244, 1997 WL 295308, at *29 (7th Cir. May 28, 1997) (holding under NEPA that an agency must either explain why new enforcement efforts would minimize illegal use or include the impacts of illegal trail use in its analysis); *Sierra Club v. Bosworth*, 352 F. Supp. 2d 909, 924 (D. Minn. 2005) (same).

²³⁹ The Wilderness Society, *Achieving Compliance with the Executive Order “Minimization Criteria” for Off-Road Vehicle Use on Federal Public Lands: Background, Case Studies, and Recommendations* (May 2016). P 4, 8-9. (Attachment 8).

²⁴⁰ RDEIS at 21.

²⁴¹ See *Alliance for the Wild Rockies v Probert*, 2019 WL4889253 (D. Mont 2019).

meet management objectives in primitive and semi-primitive nonmotorized areas has substantially decreased outside of wilderness in most areas of the forest, especially in the last decade.²⁴²

The Forest Service must account for this history of non-compliance in its analysis, demonstrate it has the capacity to adequately enforce closures and other motorized restrictions, and then provide evidence that such enforcement is in fact successful at preventing unauthorized use. If the Forest Service lacks adequate enforcement capacity or determines enforcement actions may not prevent unauthorized use, then the Forest Service should consider not designating those roads and trails, and decommission them or place the applicable roads in long term storage.

V. Travel Management Plan and Revised Draft EIS Inadequately Analyze Effects to Inventoried Roadless Areas (IRAs).

A. Concerns with Public Participation and Lack of Agency Understanding.

Public participation and analysis of the ASNF travel management RDEIS has revealed significant confusion and misinformed assumptions expressed by various USFS planning team members. For instance, at the most recent public meeting (10/23/19) in Alpine, five USFS team representatives were generally unaware that the Roadless Area Conservation Rule (RACR), as published in the Federal Register January 12, 2001, and the restrictions and prohibitions prescribed by the RACR uniformly apply to the IRAs on the ASNF. Two representatives of the planning team specifically indicted that “perhaps the restrictions prescribed by the RACR were altered or reduced as a result of the most recent Forest Planning process.” Based on these misinformed assumptions it becomes evident that analysis within the RDEIS may not have adequately considered the impacts of the various alternatives to the IRAs on the ASNF.

A primary source of this misinformation information stems from an outdated map that the ASNF maintains showing boundaries and management restrictions (or lack thereof) regarding the IRAs on the ASNF. On 10/11/19, RDEIS Team Leader, Jeanie O’Conner, provided a link to the map used to analyze the IRAs. Unfortunately the map legend mistakenly indicates that 89% of the IRAs on the ASNF as areas “where road construction and reconstruction is allowed”, and only 11% of the IRAs are represented as areas “where road construction and reconstruction is not allowed”. This is incorrect.

This map was originally produced in September 2000 (prior to the publication of the Final RACR in 2001) as a visual resource for public meetings to provide information and to solicit comments regarding the then-proposed RACR. The map depicts the then-current management restrictions regarding roads that existed prior to the Final RACR. The final RACR published on January 12th 2019 applies uniformly to all IRA on the ASNF. However, the legend should now actually indicate that all of the IRAs are areas where road construction and reconstruction is not allowed.

As a very brief history: An initial Roadless Area Evaluation and Review (RARE I) was conducted by the USFS in the 1970s, but was ruled to be inadequate primarily for lacking in public participation. The second Roadless Area Review and Evaluation (RARE II in late 1970s) identified the original USFS IRAs and restricted road construction, reconstruction and certain management activities until Congress had an

²⁴² RDEIS at 44.

opportunity to consider whether/or not to designate them as part of the Wilderness Preservation System. In 1984 Congress did pass a statewide Bill, the Arizona Wilderness Act, which designated about 40 Wilderness Areas across the state (including Bear Wallow Wilderness and Escudilla Wilderness). The Act also released the remaining Arizona USFS IRAs from the RARE II road construction and management restrictions through the life of the various Forest Plans, but did allow for their reconsideration in subsequent Forest Plans. However, 17 years later and after a robust Rule Making process, the Final RACR published January 12, 2001 does in fact pertain to all of the IRAs on the ASNF. The RACR reestablished prohibitions regarding road construction and road reconstruction in IRAs. The official maps depicting the IRA boundaries are maintained at the USFS Washington Office.

The RACR states:

294.12 Prohibition of road construction or reconstruction in inventoried roadless areas.

- a) A road may not be constructed or reconstructed in inventoried roadless areas of the National Forest System except as provided in paragraph (b) of this section.

Paragraph (b) goes on to list 7 quite limiting exceptions.

It is clear that the map depicting IRAs on the ASNF is woefully obsolete and needs to be corrected for the purpose and benefit to the TMP RDEIS process. All of the IRAs on the ASNF should be identified in the legend as areas “where road construction and reconstruction is not allowed”. ASNF Forest managers and project planners involved in various individual projects and resource areas absolutely need accurate information to adequately and professionally evaluate project effects to IRAs on the ASNF. It has been made clear that many ASNF Resource managers and project planners are confused and misinformed regarding their responsibilities related to IRAs. Perhaps no planning team requires accurate, up-to-date information regarding the management of the IRAs more than the team focused on Travel Management.

The RACR also states:

294.14(e) The prohibitions and restrictions established in this subpart are not subject to reconsideration, revision, or rescission in subsequent project decisions or land and resource management plan amendments or revisions undertaken pursuant to 36 CFR part 219.

The preamble of the RACR indicates that the USFS has the ability via its rulemaking authority to make necessary modifications to the rule. It is clear that the ASNF does not have the latitude to alter the prohibition or restrictions established by the RACR through the travel management planning process, or any planning process.

B. Concerns Regarding the NEPA Analysis of Effects to IRAs.

Public comments have been submitted to the initial DEIS indicating that the ASNF was out of compliance with the Roadless Area Conservation Rule by proposing dispersed motorized camping corridors adjacent to IRAs. A non-comprehensive review of the public comments discloses several of those comments and responses on pages 123, 184,185, and 190 of Vol. 2 of the RDEIS.

The ASNF response to C. Tuell (9th comment) on page 185 of Vol. 2 of the RDEIS states: “Cross country motorized travel, including motorized big game retrieval and motorized access to dispersed camping, is currently prohibited within the [Blue Range Primitive Area] and is proposed to be prohibited in the IRAs in alternatives 2 and 3 in the RDEIS. Alternatives 2 and 3 comply with the requirements of 36 CFR 294.” After reviewing the Alternative maps provided on the project website, we are unable to confirm if this statement is factual.

Unfortunately the Alternative maps do not depict IRA boundaries, and the ASNF IRA map (shown above to be inaccurate and misleading) does not include any forest roads. This makes it impossible to visualize if where, or how the proposed alternatives affect IRAs. So a request was made asking the ASNF to provide maps that accurately depicted IRA boundaries along with the roads being proposed in the RDEIS. The sequence of that request is as follows.

- On 9/5/19, less than a week after the RDEIS was published, a request was submitted by Mr. Hoffman of White Mountain Conservation League via the ASNF TMP webpage asking for a hard copy of the DEIS as was offered on that webpage.
- On 9/6/19 an auto-response was received by Mr. Hoffman indicating a hard copy would be sent.
- After a week had passed, Mr. Hoffman called the ASNF Supervisor’s office. The ASNF receptionist indicated that request should be referred to Mr. Tim Gilloon who was not in the office at that time. The Receptionist indicated that she would deliver a written message to Mr. Gilloon of the request as his voice mail hadn’t been set up.
- After another week had passed, Mr. Hoffman called Mr. Gilloon. He was apologetic, and he promised Mr. Hoffman that he would mail the document. At this time a request was also made for maps of the alternatives that depicted IRA boundaries. He indicated that they hadn’t yet created such maps and he wasn’t certain if staff were available to create the maps that included the IRAs.
- Nine days later, the RDEIS was received by Mr. Hoffman, but it did not include any maps at all.
- Mr. Hoffman then contacted the Supervisor’s office again, and this time the request was referred to Mr. Steve Johnson. He indicated that he would look into creating the maps that were requested.
- On 10/9/19, Mr. Johnson sent an email to Mr. Hoffman that indicated he “did some checking with our team and we need to look into this further, so I’ll try to get you an answer tomorrow.”
- On 10/11/19, an email was received by Mr. Hoffman from the team leader, Jeanie O’Conner (of Bozeman, MT) which provided the link to the faulty ASNF map with IRA boundaries but still without roads. She indicated that the Forest could not provide “additional maps since the project is out for public comment”. Further down in the email it was encouraged to ask for additional maps or information via the planning website. She also suggested that it may be possible to visit the ASNF Supervisor’s office to view additional maps.
- On 10/20/19, Mr. Hoffman sent an email to the ASNF TMP website and to various planning team members expressing a concern that based on the Alternative maps it was difficult and possibly impossible to determine if concerns regarding the IRAs that were raised in previous comment periods were addressed in the RDEIS. The email also politely expressed a degree of frustration that the informational maps being requested were either unavailable or, if they were available, the team was not authorized to provide them.
- On 10/22/19, a call was placed to Mr. Gilloon by Mr. Hoffman requesting a meeting at the ASNF Supervisor’s Office to view maps, and Mr. Gilloon again indicated that he could not produce additional maps showing IRA boundaries along with the alternative travel systems. He did say he

could provide a hard copy of the faulty ASNF IRA maps without roads being displayed so at least it could be visually compared to the RDEIS Alternative maps that did display the IRAs. He provided a copy of that map at the public meeting held in Alpine on 10/23/19.

While all communications have been polite and respectful, the above sequence is provided to express a level of dissatisfaction regarding the confusion and difficulty obtaining public information that would be useful to evaluating concerns regarding if, where or how the RDEIS Alternatives impact the ASNF IRAs. Certainly a primary purpose of a NEPA compliance process is to analyze and to disclose to the public the impacts associated with a project or plan. By withholding information used in the analysis and refusing to make that information available to the public, the Forest Service has abdicated its obligations.²⁴³

The Council on Environmental Quality's NEPA regulations directs that information used to inform NEPA analysis "must be of a high quality" and that "[a]ccurate scientific analysis . . . [is] essential to implementing NEPA."²⁴⁴ Also, NEPA directs "The Responsible Official [to] use appropriate communication procedures to ensure meaningful public participation throughout the NEPA process."²⁴⁵ We contend that the unwillingness of the Forest Service to provide maps which show IRAs – especially considering that our past comments brought forward concerns over IRAs – constitutes a violation of NEPA.

C. Potential Effects of Dispersed Motorized Camping Corridors on IRAs.

Jeanie O'Conner's email of 10/11/19 indicated that the RDEIS "does analyze and disclose the effects of the travel management alternatives on the IRAs. The analysis is contained in the "Effects to Recreation, Designated Areas, and Wild and Scenic Rivers" beginning on page 39." The RDEIS does provide a discussion comparing some of the impacts of the Alternatives to ASNF IRAs. For instance, it does show the amount (miles) of open roads in IRAs, but it does not discuss the impacts of Motorized Dispersed Camping Corridors to the IRAs. This is an important issue that has been brought up in all public comment periods of this NEPA process. There are tangible adverse impacts of motorized camping corridors that are highly undesirable in IRAs.

Volume 2 of the RDEIS, Page 185 clearly states

"[M]otorized access to dispersed camping is currently prohibited within the [Blue Range Primitive Area] and is proposed to be prohibited in the IRAs in alternatives 2 and 3 in the RDEIS. Alternatives 2 and 3 comply with the requirements of CFR 294."

However, Volume 2 of the RDEIS page 123 and 184 states

"For Alternative in the RDEIS: Along NFS Road 54D, less than 1 mile of motorized camping corridor is proposed to be adjacent to an IRA." Further on those same pages it states: "Less than 1 mile of camping corridor adjacent to an IRA is proposed along NFS Road 217I."

²⁴³ 40 C.F.R. § 1502.21.

²⁴⁴ 40 C.F.R. § 1500.1(b).

²⁴⁵ 40 C.F.R. § 6.203 (a)(5).

The two previous paragraphs certainly contradict one another. In addition to not producing maps that show the RDEIS alternatives along with accurate IRA boundaries, it is impossible for the public to precisely determine if other motorized camping corridors intrude into ASNF IRAs. A non-comprehensive list of roads that may intrude into IRAs include NFS Roads, 567, 25B, 25G, 712, 111, 212, 215, 180, 9517, 170G, 237 and perhaps several others. Team Leader, Jeanie O’Conner’s email 10/11/19 stated: “As part of this analysis, we did not create any maps that show the alternatives and IRAs together.” It turns out that such a map with precise IRA boundaries and accurate labels in the legend is critical to disclosing if, where and how motorized camping corridors affect the ASNF IRAs.

The preamble to the RACR lists a number of specific roadless characteristics intended to be maintained and protected by the Rule. Several of those are certainly relevant to the IRAs on the ASNF including high quality or undisturbed soils, diversity of plant and animal communities, habitat for threatened, endangered, proposed, candidate and sensitive species, natural appearing landscapes with high scenic quality and traditional cultural properties.

While the RDEIS does not directly analyze or disclose the impacts of dispersed motorized camping corridors to the IRAs, the RDEIS does describe adverse impacts that dispersed motorized camping corridors can have on a variety of other resources. Those physical impacts can easily be applied as impacts to “roadless characteristics” intended to be protected in IRAs under the RACR. Below are examples of impacts of motorized camping corridors relevant to IRAs and that are disclosed in the RDEIS.

“Effects to scenery from designation of dispersed camping corridors include the creation of, and expansion of existing unnatural openings and the creation of linear routes in the foreground of forest roads. Repeated motorized travel in these areas causes understory vegetation to be denuded and increases color and texture contrast between vegetated areas and those with bare soil (Cole and Monz 2003, Cole and Monz 2004). In the camping corridor locations, the scenic attractiveness would be decreased...”²⁴⁶

“Recreation Specialists have noted a trend toward large groups of RVs camping together. These group camps can be larger than a football field in size, and repeated use results in large areas of bare soil where vegetation has been denuded.” Also stated: “Uncontrolled proliferation of campsites as well as user development of larger campsites with growing amounts of bare soil, cause a downward trend in scenic attractiveness.”²⁴⁷

“Dispersed camping corridors direct impacts to species habitats can alter or destroy existing vegetation; cause damage and destabilization to stream banks, resulting in increased sedimentation and stream channel instability; and negatively impact aquatic macroinvertebrates and fish species (e.g., eggs, larvae) associated with stream substrates.” Also stated: “...dispersed camping within dispersed camping corridors can cause soil, watershed, riparian, and aquatic habitat impacts that are similar to new road or trail construction. Soils can be compacted, water infiltration is reduced, and greater water runoff and erosion can occur...”²⁴⁸

²⁴⁶ RDEIS at 92 (as related to scenery).

²⁴⁷ RDEIS at 92 (as related to scenery).

²⁴⁸ RDEIS at 220 (as related to T&E & Sensitive aquatic species).

“...dispersed camping activities may cause unintentional vandalism to sites. Campers have taken rocks from prehistoric and historic structures to build campfire rings and wind breaks; used and rearranged rocks from features as tent weights; dug holes for latrines or buried garbage; collected pieces of wood from collapsed and standing structures for campfires; pulled historic buildings apart; constructed horse shoe pits, animal pens, bonfire pits with sites; used site features for ATV play areas, and rearranged artifacts into piles. These types of impacts have adverse effects to sites by altering, damaging or destroying the characteristics that contribute to the sites significance...”²⁴⁹

D. Conclusion Regarding Impacts of ASNF Travel Management RDEIS on IRAs.

The RACR is highly regarded and supported by the public. When the RCAR was published in 2001 it had garnered more public interest and response than any other Rule Making process, with the great majority supporting its implementation. The ASNF boasts of 16 IRAs covering over 322,000 acres. As shown, Travel Management decisions and particularly the designation of Dispersed Motorized Camping corridors can have significant adverse impacts to the roadless characteristics protected by the RACR. Bear in mind that each one mile corridor 300 feet wide equates to about 38 acres where roadless characteristics are sacrificed. We contend that establishing motorized dispersed camping corridors adjacent to IRAs encourages the construction of user-created road with similar or greater impacts of constructing classified roads thus violating the intent of the RACR.

We appreciate that time is short for the planning team engaged in the ASNF Travel Management RDEIS. Time has also become short for us as we unsuccessfully waited to receive Alternative maps that included IRA boundaries. We too are anxious for the ASNF to implement a final Travel Management Plan, and wish to avoid unnecessary delays in issuing a final decision. Therefore, we recommend:

1. Select an alternative that respects the intent and restrictions established by the RACR and clearly state in any subsequent NEPA document that the action alternative does as was indicated on page 185 of Vol.1 of the RDEIS: “where motorized access to dispersed camping is proposed to be prohibited in IRAs.” In other words, state that there are no motorized dispersed camping corridors adjacent to and intruding into IRAs.
2. In any subsequent NEPA document, provide a map for public review that accurately portrays the boundaries of all IRAs so that the effects of the motorized dispersed camping corridors and MBGR are accurately disclosed and easily viewable.
3. Update the ASNF GIS data to show current and correct information regarding the location and the management of IRAs on the ASNF. This will go a long way toward minimizing the prevailing confusion regarding all current and future management activities affecting the IRAs.

VI. Forest Service Failed to Comply with the National Historic Preservation Act

We are concerned that the Forest has not complied with the National Historic Preservation Act. The RDEIS explains that while some surveys have occurred on the Forest for cultural resources, approximately 67% of the acreage of surveyed lands did not meet professional survey standards.²⁵⁰ The Forest notes that 498 “routes” still need to be inventoried for cultural resources, and 392 “corridors” need to be inventoried.²⁵¹ The

²⁴⁹ RDEIS at 275 (as related to cultural resources).

²⁵⁰ RDEIS at 257.

²⁵¹ RDEIS at 260.

RDEIS also explains that 1,017 cultural and historic sites “are located within the APE of motorized travel routes and camping spurs, and 681 are located within...dispersed camping corridors.”²⁵² The Forest also explains that these surveys and inventories “may identify sites that are highly susceptible to damage from motor vehicle use or they may identify sites where current damage is occurring, which may preclude certain roads, trails, and segments of corridors from being designated for motorized use.”²⁵³ This represents a lot of work remaining to be done, yet the Forest Service does not adequately explain how it will fund this work and ultimately complete it. The Forest Service also appears headed towards allowing motorized big game retrieval, dispersed camping, and other motorized use in these areas where there are potentially many cultural resources that may be adversely impacted by motorized recreation, and in particular motorized recreation off designated roads and trails.

The Forest Service does assert it will comply with the Standard Consultation Protocol for Travel Management Route Designation, yet does not actually explain how. To comply with NEPA and the NHPA, the Forest Service must actually explain what components of the Standard Consultation Protocol for Travel Management Route Designation it is complying with, whether it is asserting any exceptions/exemptions to the Protocol applies, and more specifics on the timing of compliance with survey requirements and what impact those results may have on already designated roads, trails and corridors. As it stands, the RDEIS is woefully inadequate in this regard.

Further, it is unclear how exactly the Forest intends to comply with the Protocol’s requirements. For example, the Protocol explicitly requires consultation for the designation of any previously closed roads/trails, any unauthorized/unclassified roads/trails, fixed distance corridors, areas open to cross-country motorized travel, amongst other categories.²⁵⁴ The Protocol also requires there be public participation in the NHPA Section 106 process, yet the detail in the RDEIS does not allow for this.²⁵⁵ The Protocol also requires disclosure of the types of surveys and inventories that will occur as part of the consultation process. Indeed, “[t]he level of need and extent of new field surveys or inspections will be proposed by a Professional Cultural Resource Specialist and approved by the Forest Archaeologist based on the guidelines provided....”²⁵⁶ If this has occurred, it should have been disclosed in the RDEIS to allow the public to review and comment on it. Further, if the Forest is intended to rely on the “phasing” component of the protocol to defer certain surveys from occurring until the future, it has an obligation to disclose that to the public during the NEPA process and allow the public to comment on it.²⁵⁷ Also missing from the RDEIS is the Forest’s disclosure and explanation of what protective measures from the Protocol have been employed to prevent damage to cultural resources.²⁵⁸

This concludes our letter. Thank you for your consideration of our comments, and again, do not hesitate to contact us at the emails and phone numbers provided early in this letter.

²⁵² RDEIS at 278.

²⁵³ RDEIS at 260.

²⁵⁴ See Protocol at page 4 ¶ III.

²⁵⁵ See *id.* at ¶ IV.

²⁵⁶ See *id.* at page 5 ¶ 7.

²⁵⁷ *see id.* at page 7 ¶ VIII

²⁵⁸ *See* Protocol page 8 ¶ IX.