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Western Environmental Law Center

The Wilderness Society

WildEarth Guardians

October 1, 2019

Objection Reviewing Officer

Rocky Mountain Region

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Submitted via email: R02admin-review@fs.fed.us

RE: Rio Grande Forest Plan Revision Objection

Pursuant to 36 C.F.R. Part 219 Subpart B, Defenders of Wildlife, Western Environmental Law Center, The Wilderness Society, and WildEarth Guardians are objecting to portions of the Rio Grande National Forest proposed final revised Land Management Plan, Final Environmental Impact Statement, and Draft Record of Decision. The responsible official is Mr. Dan Dallas, Forest Supervisor, Rio Grande National Forest, 1803 W Highway 160, Monte Vista, CO 81144

The lead objector is:

/s/ Lauren McCain

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INTRODUCTION

The Rio Grande National Forest (RGNF or Forest) released its proposed final revised Land Management Plan (Plan), Final Environmental Impact Statement (FEIS), and Draft Record of Decision (Draft ROD) few months after the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services issued its milestone

finding on biodiversity and ecosystem services: roughly one million species are currently at risk of extinction[mdash]some possibly within the next 10 years. Now more than ever the Forest Service must lead the way in protecting biodiversity and essential habitat for at-risk species[mdash]the Canada lynx, Gunnison sage-grouse, Uncompahgre fritillary butterfly, Rio Grande cutthroat trout, boreal toad, Gunnison's prairie dog, and many others. At a time when the planet is deep into the sixth mass extinction crisis and experiencing the impacts of climate change, the Forest must take seriously the intendent obligations of this era.

The RGNF has spent nearly five years revising the Forest's 1996 land and resource management plan (1996 LRMP), kicking off the process in 2014 with a request for information from the public on the Forest's ecological, social, and economic conditions and trends and a series of public meetings on the planning process (79 Fed. Reg. 77444). The Forest has held a multitude of public meetings to engage citizens in participating in this process. The Forest has offered numerous opportunities for the public to comment at various stages in the plan's construction[mdash]from the assessment to now the Plan. The RGNF's Forest Supervisor (the Responsible Official) and interdisciplinary planning team devoted countless hours toward developing the revised Plan, which was released to the public in August 2019 (84 Fed. Reg. 37830).

Unfortunately, the result of this massive effort is a plan that provides little meaningful management direction to guide future projects and uses on the Forest. The Plan fails to meet a range of requirements mandated in the Forest Service's 2012 Planning Rule, which revised the 36 CFR 219 subpart of the National Forest Management Act implementing regulations (NFMA; 16 U.S.C. [sect][sect] 1600 et seq.). The Plan, Final Environment Impact Statement (FEIS), and Draft Record of Decision (ROD) are likely violating requirements in the National Environmental Policy Act (NEPA; 42 U.S.C. [sect][sect] 4321 et seq.), and Endangered Species Act (ESA; 16 U.S.C. [sect][sect] 1531 et seq.), and other laws and their associated regulations.

A major disappointment of the Proposed Revised Plan is its failure to sufficiently protect the Forest's natural values and diversity, including at-risk wildlife and plant species that occur on the RGNF.

NFMA was enacted in 1976 in large part to elevate the value of ecosystems, habitat, and wildlife on our national forests to the same level as timber harvest and other uses. Specifically, NFMA requires the Forest Service to develop planning regulations that shall "provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives" (i.e., the "diversity requirement") (16 U.S.C. [sect] 1604(g)(3)(B)). In April 2012, the Forest Service finalized the 2012 Planning Rule, implementing the NFMA (See 16 U.S.C. [sect] 1604, 36 CFR [sect] 219). The preamble of the Planning Rule states,

The rule contains a strong emphasis on protecting and enhancing water resources, restoring land and water ecosystems, and providing ecological conditions to support the diversity of plant and animal communities, while providing for ecosystem services and multiple uses. (77 Fed Reg. 21163)

Contribute to ecological, social, and economic sustainability by ensuring that all plans will be responsive and can adapt to issues such as the challenges of climate change; the need for forest restoration and conservation, watershed protection, and species conservation; and the sustainable use of public lands to support vibrant communities. (77 Fed. Reg. 21164)

These passages clearly demonstrate that the Planning Rule affirms that wildlife and habitat protection must be given the same priority as forest uses. The Rule requirements in 36 CFR [sect] 219.8 and 36 CFR [sect] 219.9 make this principle a mandate. A forest management plan is intended to be the vehicle that balances these purposes.

This objection primarily focuses on the Planning Rule requirements in 36 CFR 219.9 on the Diversity of Plan and Animal Communities, particularly regarding the at-risk species that occur or may be present on the Forest. At-risk

species are the federally threatened and endangered; proposed and candidate species under the ESA; and imperiled but non-listed Species of Conservation Concern (SCC), selected by the Regional Forester. The objection includes points related to other requirements of the Planning Rule, such as 36 CFR 219.3, 219.7, and 219.8, primarily as they relate to and support compliance with 219.9. The objection also points out violations of NEPA and the ESA. Our assessment of the Plan, FEIS, and Draft ROD led us to this conclusion: the RGNF's Plan and EIS need major revisions to comply with relevant law, regulation, and policy. This likely cannot be accomplished without a revised or supplement EIS.

The objectors listed above have participated at every opportunity for comment during the phases of plan revision. We have appreciate these chances to to help improvie the final revised plan in the spirit of collaboration. Below is a list of comments referred to in this objection, which demonstrates that we have offered substantive recommendations for consideration by Supervisor Dallas and the planning team.

Table: Past Responsive Comments (see attached objection)

We appreciate you reviewing and considering the points we raise in this objection.

PROBLEMS WITH THE PLAN AND ASSOCIATED ENVIRONMENTAL IMPACT STATEMENT ANALYSES

The Plan

Objection Point: The Plan fails to meet 36 CFR 219.9 and supporting requirements.

The requirements of section 36 CFR 219.9 are clear: Plan components must provide the ecological conditions necessary to: 1) contribute to the recovery of federally listed threatened and endangered species; 2) conserve proposed and candidate species, and; 3) maintain a viable population of each species of conservation concern within the plan area.

The revised plan does not contain plan components that are sufficient to ensure that the necessary conditions for at-risk species are provided. In addition, the EIS fails to demonstrate that the plan will provide conditions necessary for the recovery, conservation and viability of the at-risk species. The draft ROD concludes that the plan will provide the necessary conditions for at-risk species without sufficient analysis to make that claim.

As we discuss in detail below, plan components must be revised to provide the certainty necessary for the recovery, conservation and viability of the at-risk species. The EIS must evaluate the effects of those specific plan components on the conditions for at-risk species before the Forest can make a lawful determination that the requirements of 36 CFR 219.9 have been met.

The Planning Rule established a process for developing and updating forest plans and set conservation requirements that the plans must meet to maintain or restore the diversity of ecosystems, plant and animal communities, and at-risk species. The Planning Rule incorporates an approach to diversity that first protects ecosystems by managing them for ecological integrity and then ensures that individual species are also protected. The rule's two-tiered conservation approach (alternatively called the ''ecosystem-species'' or ''coarse-fine filter'' planning method) relies on the use of surrogate measures, or key characteristics, to represent the condition of ecosystems, and also on the identification of at-risk species and evaluation of whether those species will be sustained.

To comply with the Planning Rule's requirements, the plan and supporting documentation must provide essential information and analyses. The ecological conditions that have been deemed necessary to meet the NFMA species diversity requirement found in 36 CFR 219.9(b) must be presented, and then translated into plan components. The documentation must indicate 1) what the necessary ecological conditions are for each at-risk

species 2) the plan components that provide for the conditions, and 3) how the condition will be achieved (either maintained or restored) through the application and implementation of plan components. If relevant for the species, plan components must address ecological conditions other than biological characteristics because the Planning Rule defines the term to include not only habitat but "other influences on species and the environment", including threats such as "invasive species." In other words, plan components for at-risk species are not limited to the management and protection of habitat conditions.

In order to provide the necessary ecological conditions, the plan components must respond to the factors that are causing substantial concern over the persistence of the planning area population. Plan components must respond to the relevant information concerning the status of at-risk species and address limiting factors, threats, and stressors to each at-risk species (FSH 1909.12, ch. 20, sec. 23.13).

We note that the plan incorrectly characterizes the Planning Rule's viability requirement, stating that "Many of the plan components that that contribute to the maintenance or restoration of ecological condition to contribute to maintaining a viable population of the species of conservation concern[hellip]" (p. 22, emphasis added). The correct construction is that "the plan components provide the ecological conditions necessary to maintain a viable population of each species of conservation concern." The Planning Rule does allow the responsible official to include plan components that "contribute to maintaining a viable population" of SCC, but only after the official determines that it is beyond the authority of the Forest Service or not within the inherent capability of the plan area to provide for viability (36 CFR 219.9(b)(2)). We are not aware of the Forest making a determination that it is not able to meet the viability requirements of 36 CFR 219.9(b)(1).[1]

Similarly, on p. 25 the plan states that "Plan direction is designed to protect and recover animal and plant species that are listed as threatened or endangered under the Endangered Species Act." The actual requirements are spelled out in 36 CFR 219.9(b)(1).

We also note for the record that the use of optional management approaches cannot be cited in the EIS as plan direction that provides for/contributes to the recovery, conservation or viability of at-risk species. For instance, the management approach for SCC that "Forest programs mitigate impacts to fish and aquatic species that are listed as species of conservation concern and their habitat, or that are necessary for those species to maintain aquatic organism passage and minimize fragmentation of habitat, except when needed to protect populations from undesired nonnative fish" carries no weight in providing for conditions for viability. Also, the management approach presented is unclear.

We raised the issue that the Draft Plan and DEIS required extensive revisions throughout Draft Plan and DEIS comments: Defenders et al. 2017.

Recommended Improvement: The Plan must be revised to meet the 36 CFR 219.9; additional Planning Rule requirements; and other federal laws, regulations, and policies.

The Environmental Impact Statement

The burden is on the Forest Service to demonstrate that the proposed plan components for at-risk species provide the necessary conditions for recovery, conservation and viability. Unfortunately, as presented below, the Forest has not met that burden.

In order to meet the Planning Rule's requirements it is necessary for the Forest Service to provide a logic trail for each species, from its 1) necessary ecological conditions, to 2) specific plan components, to 3) conditions that would result from the plan components, to the 4) legal sufficiency of those conditions. The documentation must

show that because of the plan components, the at-risk species will meet all of the regulatory criteria. Specifically, for SCC viability, the documentation must show that the SCC will 1) continue to persist over the long term, 2) with sufficient distribution to be 3) resilient and 4) adaptable to stressors and likely future environments, as per the definition of a viable population in 36 CFR 219.19.

It is important that the Forest grasp the relationship between NEPA procedures and NFMA requirements. NEPA requires procedures - the analysis of effects. However, NFMA requires that those effects meet a substantive threshold, and that determination should be based on documented analysis found in the EIS. The Record of Decision must address compliance with the viability requirement (36 CFR 219.14(a)(2)). It is not sufficient to state that a plan meets this requirement because it simply analyzed effects. The ROD must explain how the effects disclosed within the EIS demonstrate contributions to recovery and viability. While this analysis may be contained in a NEPA document, it is being used to demonstrate compliance with a substantive legal requirement in NFMA, and therefore requires rigor and certainty that go beyond the disclosure purpose of NEPA. The planning documents must do more than just list or restate the plan components that "support" a conclusion; they must present a reasoned rationale for viability based on reference to specific plan components. Unfortunately, the Forest has not met this bar.

The NFMA diversity requirement may not be met exclusively by aspirational and flexible plan components. While the consistency requirement of 36 CFR 219.15 discourages movement away from desired conditions and objectives, there is no requirement that they would ever occur on the landscape. The EIS must acknowledge that desired conditions may never be achieved in the context of meeting 36 CFR 219.9 diversity requirements. On the other hand, where maintaining existing ecological conditions is important for species persistence or recovery, standards and guidelines can prevent management actions that would adversely affect those conditions. In fact, the Planning Rule advises the use of forest plan standards and guidelines to provide the certainty needed "to meet applicable legal requirements" such as species persistence (36 CFR 219.7(e)(iii) and (iv)). It is arbitrary for a forest plan to not include mandatory plan components in such instances. Vague or subjective desired conditions create a need for stronger standards and guidelines. In addition, a plan that contains such mandatory regulatory mechanisms may be used as basis for not listing a SCC under the Endangered Species Act or for supporting a determination to delist a species.

The analysis must include a determination of the likelihood of desired conditions being achieved and must analyze the most likely outcomes even if those are not the desired outcomes The EIS must consider whether there are other plan components, especially standards and guidelines, that contribute to achieving the desired conditions.

The EIS must demonstrate that the effects of plan components result in providing the necessary ecological conditions for each of the at-risk species over time; this includes the affirmative and protective effects of the touted plan components, as well as the effects of all of the other plan components for other uses. This analysis enables the agency to make the key determination that the plan is in compliance with NFMA diversity requirements. This determination must be made concerning the persistence of each species identified in accordance with 36 CFR 219.9(b) and must in some way reference and/or summarize the specific rationale and supporting analysis. The effects analysis must produce convincing evidence that the forest plan will provide the amount and distribution of necessary ecological conditions. Moreover, the EIS must disclose the fact that vague or discretionary plan components necessarily mean greater uncertainty, variability and risk associated with the effects, and that such components make it more difficult to evaluate them or use them to show compliance with NFMA diversity requirements.

We raised the issue that the Draft Plan and DEIS required extensive revisions throughout Draft Plan and DEIS comments: Defenders et al. 2017.

Recommended Improvement: The Plan must be revised to meet the 36 CFR 219.9; additional Planning Rule requirements; and other federal laws, regulations, and policies.

Objection Point: The EIS has not put forward a defensible method for assessing effects to at-risk species. The EIS is therefore flawed and not sufficient to support a determination that the plan is providing the ecological conditions necessary to maintain a viable population of each species of concern. The EIS violates 36 CFR 219.5(a)(2)(i) because the process fails to consider the environmental effects of the proposal. The draft ROD violates 36 CFR 219.14(a)(2) because it does not explain how the plan components meet the diversity requirements of [sect]219.9.

The EIS states the objective of the at-risk species analysis on p. 212 (emphasis added):

This analysis evaluates the effectiveness of the alternatives to provide direction to create the ecological conditions necessary to contribute to the recovery of federally listed threatened and endangered species, the conservation of proposed and candidate species, the maintenance of viable populations for species of conservation concern, and also to allow for sufficient numbers of demand species within the plan areas.

The statement is concerning. As discussed above, the EIS must evaluate the effects of the plan direction on the ecological conditions necessary to contribute to recovery and provide for viability. The EIS must support the Planning Rule requirement in 36 CFR 219.14(a)(2) that the ROD include "(a)n explanation of how the plan components meet the[hellip]diversity requirements of 219.9." The EIS must do more than simply evaluate the "effectiveness" of alternatives. The Planning Rule has no requirements for "effectiveness", outside of the plan monitoring program. 36 CFR 219.5(a)(2)(i) states that "(t)he process for developing or revising a plan includes: [hellip]consideration of the environmental effects of the proposal." We demonstrate below that the analysis did not sufficiently evaluate and disclose the effects of the plan in providing conditions necessary for the at-risk species. The draft ROD errs in relying on this flawed analysis to make a determination that conditions for the at-risk species will be provided.

The EIS states that:

This analysis compares the current abundance and condition of various habitats with ecological reference conditions (natural range of variation) based on the dynamic nature of ecosystems, recognizing they are not static[hellip] (p. 212)

In fact, the EIS does not do this for certain conditions that are necessary for recovery and viability, including for example, for SCC fish. For SCC, the EIS must evaluate reference conditions for the four viability parameters discussed above, per the Planning Rule definition of a viable population. We could not find this analysis. To demonstrate compliance with the Planning Rule, the EIS must compare the desired/reference condition to the baseline/current condition, and then present a logical analysis indicating how implementation of the plan components will move current conditions towards the desired/reference condition.

The "key indicators" for the analysis are trends in habitat quantity and condition, as well as connectivity, "measured as a landscape scale." According to the EIS, the indicators "provide a reasonable assessment of ecological conditions needed contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of concern in the plan area" (p. 214). Management direction is evaluated at a "programmatic level" (p. 214). The EIS claims that forest plans have no direct effects, but regardless of the terminology used, an EIS must always consider the reasonably foreseeable impacts. It cannot simply defer relevant effects analysis to projects. For years, the Forest Service has been avoiding addressing broad-scale effects during project analysis by saying that they are "beyond

the scope" of that analysis. Now that it is time to consider those effects at the forest plan level.

Notably the EIS claims that the "direct and indirect site-specific effects will be analyzed when projects are proposed." Given the agency's movement towards "condition-based management" we do not necessarily agree with this assumption. The EIS also says that "potential short-term effects may be described where appropriate" (p. 214), yet we found many instances where short-term effects, encouraged by plan components, were not evaluated for at-risk species. For example, the EIS does not evaluate the effects of S-RMZ-1 which states that "Management activites may have short-term impacts (generally less than 5 years) to composition, function, and structure of riparian areas and fish habitat.

It is not apparent that the EIS applied the key indicators for the analysis to each of the SCC, including SCC fish. For example, we found no discussion, disclosures, or findings in the EIS regarding connectivity for SCC fish. As noted below, the EIS fails to analyze several of the necessary conditions for viability for SCC fish.

The EIS states that the "natural range of variation was used in development of plan direction" (p. 214) but, as we have noted in this objection, actual NRV levels are generally not included in plan components for integrity and are absent for example, for SCC fish. For example, DC-WA-1 asserts that "Physical channel characteristics are in dynamic equilibrium and are commensurate with the natural ranges of discharge and sediment load provided to a stream" and that the "sediment regime within water bodies is within the natural range of variation." In this case and others, the NRV was actually not used in the development of plan direction, which has implications for the analysis within the EIS that must be disclosed.

The EIS does not evaluate the effects of the plan components on all the conditions necessary for the persistence of SCC. The EIS states that: "Rather than describe all environmental conditions needed by all at-risk species, we are instead describing those conditions shared by one or more of the SCC[hellip]while ensuring that at least one condition required by each species is described" (p. 262). As a result of this decision, a "coarse filter of shared ecological conditions necessary for the species" was created (represented in Tables 60 and 61).

The EIS references p. 68 of Assessment 5 to justify the determination to group species for viability analysis within the EIS. Assessment 5 declares that: The 'Monitoring' section of the 2012 Planning Rule (219.12) includes the optional grouping of species and the development of a 'select set of ecological conditions[hellip]'" This is true - the rule allows monitoring of a select set of ecological conditions with 36 CFR 219.12(a)(4)(iv). However, this is in no way related to the 219.9(b)(1) requirement that the responsible official determine "whether or not the plan components[hellip]provide the ecological conditions necessary to[hellip]maintain a viable population of each species of conservation concern within the plan area." The EIS must support this determination. To do so, it must disclose assumptions made concerning the analysis method and disclose any uncertainties associated with the method. In other words the effects of the choice to group the species and drop certain ecological conditions from the analysis must be disclosed. The burden is on the agency to demonstrate that the method is reasonable and sufficient. The EIS does neither of these things and therefore must be remedied.

The effects analysis for SCC must produce convincing evidence that the forest plan will provide the amount and distribution of necessary ecological conditions for each of the SCC. As noted above, the EIS has not provided a reasonable explanation that the grouping method, which removes some conditions from analysis, will produce such convincing evidence.

We raised the issue that the Draft Plan and DEIS required extensive revisions throughout Draft Plan and DEIS comments: Defenders et al. 2017.

Recommended Improvement: The Plan must be revised to meet the 36 CFR 219.9; additional Planning Rule requirements; and other federal laws, regulations, and policies.

Objection Point: The effects analysis for the species of conservation concern is flawed and not sufficient to support a determination that the plan is providing the ecological conditions necessary to maintain a viable population of each species of concern. The EIS violates 36 CFR 219.5(a)(2)(i) because the process fails to consider the environmental effects of the proposal. The draft ROD violates 36 CFR 219.14(a)(2) because it does not explain how the plan components meet the diversity requirements of [sect]219.9.

The EIS declares that: "All action alternatives include direction specific to the habitat conditions necessary for the persistence of the species of conservation concern listed above" (p. 271). We do not agree with this statement. For example, see our review of direction provided for SCC fish. The EIS must document the plan components and specific direction that is being touted here. The EIS goes on to submit that implementation of the plan will likely cause adverse effects because of dispersed recreation, wildland fire operations, timber, roads and trails, and other uses, but that those "would be addressed through plan direction and site-specific analysis." The role of the EIS is to demonstrate the effects of the plan components on the ecological conditions necessary for the persistence of the SCCs, not to conclude that plan components will avoid effects. In addition, the EIS cannot defer relevant effects to the project level. The broad-scale effects of the plan must be assessed now. Programmatic effects analysis for the purpose of NEPA must make a legitimate effort to forecast the future. Qualitative and subjective analysis is not sufficient to demonstrate compliance with diversity requirements.

In the Direct and Indirect Effects section of the EIS (beginning on p. 271) the analysis does not evaluate the likely adverse effects of the plan on each of the chosen ecological conditions that have been lumped for the SCCs. Instead, effects are generalized to all SCC. This is confusing given that the EIS declared that the analysis would evaluate the "effectiveness" (effects) of the alternatives on the ecological conditions necessary for viability. Where is this analysis? We took a close look at how the EIS treated several of the necessary ecological conditions within the EIS, and here are some highlights of what we found:

Willow thickets and cottonwood galleries - The EIS discloses that "Declining groundwater levels and the elimination of flooding have altered plant composition and structure, notably causing the decline of cottonwoods and willow systems. At the programmatic scale, the cumulative effects on species of conservation concern are not expected to increase beyond current trends" (p. 275). What are the cumulative effects on SCC associated with this condition under current trends? According to the EIS a current trend is "away from the natural range of variation" (p. 267). Is the EIS suggesting that the plan area will not provide conditions necessary for viability? There seem to be no plan components to address this issue. According to the EIS: "Actions to restore natural flooding conditions or to raise the water table can[hellip]be more effective at restoring native riparian vegetation[hellip]However, actions of that magnitude may be beyond the scope of Forest Service management actions" (p. 267). What is the plan doing to provide this condition?

Large aspen trees - According to the EIS this condition is below NRV (p. 268), indicating a viability concern for the species affiliated with it. The EIS simply concludes that "at mid- to lower elevations, aspen may decrease due to fire suppression as well as other changes in structural composition" (p. 275). What is the effect of the Forest's fire suppression on this condition, and further, what is the implication for the viability of the SCC that rely on this condition for persistence (boreal owl, flammulated owl and Northern goshawk)? The EIS is silent on these questions.

Alpine ecosystem - The EIS informs us that: "Plant and animal communities[hellip]may be pushed to extinction if warming temperatures reduce their habitat" (p. 81). Given that there are ten SCC affiliated with this condition, this would be a good place for plan components that affect "the ability of terrestrial and aquatic ecosystems on the plan area to adapt to change", as directed by 36 CFR 219.8(a)(1)(iv). Instead, the EIS informs the reader that while historic effects of grazing, mining, roads, and current recreation continue to affect conditions, all is well because of the "forest plan components designed to minimize effects to this ecosystem and the species that rely

on it." It is not defensible for the ROD to rely on this conclusion to make a determination that the needs of SCC have been met under the plan.

Some conditions, like fens, are covered more comprehensively. But even in those cases, the EIS does not disclose effects of the plan that could support a defensible conclusion that the plan provides for SCC viability. For instance, for fens, the EIS yields that vegetation management and grazing, among other uses, can have negative effects on riparian areas, wetlands and fens. But for vegetation management, the EIS only informs the reader that impacts "would vary based primarily on the number of acres found to be part of the suitable timber base" (p. 207). Alternative C would be worst for the fen conditions that support five SCCs, and D would be "least bad", perhaps. Yet there is no discussion of the impacts on the condition, and thus the viability of the dependent SCCs. Similarly, for grazing impacts on fens, the EIS lays out the negative effects and concludes that: "The impacts described above are typically avoided through proper rangeland management, which entails the application of the standards, guidelines, and management approaches detailed in this forest plan revision, along with a variety of other tools" (p. 207). The responsible official cannot make a determination that conditions necessary for the viability of little grapefern, mud sedge, Colorado woodrush, spiny-spore quillwort will be provided based on this analysis.

The snow willow condition is worth noting. In addition to Uncompahgre fritillary butterfly, three other at-risk species depend on the condition, which is threatened by grazing. The EIS defers on that issue, stating that: "As grazing leases cycle through permit renewal, revised management direction in all action alternatives would be taken into consideration, ensuring that any negative impacts associated with grazing are prevented or mitigated" (p. 225). The EIS must document the management direction that is relevant to this statement and demonstrate how "consideration" of that direction will provide the necessary conditions for SCC viability. Regarding mitigation, and this applies throughout the plan and EIS, the EIS must disclose the effectiveness of mitigation measures. In a forest plan, mitigation takes the form of standards and guidelines. To use them in demonstrating persistence of species, the EIS must provide evidence of their effectiveness and achieving that outcome. If plan components in the revised plan resemble those from the current plan, the EIS must provide some discussion of what monitoring has revealed about their effectiveness.

Volcanic substrates are specific soil types needed by 11 at-risk species, the most of any condition evaluated in the EIS. The EIS informs the reader that "the well-being of these species is tied to the preservation of those areas where the specific soil types occur which are typically small, isolated patches" (p. 269). On that same page the EIS states that: "These areas can be managed and protected[hellip]" However, we find no analysis in the EIS on whether the plan in fact does manage and protect these areas. There is an oblique reference to "unique soils" on p. 272 in the grazing section: "Some patches of unique soils that support plant species of conservation concern could be fenced off or otherwise protected in order to achieve protection." Will the areas be fenced off? How will the unique soil areas be "otherwise protected?" The EIS does not inform the reader. It is therefore impossible for the responsible official to make a determination that the necessary condition is being provided.

We couldn't find a clear effects analysis for the prey species that provide a necessary condition for several at-risk species. For example, American marten are of concern due in part to declines in red squirrel. Yet the EIS does not make a logical connection between this decline and the viability of American marten. This sentence does not illuminate the issue: "Prey species are generally analyzed not as prey but on their own merits, with the exception of those prey species that have very strong relationships with individual predator species" (p. 269). Red squirrels do receive some attention in the Canada lynx analysis, but there is no connection made between their condition and the viability of American marten.

Generally, the Direct and Indirect Effect analysis beginning on p. 271 for the SCCs is poor and insufficient to demonstrate compliance with the Planning Rule. It includes the following statements and findings.

For example, for vegetation management, the EIS assures the reader that: "The majority of species of

conservation concern are absent or make only limited use of suitable timber harvesting areas, including small patches of species of conservation concern habitat that are sparsely vegetated but are surrounded by denser, thicker vegetation" (p. 271). This informs the responsible official that a majority of SCC may make some use of suitable timber harvesting areas. This is concerning given the absence of analysis. The EIS must tell the reader what species have habitat within the suitable base and demonstrate that the plan components protect them from the effects of logging.

For prescribed fire, fire use, or fuels the EIS concludes that: "There is some risk that fire management could have negative effects to species of conservation concern, but the net effect will likely be beneficial as conditions move toward the desired conditions and the natural range of variation" (p. 271). The EIS must breakdown this "net effect" analysis, which indicates that harms will occur. The EIS informs us that "incidental impacts" "would likely be avoided in relevant habitat for species of conservation concern through the use of geospatial information systems and resource advisors during the planning process" (p. 271). What planning process is this referring to? And where are the plan components that require these things? What are the effects of mechanical fuels treatment on the SCCs?

On the issue of fire, the EIS must also properly account for the effects of fire suppression, as well as the effects of fuels reduction. The EIS acknowledges that suppression will occur, albeit with "flexibility" (p. 272). But there is plan direction on suppression. For example, suppression action will be taken in areas where community or infrastructure values are threatened (Plan at p. 17). If there are parts of the forest where suppression is a desired condition, especially where that is not the historic ecological condition, the effects of limiting or eliminating fire must be disclosed. If it is expected that mechanical treatment will be needed to prevent fires, those effects must also be disclosed. The EIS concludes that fire management under the plan "would l likely be beneficial to species of conservation concern" (p. 272). This is something the EIS needs to demonstrate.

The Forest includes 2,242 miles of roads (EIS at p. 397), and the EIS notes the negative impacts they have on ecosystems and species. Yet, for the SCC analysis, the EIS simply states that none of the alternatives propose changes to the current road or trail systems. Yet this is disingenuous. On p. 273 the EIS states that Alternative C "represents a maximum number of acres available for the potential expansion of the motorized trail network." What is the effect of the current road and trail systems and networks on the SCC?

We raised the issue that the Draft Plan and DEIS required extensive revisions throughout Draft Plan and DEIS comments: Defenders et al. 2017.

Recommended Improvement: The Plan must be revised to meet the 36 CFR 219.9; additional Planning Rule requirements; and other federal laws, regulations, and policies.

ECOLOGICAL CONDITIONS FOR AT-RISK SPECIES

As argued above, the RGNF conducted a flawed assessment of effects to ecological conditions associated with many SCC and a few threatened and endangered species. These conditions seem to have been selected arbitrarily and do not represent the full range of ecological conditions required by many at-risk species. We selected a few of these conditions representative of the problem: the plan components do not maintain or restore ecological conditions necessary for the recovery of threatened and endangered species and the viability of SCC.

Objection Point: The Plan fails to provide sufficient plan components to maintain or restore habitat connectivity, in violation of 36 CFR 219.9(a)(1), 36 CFR 219.8(a)(1), and 36 CFR 219.8(a)(3)(1)(E).

The Forest must maintain or restore ecosystem connectivity to comply with the Planning Rule. The RGNF chose

"connectivity" as one of its key ecosystem characteristics to assess through monitoring (Plan at 29). While the Plan includes several components that have "connectivity" in the language, they don't provide meaningful direction on the ground to guide projects and activities and, in the case of aquatic connectivity components, can actually do harm to native SCC. There is one general desired condition related to providing habitat connectivity, that is written:

DC-WLDF-3: Habitat connectivity is provided to facilitate species movement within and between daily home ranges, for seasonal movements, for genetic interchange, and for long-distance movements across boundaries. (Forestwide)

It sounds good on the surface, but what is meant by it in terms of management? The desired condition essentially repeats the definition of "connectivity" from the Planning Rule (36 CFR 219.19), and thus violates one of the tenets of the Planning Rule and the Plan: "The components guide future projects and decision-making, and should be in compliance with, but not repeat, agency direction" (Plan at 2). The habitat needs of at-risk species to facilitate the movement identified in the plan component must be specified.

In the case of terrestrial connectivity, there is only one guideline; it's the snag guideline, G-VEG-1. Yet, how this guideline provides direction or constraint on management to restore or maintain connectivity is not at all clear.

There are several plan components that address aquatic connectivity. However, DC-FISH-1, OBJ-FISH-1, and S-RMZ-1 could all harm native fish by encouraging the movement of non-native fish competitor and predator species into native fish occupancy and potential recovery areas. Non-native fish species is one of the most severe threats for the Rio Grande chub, Rio Grande cutthroat trout, and Rio Grande Sucker. G-FISH-1 offers some protection for SCC fish from the threats of nonnative fish, but it only applies in limited cases of new surface diversions. It is not clear how the Forest will determine "when barriers are needed."

The RGNF passed up important opportunities to help maintain habitat connectivity for Canada lynx and other species by not designating Wolf Creek Pass Special Interest Area and Spruce Hole/Osier/Toltec Special Interest Areas in the Plan, see more on this below. Not only is connectivity important for landscape scale species movement, including large game and carnivores, but it's also vital for others, including plants, pollinators, and prairie dogs.

Regarding connectivity, the Plan fails to meet Planning Rule requirements.

The importance of plan components and designated areas to maintain or restore connectivity was raised in previous comments by TWS 2016, Defenders 2016 at 20, Smith et al. 2017, and Defenders et al. 2017.

Recommended Improvement: Revise existing and develop additional plan components to maintain or restore connectivity that comply with 36 CFR 219.7(e) requirements. These plan components should provide the specific habitat conditions that enable movement for at-risk species. At-risk species that require connected conditions, where habitat fragmentation has been cited as a risk factor, must have plan components to provide for the non-fragmented conditions that are necessary for the persistence. This includes species such as boreal toad, Rio Grande chub, Rio Grande sucker and Western bumblebee.

Objection Point: The Plan does not maintain sufficient minimum snag sizes and densities (key structural ecosystem characteristics), based on the best available science, and therefore fails to provide ecological conditions necessary for maintaining the viability of several snag-dependent at-risk species, in violation of 36 CFR 219.8(a)(1), 36 CFR 219.9(a)(1), and 36 CFR 219.9(b)(1).

Numerous forest associated species depend on or use snags, standing dead trees. The FEIS lists at least three SCC, and possibly six SCC, that are dependent on snags; Table 60 (FEIS at 265-266), "Ecological conditions for recovery and conservation of species of conservation concern described in Assessments 1 and 3," is unclear about this. The Table lists boreal owl, flammulated owl, and American marten in the "Snag" Feature or Condition column and these plus three additional species in the "Large trees and snags, late-seral forests" column: northern goshawk, fringed myotis bat, and western bumblebee.

The snag targets in the plan are insufficient and not based on the based on the best available science

The following desired condition relates to snags and SCC:

DC-SCC-6: Snags and decaying wood processes meet the needs of associated species, including species of conservation concern. (Forestwide)

The snag recommendations in Table 8 of the Plan (p. 36) are not sufficient to provide for the ecosystem conditions of, for example, the American marten, boreal owl, and flammulated owl and will not meet this desired condition. Snags are habitat requirements for these species, and possibly other SCC. It is not clear what best available scientific information the Forest used as a basis for setting snag minimum targets. To the extent this can be determined, it seems apparent that the snag criteria used in the Plan was not derived from wildlife studies. Species studies demonstrate that the RGNF's minimum size and density thresholds may not be enough.

We stated in our Draft Plan and DEIS comments the following, which still applies to the Plan,

We are especially concerned about snag desired conditions in relation to boreal owl and American marten needs; they do not square with BASI synthesized in the RGNF's wildlife overviews (RGNF undated, Martes americana; RGNF undated, Aegolius funereus) and additional BASI related to the marten (Hargis et al. 1999; Powell et al. 2003; Buskirk and Ruggiero 1994; Buskirk and Zielinski 1997; Ruggiero et al. 1998) and owl (Ryder et al. 1987; Hayward et al. 1987, 1993; Hayward 1994; Herren et al. 1996).

Boreal owls are subalpine secondary cavity nesters and the largest cavity nesting species in the Southern Rockies (Hayward 2008). They need large snags and trees for nesting: a minimum of 9 snags per acre at 13 inches in diameter at breast height (dbh). To enable retention of sufficient snags for boreal owl nesting, projects cannot manage to the minimum. The average snag size is 25 inches dbh, and some snags must be retained at much larger diameters than 12 inches (the recommendation in DC-VEG-1). The American marten requires snags greater than 16 inches dbh.

American martens are depended on snags and down wood. They need at least 9 snags per acre at >16 inches dbh and at minimum 47 logs per acre at >16 inches in diameter (see scientific references above).

(Smith et al. 2017 at 193-194, Appendix 1)

Science cited in the RGNF's Flammulated Owl Overview stated that owls select snags ranging from 14 to 22 inches dbh for nesting (citing McCallum 1994).

If the RGNF is going to identify snags as an ecological condition for SCC viability, it should use species habitat requirement data, i. e., the best available science, to determine targets. The research cited above demonstrates that the RGNF's snag size minimums are too small and density per acre minimums too sparse.

The Plan does not provide sufficient standards and guidelines to maintain the minimum snag density and size requirements of SCC

The Plan is not clear as to whether the minimum snag targets listed by forest type in Table 8, "Recommended snags and downed wood for wildlife habitat and ecosystem processes," are part of any specific plan component (Plan at 36). Table 8 in the Plan notes the targets as "Recommended", and may be tied to G-VEG-1 on the previous page. However, the FEIS calls them "minimum requirements" that "would meet the need to provide sustainable wildlife habitat and ecosystem function" (FEIS at 112). This discrepancy must be clarified.

A standard is the most appropriate plan component for snag targets that are based on the best available science. Constraining a project to meet minimum snag thresholds cannot be accomplished other than by having specific quantifiable metrics whose application is mandatory.

The Plan indicates that the snag recommendations in Table 8 are "based on an average basis across the planning unit" (Plan at 36; emphasis added). Though the glossary defines planning unit as "The area planned for treatment as identified in a project-level decision document," the Plan viarably uses the term to refer to what could be interepreted as the entire Forest (See Plan at 25, 157, 158, and 164). The appropriate scale for applying snag standards is the project scale. To avoid confusion, the plan component requiring snags should clearly state that the minimums apply at the project level.

Additionally, the guideline related to snags is inadequate to ensure that snags will be protected as ecological conditions that serve as essential habitat for at-risk species.

G-VEG-1: Snag densities are related to disturbance regimes of various forest systems. Snags suitable for nesting and denning (typically larger sizes) are present across the Forest contributing to the diversity of forest structure and maintenance of habitat components important to the persistence of snag-associated wildlife species. Snags provide an important habitat component in the maintenance of habitat connectivity. Snag-retention should represent a variety of snag heights. At least 50 percent of the retained snags should represent the larger size classes available. Where larger snags are not available, trend toward a greater number of smaller snags. Snags are not required to be maintained on every acre. (Forestwide)

Guideline G-VEG-1 is written like a desired condition and provides no constraints on projects or activities, as required by 36 CFR 219.7(e)(1)(iv).

The Plan has not based its snag density, size, and height targets based on the best available scientific information as required by 36 CFR 219.3. This includes science the RGNF compiled for its wildlife overviews, developed as part of the planning process as stated on page 157 of the Plan.[2] The American marten, boreal owl, and flammulated owl require a greater density of snags per acre and/or larger sized snags than the Plan recommends or requires, and the Plan appears to have no plan components to ensure these ecological conditions can be provided. The Plan does not meet the requirement that it must provide the ecological conditions to maintain the viability of the American marten, boreal owl, and flammulated owl[mdash]all SCC. The Plan fails to meet requirements in 36 CFR 219.9 for these species and possibly other at-risk snag-dependent species.

We addressed this in previous comments on the Draft Plan and DEIS: Smith et al. 2017 at 98, 102-103, and 193-197, Appendix 1.

Recommended Improvements. Base snag targets on the best available scientific information derived from studies of SCC that depend on snags, such as the American marten and boreal owl. Clarify that Table 8 is a plan component or part of a plan component, which should be a standard. Snag targets must clearly apply at the project scale. A supplemental or revised EIS is required to show that BASI has been used for snag and related requirements, and management will provide the ecosystem characteristics necessary to support dependent

species.

Objection Point: The Plan uses a flawed analysis to develop late-seral forest desired conditions and does not contain effective plan components to maintain sufficient late-seral conditions to ensure the recovery, conservation, and viability of at-risk species that need late-seral forest.

The FEIS lists 6 SCC that are dependent on "Large trees and snags, late-seral forests," including boreal owl, flammulated owl, American marten, northern goshawk, fringed myotis bat, and western bumblebee (FEIS at 265-266, Table 60, "Ecological conditions for recovery and conservation of species of conservation concern described in Assessments 1 and 3"). It is unclear from Table 60 if all of these species are dependent on late-seral forest.

There is a desired condition that relates to late-seral forest and SCC:

DC-SCC-2: Structure, composition, and function of coniferous forests, including late seral forests, meet the needs of associated species, including species of conservation concern. (Forestwide)

DC-SCC-2 does not provide enough information to allow measurability, as required by 36 CFR 219.7(e)(1)(i). We don't know anything about late seral patch size needs for these species, for example.

There is a guideline focused on late-successional forest:

G-VEG-5: Old forest, or late-successional stage forest, is often deferred from harvest to maintain biotic diversity across the landscape. To maintain old forest components across the landscape and move toward desired conditions (defined in Table 6) prioritize retention of old forest stands as follows:

* Older stands that have not been manipulated are more desirable than younger ones.
* Stands with limited use and access are better suited to maintain old forest conditions.
* Stands that provide habitat for threatened, endangered, or proposed species, species of conservation concern.
* Stands exhibiting a variety of attributes such as diverse canopy layers, decadence in live trees, standing or downed dead, or both, and patchiness.

This guideline does not give any indication of how it is to be applied on the ground. Are these priorities given the same weight in project development, for example? Moreover, the structural stage targets in Table 6 are problematic and should not be the sole basis of the only plan component that exists relating to late-seral forest.

The forest development and structural stage desired conditions in Table 6 (Plan at 33) are based on a flawed analysis

We stated in previous comments on the Draft Plan and DEIS, which still hold for the Plan and FEIS,

The current approach, which relies on vectors of vegetation structural stages downloaded from the LANDFIRE website (and modified locally), is insufficient to characterize the desired range of variation. Indeed, this static characterization of desired condition is the exact opposite of what was intended by the original conception of historical range of variability (Morgan et al. 1994). The "range of variability" should not be presented as a fixed distribution of structural stages. Such a characterization is the consequence of the State Transition Simulation (STS) Model used to derive desired condition, not a realistic characterization of vegetation dynamics. The STS model simply cannot represent the effects of the periodic disturbances that drive vegetation dynamics in the

Rocky Mountains (instead, the effects of periodic disturbances are divvied up among annual time steps and modeled as though they occur every year; such modeling results in the static representation of historical vegetation that passes for desired conditions in Table 6). (Smith et al. 2017 at 104)

Perhaps the biggest problem with this approach, though, is that it leads to the conclusion that any management that is intended to move the forest toward desired conditions is good for the forest. This is reflected in the ludicrous effects analysis on pages 91-94 of the DEIS [nearly identical in the FEIS at 108-110] that ignores the impact of management and assumes that more management would lead to more rapid achievement of desired conditions and "a larger suitable timber area also means there would be more control over manipulating vegetation and creating particular old forest characteristics." The emphasis on transitions among structural stages at the scale of whole forest types also leads to the dismissal of meaningful differences among alternatives with statements like, "This effect (of alternatives) is minor in that the distribution and diversity of vegetation structural stages across the Forest is predominantly determined by successional and natural disturbances such as fire, insects, and disease, and the fact that about half the forested area is already in protected areas[hellip]" DEIS at 92. The analysis of environmental effects among alternatives cannot be dismissed simply because the aggregate distribution of structural stages is controlled by factors other than management. (Smith et al. 2017 at 104-105)

It is also important to understand that vegetation modeling to develop the desired conditions in Table 6 did not include large beetle outbreaks that may be within NRV (See FEIS at 89).

Plan components are not sufficient to protect (maintain) late-seral forest conditions necessary for SCC

As stated above, guideline G-VEG-5 does not provide adequate management direction to maintain late-seral forest. We continue to recommend that beetle-affected stands be protected from salvage logging, in a standard, as we did in previous comments (Smith et al. 2017 at 103):

According to Table 27 (DEIS at 74) [in FEIS as Table 27 at 90], spruce-fir forest is currently below desired levels of late successional habitat. Beetle-affected stands should be protected from salvage, even if they contain considerable volume of dead spruce, as long as they meet the criteria for old forest [old forest criteria based on Appendix A in the Plan].

And, see Smith et at. 2017 at 120, below:

The DEIS (p. 76) also notes that while spruce mortality may exceed 90 percent of the overstory, it is also "highly variable across the landscape." This variability may result in stands being targeted for salvage that are, in fact, suitable for retention as old growth. As Appendix A makes clear, a stand need only contain 10 live trees over 200 years old and 16" DBH (and snags and down wood) to qualify as old forest, conditions that would be expected in stands that have been "affected" but where not all large trees were killed. It is highly likely that much of the "affected" area meets these criteria and should not be targeted for salvage. The plan should contain standards to protect these stands, and it should describe precisely the areas where salvage logging is anticipated so that the EIS can effectively evaluate environmental consequences of the alternatives.

And, as stated in Defenders et al. 2017 at 17-18,

The Terrestrial Assessment (p. 18) indicates that the spruce-fir ecosystem will trend toward recovery. It's not clear whether the recovery trajectory is inclusive of vegetation management activities under the current plan or under a limited or no management scenario. The Terrestrial Assessment (p. 18) states,

Future projections for the spruce-fir forest ecosystem generally show a trajectory of recovery toward the natural

range of variation conditions over time. The current overabundance of grass/shrub conditions largely disappears in the first 20 years of projections, and open conifer forests are mostly replaced by mid- and closed cover forests over the first century of projections. Aspen stands increased in short-term and mid-term projections. Longer-term projections, however, show a decline of aspen stands to levels roughly 10 percent lower than under the natural range of variation, mostly due to lower levels of wildfire under contemporary conditions due to fire suppression.

An active management approach does not necessarily follow from a situation where structural conditions are out of alignment with reference conditions. Given the beetle outbreak, vegetation management in this ecosystem should only be undertaken with extreme caution and with a clear justification based on BASI, and where the latter shows the harm to late-seral species is minimal. We believe the RGNF has not sufficiently documented the BASI upon which it is making planning decisions for this ecosystem. This is essential to protect the habitat of at-risk species and meet the at-risk species requirements of the planning rule.

And, Defenders et al. 2017 at 16 stated,

Including a DC for old forest conditions is necessary for species such as the northern goshawk, but the plan must also include related standards and guidelines to assure that a DC or DCs are compliant with the planning rule and can be met. For example, standards should be written that assure, for example, that criteria for retaining: old trees and large trees, etc. The plan must be specific about what spatial scale these criteria apply.

Again, one or more standards are necessary to protect old forest conditions required for SCC, especially in spruce-fir forest. These can be based on Appendix A in the Plan, which is still reflective of the best available science. Without this, given timber harvest and salvage logging objectives in the Plan that call for considerable cutting, it is unlikely that the plan can provide the late-seral conditions necessary to maintain the viability for SCC that require these conditions.

We addressed the issue of late-seral (or late successional or old growth or old forest) forest in earlier comments: Smith et al. 2017 at 103, 105, 106, and 120. And see Defenders et al 2017 at 13-14, 15-18, and 23.

Recommended Improvement: Provide a revised plan standard that maintains late-seral/old forest conditions consistent with Appendix A of the Plan.

Objection Point: The Plan contains no plan components to provide the ecological conditions necessary to support northern flicker cavities for at-risk species that are secondary cavity users.

Table 61 in the FEIS (p. 266) indicates that northern flicker cavities are necessary for the western bumblebee, fringed myotis, boreal owl, and flammulated owl[mdash]all SCC. However, the Plan contains no plan components aimed at restoring or maintaining conditions required for northern flickers. The FEIS (p. 270) states,

Northern flickers create holes in snags for nesting. Other species commonly re-use the northern flicker-created cavities for nesting or hives, or as short-term roosting habitat. In some environments, efforts have been made to artificially create such flicker-created cavities (Bull et al. 1997), although that has not occurred on the Forest. The frequency of northern flicker-created cavities is probably closely tied to the number of snags, which is addressed earlier in this section as well as in the Forested Ecosystems section.

Certainly, the habitat requirements for northern flickers have been studied. The RGNF is right to include northern flicker cavities as a condition needed for these species. However, the best available science must be used to inform the revised plan regarding conditions that support the needed cavities. This science should be the basis for plan standards that ensure that the conditions necessary for northern flicker cavities will be sufficient to meet

the habitat needs of the SCC listed above.

We addressed northern flicker cavities in Defenders et al. 2016a at 17 and Defenders et al. 2017 at 12.

Recommended Improvement: Use and document the best available scientific information on the habitat requirements of northern flickers to inform plan standards that maintain conditions needed for northern flickers. Designate flickers as a focal species for monitoring, i.e., monitoring for snags.

THREATENED AND ENDANGERED SPECIES

Objection Point: The Plan fails to provide desired conditions that describe the specific ecological conditions necessary to contribute to the recovery of threatened and endangered species that may be present on the Forest.

Though found in the Canada lynx section, we assume that this following generic desired condition is intended to apply to all threatened and endangered species:

DC-TEPC-1: Maintain or improve habitat conditions that contribute to either stability or recovery, or both, for threatened, endangered, proposed, and candidate species. (Forestwide) (Plan at 27)

Managing for "stability" of threatened and endangered species does not meet the requirement to "contribute to the recovery" of federally listed species in 36 CFR 219.9(b)(1)) and the requirement to:

[hellip] include plan components, including standards or guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore their structure, function, composition, and connectivity. 36 CFR 219.9(a)(1))

Additionally, "maintaining" habitat or ecosystem conditions should only be considered where ecological integrity is not in question.

Yet, providing one or more desired conditions that specify what the habitat conditions are that would contribute to federally listed species' recovery (i.e., the key structural, compositional, functional, and connectivity characteristics) is essential to meeting the requirements of the Planning Rule. A sufficient desired condition must, at minimum, include details about the natural range of variation for these characteristics in a way that progress toward the desired condition and can be assessed through monitoring. Desired conditions must also provide "specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed." 36 CFR 219.7(e)(1)(i), The desired condition DC-TEPC-1 does not meet the requirements for desired conditions, and does not satisfy 36 CFR 219.9(b)(1)) or 36 CFR 219.9(a)(1)).

We did not raise this in previous comments because the Draft Plan included desired conditions specific to threatened and endangered species that may be present on the Forest.

Suggested Improvement: Develop desired conditions for each species that may be present on the Forest that meet the requirements of 36 CFR 219.7(e)(1)(i) and provide specifications for the key structural, compositional, functional, and connectivity characteristics necessary for the recovery of these species, based on the best available scientific information as required by 36 CFR 219.3.

Uncompahgre Fritillary Butterfly

Objection Point: The Plan does not provide the ecological conditions necessary to contribute to the recovery of the Uncompahgre fritillary butterfly, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The UFB is endemic to the San Juan Mountains of Colorado in high alpine ecosystems and is dependent on large snow willow patches. There are 11 known UFB colonies, and 5 occur on the Forest, according to the FEIS (p. 222). The FEIS (p. 223-224) identified the ecological conditions necessary for the species as:

* large patches of snow willow (Salix nivalis) above 12,000 feet, which provides food and cover
* flowering plants that provide nectar
* functional connectivity between colonies

Threats include collection, livestock grazing, recreation, and climate change (FEIS at 224). The FEIS (p. 224) states that there are few human uses of the forest that threaten UFB colonies because the colonies occur in remote areas. However, the BA (p. 49-50) notes,

* A cattle allotment occurs across a known colony.
* "[W]andering bands of domestic sheep have been observed grazing on some colony areas".
* "Trampling by recreational foot traffics [sic] has been noted as a management issue in some colony areas".
* Visitor use and dispersed recreation is likely to increase.
* "[A]t least one population on the Rio Grande National Forest experiences considerable visitor use."

Neither the Plan nor FEIS identify the plan components relevant to UFB recovery. Nonetheless, the FEIS (p. 224) stated,

All action alternatives include revised management direction for Uncompahgre fritillary butterfly habitat in alpine areas with snow willow. Generally, there will be very little, if any, adverse impact to the Uncompahgre fritillary butterfly from any action alternative.

However, the BA does discuss some specific plan components in relations to the UFB.

The BA (p. 51) states, "Forest Plan components S-TEPC-4 and G-TEPC-1 would minimize potential impacts to the species." There is no S-TEPC-4 in the Plan; there was no S-TEPC-4 in the Draft Plan. That leaves G-TEPC-1, which is,

G-TEPC-1: To avoid or minimize adverse effects to listed species and their habitat, management actions should be designed with attention to threatened, endangered, proposed, or candidate species and their habitats. (Forestwide)

Guideline G-TEPC-1 provides absolutely no management direction at all. The RGNF deleted from the Plan the only plan component in the Draft Plan specifically associated with the UFB, which was the following desired condition:

DC-SCC-4: Plant species that are necessary for species of conservation concern as food (including grazing, forage, and nectar for pollinators) or structure are identified and occur in numbers viable enough to fulfill that function. This includes snow willow (necessary for the Uncompahgre fritillary butterfly), flowering plants (nectar producing species for the Western bumblebee) and many other species. (Forestwide)

The BA (p. 49) states, "[hellip] high-alpine monitoring of grazing allotments needs to occur to determine if this desired condition is occurring or not," [hellip] "As grazing leases cycle through permit renewal, this Desired Condition (and all other plan components) will be taken into consideration, ensuring that any negative impacts

associated with grazing are prevented or mitigated." These statements are in reference to the deleted desired condition DC-SSC-4. Either DC-SCC-4 was deleted in error in the Plan or this text in the BA was retained in error. Regardless, this desired condition provides no direction that would be helpful to inform management actions.

The BA (p. 49) claims, "The USFS already prohibits direct sheep grazing in UFB habitat, and no sheep trailing occurs in UFB habitat within the Rio Grande National Forest." But this is based on a standard in the 1996 LRMP, and the Plan did not retain the standard.

The Plan includes the following desired condition:

DC-SCC-5: Structure, composition, and function of alpine ecosystems, including cushion plant communities, snow willow, alpine fell fields, and talus slopes, meet the needs of associated species, including species of conservation concern. (Forestwide)

However, there are no objectives, standards, or guidelines that assure this will happen. There are no plan components that provide direction for habitat restoration, butterfly reintroduction, or butterfly translocation[mdash]all recovery actions assigned the Forest Service in the species recovery plan (UBRT 1994).

The monitoring program offers the only real guidance in the Plan that is directly related to the UFB. There is one monitoring question: "How is climate change or other factors influencing vulnerable alpine systems such as snow willow, the phenology of flowering nectar plants, and occupancy of Uncompahgre fritillary butterfly colony sites?" and an indicator: "Occupancy and trend of Uncompahgre fritillary butterfly colonies." Monitoring is only slated to occur at "6 and 10 years." Monitoring UFB occupancy and trends is not tiered to any plan components, so it triggers no management action that may be necessary to protect colonies and individuals.

We communicated in past scoping comments: Defenders et al. 30 that the 1996 LRMP standards and guidelines relevant to the UFB were not adequate. Wildlife - Standard 13 (RGNF 1996: III-28) from the 1996 LRMP states,

No ground-disturbing activity shall be allowed in potential Uncompahgre fritillary butterfly habitat unless a survey is conducted to determine the existence of the species. Ground-disturbing activities include trail building, livestock driveways, or domestic sheep bedding grounds. The usual grazing associated with livestock in the area is not considered ground disturbing. Potential habitat definitions and survey protocols are found in the Uncompahgre Fritillary Butterfly Recovery Plan.

However, if ground disturbing activities are allowed to occur in unoccupied potential habitat, this may preclude the restoration and recolonization of potential habitat and hinder the butterfly's recovery. Wildlife - Standard 14 (RGNF LRMP 1996: III-28) states, "[i]f any new Uncompahgre fritillary butterfly populations are discovered, a "No Butterfly Collecting" regulation shall be imposed on the area." It follows that "ground-disturbing activity" restrictions should apply to the habitat of newly discovered populations not solely collection restrictions.

The USFWS has emphasized a continued need to maintain regulatory mechanisms and recommended the following action: "[d]evelop a management plan with the USFS and BLM to ensure grazing, collecting, recreation, and other on-the-ground threats remain low or are eliminated" (USFWS 2009: 16).

There are no plan components in the Plan that provide protection for UFB habitat or individual butterflies and none that aim to help recover recovery, expand, or initiate new colonies. The Plan fails to comply with 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1) in the case of the UFB.

We addressed Uncompahgre fritillary butterfly recovery in prior scoping comments: Defenders et al. 2017: 29-30.

Recommended Improvement: We recommend the revised plan include objectives necessary to provide direction to reintroduce UFB's to new locations and the following standards to prevent ground disturbing activities in known colony sites and potential new colony areas:

* Standard: Close Uncompahgre fritillary colony sites and potential recovery areas to recreation, including hiking and trail building.
* Standard: Close Uncompahgre fritillary colony sites and potential recovery areas to grazing.

Objection Point: The Plan fails to provide for ecological conditions necessary to contribute to the recovery of the southwestern willow flycatcher, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The southwestern willow flycatcher, a riparian obligate bird, was listed as endangered under the ESA in 1995 (60 Fed. Reg. 10694). The FEIS (p. 265, Table 60 and at 266, Table 61) noted ecological conditions associated with the species, below:

* Willow thickets and cottonwood galleries (description: riparian vegetation dominated by mature cottonwood trees and dense willow)
* Prey: insects

Though there is no designated critical habitat for the flycatcher, the Final Recovery Plan: Southwestern Willow Flycatcher (Empidonax traillii extimus) lists the following primary constituent elements:

(a) Dense riparian vegetation with thickets of trees and shrubs that can range in height from about 2 to 30 m (about 6 to 98 ft). Lower-stature thickets (2 to 4 m or 6 to 13 ft tall) are found at higher elevation riparian forests and tall-stature thickets are found at middle and lower-elevation riparian forests;

(b) Areas of dense riparian foliage at least from the ground level up to approximately 4 m (13 ft) above ground or dense foliage only at the shrub or tree level as a low, dense canopy;

(c) Sites for nesting that contain a dense (about 50 percent to 100 percent) tree or shrub (or both) canopy (the amount of cover provided by tree and shrub branches measured from the ground);

(d) Dense patches of riparian forests that are interspersed with small openings of open water or marsh or areas with shorter and sparser vegetation that creates a variety of habitat that is not uniformly dense. Patch size may be as small as 0.1 ha (0.25 ac) or as large as 70 ha (175 ac).

The Recovery Plan identified several of threats that are relevant to the RGNF, for example:

* Habitat Loss and Modification: reduction or elimination of surface and subsurface water due to diversion and groundwater pumping; changes in flood and fire regimes due to dams and stream channelization; clearing and controlling vegetation; livestock grazing; changes in water and soil chemistry due to disruption of natural hydrologic cycles; and establishment of invasive non-native plants.
* Inadequacy of Regulatory Mechanisms
* Other Natural or Manmade Factors: drought and the effects of climate change

The FEIS (p. 267) described the current condition of willow thickets and cottonwood galleries, stating,

Current conditions contain 30 percent of the riparian vegetation in open to mid canopy cover, substantially less than under the natural range of variation. Future projections indicate a gradual decline of mid cover areas over

time. This trend away from the natural range of variation is due to the much longer fire return interval under contemporary conditions.

The FEIS (p. 267), states, "Management data indicate that less than 20 acres per year is treated in this ecosystem;" However, the type of management employed and for what purpose is not clear from the FEIS, which implies this could mean "removal of invasive plants."

The FEIS (p. 275) presents perspective on cumulative effects, though no direct or indirect effects are discussed among the analyses below:

Human activities in the planning area include grazing, removal of trees, and construction of dams and diversions that regulate water flow, block aquatic organisms, and alter erosional processes. Declining groundwater levels and the elimination of flooding have altered plant composition and structure, notably causing the decline of cottonwoods and willow systems. At the programmatic scale, the cumulative effects on species of conservation concern are not expected to increase beyond current trends.

According to the Biological Assessment (at 41), the RGNF has 1,762 acres of suitable habitat and 947 acres of potential habitat for the species. Most of this, primarily cottonwood-willow habitat, occurs in lower elevation riparian areas, < 8,500 feet, according to the RGNF's planning assessment on wildlife (RGNF undated: 28, Assessment 5 - Wildlife). While the planning documents and planning assessments did not quantify how much of this suitable and potential habitat is in a degraded condition, the aquatics planning assessment and appendices noted that,

* The forest's lower elevation streams are most at risk to climate change and should be management priorities (RGNF undated: 4, Assessment 1 and 3: Aquatics)
* Human influences on wetland conditions occur most in lower elevations (RGNF undated: 5, Assessment 1 and 3: Aquatics)
* Riparian woodlands are among the lowest ranking riparian and aquatic ecosystems on the forest in terms of integrity with departures from the natural range of variation among some key ecosystem characteristics (RGNF undated: 14 and 15, Assessment 1 and 3: Aquatics),
* Most of the forest's OHV trails occur in lower elevation valley bottoms (RGNF undated: 26, Assessment 1 and 3: Aquatics)
* The aquatics assessment recommended that lower elevation streams for management that mitigates threats and restoration (RGNF undated: 42, Assessment 1 and 3: Aquatics)

The planning documents have emphasized that only one southwestern willow flycatcher has been detected in the forest. This is not surprising given the species is federally endangered, declining, and difficult to observe due to camouflaging plumage. Plan direction to guide appropriate threat mitigation and restoration of riparian habitat for this species might attract more birds to the forest and provide a net gain in occupied habitat, but the Proposed Final Plan does not offer sufficient direction to do this.

The Forest Service failed to develop plan components that would comprehensively address threats and that would contribute to the recovery of the southwestern willow flycatcher.

We provided relevant comments in Defenders 2016b at 28-29.

Recommended Improvement: Revise the Plan to provide plan components that meet the Planning Rule's 219.9 requirements for the southwestern willow flycatcher.

Canada Lynx

Objection Point: The Plan fails to provide for ecological conditions necessary to contribute to the recovery of the Canada lynx, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

We raised concerns relevant to lynx ecosystem plan components and vegetation management in comments on the Draft Plan and DEIS (Smith et al. 2017 at 69-86). We supported the RGNF largely retaining direction from the SRLA, as it has, but we recommended, "strengthening plan components, incorporating additional direction, and modifying some definitions in the SRLA to meet the threatened and endangered species recovery requirement of the planning rule (219.9(b)(1))" (Smith et al. 2017 at 70). We made recommendations for doing this (Smith et al. 2017 at 69-86). The RGNF largely ignored these recommendations. We stated in prior comments,

The changed ecological conditions in the forest resulting from the recent multi-year, large-scale spruce bark beetle outbreak necessitate a precautionary approach to forest management, with a high priority on maintaining or restoring ecological conditions necessary to contribute to the recovery of Canada lynx (lynx). Generally, viable populations of native wildlife species are resilient to natural disturbances, even large-scale changes. The assessment presented inconsistent science regarding whether the current forest conditions are outside of their NRV [natural range of variation] based on structure, composition, function, and connectivity characteristics. [hellip] Given the likelihood that the population has remained small, it may be more vulnerable to perturbations, even those that occur naturally. (Smith et al. 2017 at 70)

We appreciate the Forest initiating and supporting a study led by Dr. John Squires, one of the foremost experts on lynx, that assessed lynx use of areas on the forest with high spruce tree mortality (Squires et al. 2016; Squires et al. 2017; Squires et al. 2018).

However, the set of desired conditions, objectives, standards, and guidelines in the 2008 Southern Rockies Lynx Amendment (SRLA) and those developed in addition to the SRLA in the Plan are insufficient to achieve the ecosystem conditions required by lynx and contribute to the species' recovery. The Plan's VEG S7 standard modified from the Draft Plan provides an arbitrary threshold for allowing salvage logging in forest stands that meet the VEG S7 definition, i.e., land with the highest quality lynx habitat (See Plan at 26-27), and further discussion below. The Plan jettisoned all of the management approaches related to lynx included in the Draft Plan (Draft Plan at 22-24). Some of these held promise for guiding post-beetle vegetation management in the Forest had they been revised and developed into standards or guidelines. These include, but are not limited to, prioritizing placement of snag clumps near high quality habitat and recognizing the value of understory patches at least 0.5 acres in size (Draft Plan at 23).

The FEIS (p. 234-235) and Forest Service's Biological Assessment (BA; at 19-20) both summarized the findings reported by Squires et al. (2018), stating,

The information collected for the lynx study successfully explains and models what lynx are selecting and not selecting (i.e., avoiding) in spruce-fir ecosystems altered by the spruce beetle outbreak on the Forest (Figure 20, Squires et al. 2018). The results of the Resource Selection Function model for winter (January-April) are of particular interest because this period is the most critical in regards to lynx survival. The Resource Selection Function model successfully explains 95 percent of the winter lynx use in the study area, with approximately half of the total study area (49.9 percent) being selected for and half (50.1 percent) less selected. The West Fork Fire Complex is not included in the Resource Selection Function model. Based on GPS locations from individual lynx, however, it is evident that collared lynx are avoiding the fire landscape at this time. An exception to this involves unburned islands of forest vegetation within but close to the burn perimeter.

Based on the top model, winter use is best explained by a combination of abiotic factors and forest vegetation factors. Approximately half of the lynx use is explained by abiotic factors such as precipitation and landscape

roughness, while the vegetation factors include dead forest canopy comprised of larger trees, aspen canopy, a subcanopy of subalpine fir and small spruce, and the presence of Douglas-fir. However, the presence of Douglas-fir is a negative relationship, indicating that lynx are avoiding dryer sites that contain this species. Of the vegetation factors lynx are selecting for, the presence of subalpine fir in the subcanopy is the most significant. Dense horizontal cover conditions of at least 45 percent are primarily being selected by lynx, which suggests that lynx are actively selecting forest stands with high horizontal cover values that also support high snowshoe hare densities. Reproduction has also been documented within areas of extensive overstory mortality. Both lynx use areas and reproduction areas sometimes overlap with habitat areas that are currently considered unsuitable habitat on a coarse scale, suggesting that new definitions of suitable and quality habitat in forests heavily influenced by bark beetles is warranted. (emphasis added)

The extent of salvage logging and timber harvest that may be allowable in habitat being used by lynx is considerable. The Plan includes the following objectives that indicate the Forest is planning significant salvage logging and commercial timber harvest:

OBJ-VEG-1: Diversify the structure class distribution for various forest types by managing 800 acres annually in years 4 and 5 of the planning period and 1,200 acres in years 6 through 20 of the planning period, to work toward or maintain the desired conditions in Table 6. (Forestwide)

OBJ-VEG-3: Salvage harvest approximately 62,800 CCF (hundred cubic feet) of spruce-fir annually for the first 3 years of the planning period. (Forestwide)

OBJ-VEG-4: Salvage harvest an estimated 20,000 CCF of spruce-fir annually during years 4 and 5 of the planning period. (Forestwide)

OBJ-VEG-5: Offer timber for sale at an average timber sale quantity of 8,000 CCF per year for years 4 and 5 of the planning period. Offer timber for sale at an average timber sale quantity of 12,000 CCF per year for years 6 through 20. (Forestwide)

(Plan at 34)

The Forest must show how much harvesting is likely to or could occur in lynx habitat under these objective categories, and disclose the impacts from such activity. This disclosure should occur for current mapped lynx habitat in both the 95% use area (Squires et al. 2018) and within the forest matrix as mapped for any SRLA updates. The risk of not adapting SRLA direction to the changed forest condition would be to enable timber harvesting, fuel treatments, and salvage logging[mdash]without SRLA limits[mdash]in areas lynx are actively using. Further, the Forest must disclose in its NEPA analysis how much, if any, of this proposed logging, relates to projects recently approved under the existing plan, such as the La Garita Hills project and Conejos Peak District-wide salvage project. Failure to disclose this information, obscures the potential effects of this salvage logging, and is indicative of the Forest's failure to take a hard look at the potential impacts of the implementation of the proposed Plan in violation of NEPA.

The Plan Fails to Provide Sufficient Desired Conditions for the Ecological Conditions Necessary for Lynx Recovery

The FEIS lists "[s]ome ecological conditions considered important" for lynx recovery (FEIS at 231). However, the Plan lacks any desired conditions that describe the necessary ecological conditions for lynx recovery in terms that are detailed enough to provide functional direction and that are sufficiently specific to enable tracking their progress toward achievements, as required by 36 CFR 219.7(e)(1)(i). As we stated in our Draft Plan and DEIS comments, "The plan must include desired conditions for the ecological characteristics necessary for lynx

recovery in relation to structural, compositional, functional, and connectivity elements of ecosystem integrity" (Smith et al. 2017 at 71). The Plan (p. 27) states, "Desired conditions related to habitat for Canada lynx are specified in the Southern Rockies Lynx Amendment." The SRLA states, "Objectives define the desired conditions for lynx habitat. Four objectives, VEG O1, VEG O2, VEG O3, and VEG O4 are identified for vegetation management in the context of natural ecological processes." SRLA 2008: 6. These objectives include:

Objective30 VEG O1: Manage vegetation to mimic or approximate natural succession and disturbance processes while maintaining habitat components necessary for the conservation of lynx.

Objective VEG O2: Provide a mosaic of habitat conditions through time that support dense horizontal cover19, and high densities of snowshoe hare. Provide winter snowshoe hare habitat51 in both the stand initiation structural stage and in mature, multi-story conifer vegetation.

Objective VEG O3: Conduct fire use11 activities to restore40 ecological processes and maintain or improve lynx habitat.

Objective VEG O4: Focus vegetation management50 in areas that have potential to improve winter snowshoe hare habitat52 but presently have poorly developed understories that lack dense horizontal cover.

(SRLA 2008 at Attachment 1, p. 2 (objectives) and Attachment 1, p. 10-15 (definitions referenced in the objectives)).

These objectives do not meet the Planning Rule's requirement for desired conditions (36 CFR 219.7(e)(1)(i)).[3] They are all written more like standards or guidelines as defined by the Planning Rule (36 CFR 219.7(e)(1)(iii) and (iv)). Additionally, the objectives do not specify what the habitat conditions are that would contribute to lynx recovery (i.e., the key structural, compositional, functional, and connectivity characteristics), which is essential to meeting the requirements of the Planning Rule. Regarding VEG 01: what exactly are the "habitat components necessary for the conservation of lynx"? Regarding VEG 02: the Squires (2018) study quantifies that stands should include at least 45 percent dense horizontal cover (cited in the FEIS (p. 234 and BA at 21), which is included in a plan standard (Plan at 28); see further discussion below. Objective VEG 03 is written more like a vague guideline and raises the question: what do restored "ecological processes" look like on the ground? Objective VEG 04, again, is more like a guideline or standard than a desired condition as defined by the Planning Rule, as it focuses treatment in certain areas rather than describing a condition or state to be attained.

The following statement in the Plan (p. 26), though not a plan component comes closer to what a desired condition for lynx ecosystem conditions should look like:

The direction below is intended to encourage vegetation management in areas where habitat quality for lynx and snowshoe hare can be improved while retaining existing high quality habitat. The overall goal is to maintain areas that support high densities of snowshoe hare while promoting vegetation management that restores habitat and landscape connectivity for lynx movement.

If this is indeed a goal, it should be developed as a desired condition that meets Planning Rule requirements. Moreover, this goal statement specifies that existing high quality habitat be retained and areas that support high densities of snowshoe hare be maintained, which indicates no active management should occur in such stands. As we contend in more detail below, vegetation management, including salvage logging, should not be occurring in high quality lynx habitat under the revised plan. However, it is inappropriate for the EIS to treat this "overall goal" as if it were a desired condition in the Plan; this implies that there is additional plan direction, which there is not, and skews the effects analysis toward artificially deflating effects.

There must be one or more desired conditions in the revised plan that incorporate the Squires et al. (2018)

findings in its description of necessary ecological conditions for lynx recovery. Sufficient desired condition for the recovery of lynx must include details about the natural range of variation for structural, compositional, functional, and connectivity characteristics in a way that progress toward the desired condition can be assessed through monitoring. The SRLA objectives do not meet the requirements of 36 CFR 219.7(e)(1)(i), do not satisfy 36 CFR 219.9(b)(1) or 36 CFR 219.9(a)(1), and nor do they reflect an adaptation to new conditions and new science provided by the Squires et al. study. Additionally, there are other habitat conditions that need to be restored or maintained for lynx recovery, as noted in the BA (p. 13-14):

* deep winter snows,*
* riparian areas dominated by dense willow, especially in the summer,
* availability of prey alternatives to snowshoe hare, particularly red squirrels, but also cottontails and other small animals,
* multiple den sites per family with large diameter woody debris that proximal to dense horizontal cover that provides foraging opportunities,
* linkage areas that include forest stringers that connect large patches and low forested passes.

* We would add to "deep winter snows," that lynx prefer "fluffy" or "soft" snow to help them retain a competitive advantage over other predators, such as coyotes that have trouble maneuvering in deep, fluffy snow because they have much smaller feet than lynx. Lynx have huge feet that work like snowshoes. This is included later in the BA (p. 15) in the discussion on recreation as a risk factor.

The RGNF's description of ecological conditions necessary for lynx did not include the importance of winter habitat[mdash]mature forest[mdash]which is not the same as winter hare habitat. This point was made by Squires et al. 2010; Kosterman 2014; Holbrook et al. 2017, all referenced in our comments on the Draft Plan and DEIS (Smith et al. 2017 at 76 and 82). We recognize that mature spruce-fir forest conditions may be extremely limited, given the spruce beetle epidemic, but this habitat must be retained wherever it may exist on the Forest. Late successional stands are also the most important for maintaining habitat connectivity. There must be a desired condition for mature forest as well as an associated standard that prevents active management of forest stands in this condition.

Our Draft Plan and DEIS comments asked the Forest to turn Guideline VEG G11 into a standard, given the importance of lynx denning habitat to the lynx life cycle, as explicitly recognized by the U.S. Forest Service (Smith et al. 2017 at 73-74). The USFWS discussed the importance of denning habitat to lynx, and included denning habitat as a Primary Constituent Element "that provide[s] for a species' life-history processes and [is] essential to the conservation of the species" when determining which lands should be designated as Canada lynx critical habitat. 79 Fed. Reg. 54782, 54811-2 (Sept. 12, 2014). USFWS explained that "a feature or habitat variable need not be limiting to be considered an essential component of a species' habitat. Both denning and matrix habitats are essential components of landscapes capable of supporting lynx populations in the DPS because without them lynx could not persist in those landscapes" (79 Fed. Reg. 54786). Because lynx denning habitat "is an essential component of the boreal forest landscapes that lynx need to satisfy a key life-history process (reproduction)," USFWS identified "denning habitat to be a physical or biological feature needed to support and maintain lynx populations over time and which, therefore, is essential to the conservation of the lynx [distinct population segment]" (79 Fed. Reg. 54810). The LCAS also notes: "Maintaining good quality and distribution of denning and foraging resources within a LAU will help to assure survival and reproduction by adult females, which is critical to sustain the overall lynx population" (LCAS at 87). As such, we asked the Forest to recognize the importance of this habitat and ensure that it is considered, protected, and enhanced through the Forest's management of its lands by converting SRLA Guideling VEG G11 into a standard, and changing the word "should" to "must") in the Plan. The Forest Service failed to do so, nor did it explain why this is not necessary to maintain or restore the ecological conditions necessary to contribute to the recovery of Canada lynx as required by the 2012 Planning Rule. In addition to violating 36 CFR 219.9(a)(1) and (b)(1), this also violates NEPA.

The omission of any discussion of lynx winter habitat and limited and incomplete discussion of lynx denning habitat in the FEIS violates NEPA's unambiguous requirement that the agency disclose and analyze the effects of its proposed actions, including disclosing baseline conditions, to ensure that the public has an opportunity to appropriately comment, and further ensure public officials have complete information before making decisions. 42 U.S.C. [sect][sect] 4332(2)(C)(i)-(v); 40 CFR [sect][sect] 1502.14(a), 1502.16, 1508.7, 1508.8, 1508.14. Indeed, "NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 CFR [sect] 1500.1(b).

To summarize, the Plan's desired conditions for the ecosystem conditions that lynx require are inadequate to contribute to the recovery of lynx.

Application of Standard Veg S7 will not Contribute to Lynx Recovery and May Even Harm Stability of Population Levels

The most significant modification the RGNF made to the SRLA direction was to add a standard: VEG S7 (numbered in the Plan as S-TEPC-2). The purpose of the standard is ostensibly to adapt to the changed habitat condition for lynx due to the spruce bark beetle outbreak (See Plan at 25-26). We addressed the Draft Plan's version of VEG S7 (p. 21-22) in comments (Smith et al. 2017 at 72-73).

The Plan (p. 25-27) described the purpose of VEG S7 and explained the definition of a VEG S7 stand this way:

Standard VEG S7 (below) applies to salvage harvest activities conducted in conifer forests that have lynx habitat attributes, but no longer meet the definition for standard VEG S6 due to tree mortality and associated forest structural changes. These stands still provide high quality lynx habitat and are characterized by dense horizontal cover, and include forest structure that provides cover and food for snowshoe hares, and foraging habitat, traveling, and hiding cover for Canada lynx. According to a recent study completed on the Forest (Squires et al. 2018), stands with Engelmann spruce and subalpine fir in the canopy, and subalpine fir in the sub-canopy are disproportionality selected by lynx. Stands where standard VEG S7 would apply continue to support snowshoe hare and secondary prey species, such as red squirrels, particularly when live vegetation and horizontal structure is present.

Salvage harvest in lynx habitat is prioritized as follows:

1. Choose areas with good habitat restoration potential that currently exhibit poor quality lynx habitat condition, (i.e., horizontal cover density less than 25 percent, subalpine fir is a minor component of the sub-canopy, favorable site conditions, and best available science suggest that conditions could be improved through vegetation management);
2. Choose areas that provide poor quality lynx habitat and poor habitat restoration potential;
3. All other areas based on overall project considerations and needs.

(Plan at 26)

This prioritization scheme requires additional information. How much salvage harvesting is possible or likely among these priority categories? What is the meaning of "prioritize" (i.e., to what scale does this apply; does it apply forestwide; does it allow treatment in high quality or suitable lynx habitat)? What is the best available science being used[mdash]the Squires et al. study, or will others be used also?[mdash]this must be clear. These priorities, which read as plan standards, indicate that additional plan standards are necessary to assure that lower priority stands cannot be treated until all higher priority stands have been. The RGNF's description of VEG S7 continues,

Stands that are subject to VEG S7 represent high-quality habitat for lynx and are confined to the high probability lynx use area (95 percent areas) delineated in the Resource Selection Function model for the Forest (Squires et al. 2018). The High Probability Lynx Use Area Map can be found on the external drive of maps located in the back of the document. These areas are identified as having:

* Overstories that are predominantly live or dead Engelmann spruce and subalpine fir, or either species, with sub canopy layers dominated by subalpine fir, or a combination of either Engelmann spruce or aspen, or both; and
* Total live overstory canopy cover less than or equal to 40 percent; and
* Understory horizontal cover density from ground level to 3 meters above ground level is greater than or equal to 45 percent during winter foraging conditions for snowshoe hares.

Openings in lynx habitat are areas with less than 25 percent total canopy closure. Areas with less than 25 percent horizontal cover are not considered suitable habitat. During salvage project design, late-successional forest patches that are expected to remain green or mostly green in the next 15 years are identified for retention during project implementation. Foresters and wildlife biologists determine the optimal landscape heterogeneity objectives that include retention, opening patch size, and configuration. Project objectives should be considered at a watershed or sub-watershed scale, using the best available science.

(Plan at 26-27)

The proposal to have "Foresters and wildlife biologists determine the optimal landscape heterogeneity [hellip]" is deferring what should be a plan decision to the project level. This paragraph reemphasizes that a desired condition is needed that specifies what the necessary ecosystem conditions for lynx should be, based on the best available scientific information, and standards to assure these conditions are met. This also reinforces that snag retention and downed wood requirements in Table 8 of the Plan (p. 36) must apply at the project scale not the planning unit area.

Forest stands that meet the VEG S7 definition represent a disproportionately high value subset of the overall suitable habitat in a lynx analysis unit. Management prioritization provides limited entry allowances into VEG S7 stands. A 7 percent allowance into VEG S7 stands is available for use within 15 years of the decision date for this forest plan.

(Plan at 27)

Given the information provided in the planning documents, the prioritization scheme is based on the assumption that there are sufficient priority 1 and 2 areas to meet salvage logging objectives. The RGNF must quantify the extent of priority 1 and 2 areas. The explanation continues:

Suitable lynx habitat is defined as stands with understory horizontal cover density greater than 25 percent. Timber stands subject to VEG S7 in locations that are documented as occupied by lynx and may support reproduction (Ivan 2018) should be avoided where possible. If entry does occur, minimize further reduction in key habitat values.

This paragraph must be developed into a plan standard or guideline. It is written as mandatory language. The meaning of "If entry does occur, minimize further reduction in key habitat values," must be explained.

The VEG S7 standard is associated with a management prioritization focus that supports limited entry into VEG S7 stands while promoting forest restoration in stands that may be improved by understory regeneration. The prioritization focus for vegetation management activities for non-VEG S7 stand and non-hazard trees, in the 95

percent lynx use area is as follows:

1. Activities in stands with 0 to 24 percent horizontal cover density (unsuitable habitat) and high site potential for active habitat improvement;
2. Activities in areas of 0 to 24 percent horizontal cover density (unsuitable habitat) with poor potential for further improvements in habitat values;
3. Activities in areas of 25 to 44 percent horizontal cover density (suitable but not high quality).

Hazard tree removal along open and administrative use roads, trails, and campgrounds is exempt from this direction. Removing hazard trees from these locations is done to maintain safety for the public and employees. This treatment may occur up to 250 feet from open and administrative use roads, trails, and campground boundaries.

(Plan at 27)

The standard VEG S7 is worded this way:

Plan S-TEPC-2 (VEG S7): Salvage activities in stands that represent high quality lynx habitat may occur in up to 7 percent of the high-probability lynx use area (95 percent lynx use areas shown on the High Probability Lynx Use Area Map) that overlaps the suitable timber base 15 years from the date on the forest plan decision. Salvage activities in VEG S7 stands in combination with all vegetation management activities, including incidental damage resulting in either Stand Initiation Structural Stage conditions, a reduction of horizontal cover, or both, are tracked for 15 years from the decision date for this forest plan decision.

Despite the addition of the VEG S7 (S-TEPC-2) standard, the Plan is not going to meet the contributing to recovery requirement and is unlikely to even meet the "stability" condition presented in DC-TEPC-1. Vegetation management activities, including commercial timber harvest and salvage logging, would be allowed to occur in up to 7 percent of the high-probability lynx use areas[mdash]the highest quality habitat for lynx. Given the changed condition of the Forest, allowing entry of these areas at all is not conducive to lynx recovery.

The allowable amount of salvage logging that can occur in VEG S7 stands, 7 percent, appears to be arbitrary. The RGNF must be able to support this figure with best available scientific information, including a quatification and map displaying how much and where the VEG S7 are expected to occur, by LAU, within the 95% use area. This inclusion is important because it is evident that many of the LAUs on the RGNF may already be at or above the habitat unsuitability threshold associated with SRLA Standard VEG S1.

The Plan also relaxes SRLA standards VEG S1 and VEG S2 in the following standard:

S-TEPC-3: Southern Rockies Lynx Amendment standards VEG S1 and VEG S2 do not apply on lynx analysis units that have no overlap, either wholly or partially, with the high probability lynx use areas shown on the High Probability Lynx Use Area Map. All other management direction (excluding VEG S1 and VEG S2) in the Southern Rockies Lynx Amendment applies to areas outside of the high probability lynx use areas (95 percent use area).

VEG S1 requires that no more than 30 percent of a lynx analysis unit (LAU) be in a stand initiation structural stage that does not provide suitable habitat for lynx. Veg S2 prohibits converting more than 15 percent of the habitat in any LAU to an unsuitable condition via vegetation management in any 10 year period.

As noted previously, the RGNF must be able to demonstrate and communicate to the public how many acres of forest that fit the definition of VEG S7 exist in the 95 percent use area. The Draft Plan's version of standard VEG S7 excluded entry into these stands with exceptions 1 and 2. (Draft Plan at 22).

With the Plan, however, stands just below 45 percent horizontal cover density, i.e., not in the 95 percent probability areas, but very good lynx habitat, could be subject to extensive salvage harvest, with no requirement to maintain any portion of the respective LAU in suitable habitat. This surely cannot be considered conducive to lynx recovery. Indeed, conserving stands with good, but maybe less than the best, habitat quality may be crucial for connectivity of habitat, which is in turn very important for full recovery of lynx populations in Colorado. (See further discussion below.)

Indeed, there is already a considerable amount of unsuitable habitat, as "11 of the 29 LAUs (38%) [are] over the unsuitable habitat threshold associated with Standard VEG S1 (30% unsuitable)" (BA at 38). Allowing the conversion of addition habitat to unsuitable via logging cannot help the lynx recover. At a minimum it is not clear in the FEIS how allowing the conversion of addition habitat to unsuitable via logging could help the lynx recover, particularly if up to 7% of the high quality habitat can be reduced in habitat value through salvage logging.

Logging in the non-95 percent probability of lynx use areas could destroy, damage, or fragment good lynx habitat. Salvage logging, a large amount of which would be allowed under the Plan,[4] would be via clearcut, not creating small openings that can be beneficial to lynx[5]. Large scale salvage would likely not cut small openings to help them regenerate; rather it would clearcut large areas. As the BA observes, "Salvage harvest activities are not limited by size of created openings" (BA at 26; See also the Planning Rule at 36 CFR 219.11(d)(4)(iii)).

The Biological Opinion notes the overlap between the 95 percent high use area and the suitable timber base:

Table 3 displays the overlap between the 95 percent high-use area potential disturbances to that habitat. Fourteen of the 25 LAUs on the RGNF, fall within the suitable timber base where vegetation management may occur, including salvage activities under VEG S7 may proceed. However, seven of the 14 LAUs currently exceed 30 percent SISS condition, which precludes additional disturbance within the suitable component of the 95 percent high-use area within those LAUs. However, vegetation management may occur within the low-use area of a LAU that exceeds 30 percent SISS consistent with Plan direction.

(BO at 15)

Thus, logging in good lynx habitat could be widespread unde the Plan, with no requirement to maintain any portion of the habitat as suitable habitat.

Areas with 25-44 percent horizontal cover density could also increase in cover density over time, improving their lynx habitat quality. For example, small trees will grow in height and may protrude further out of the winter snowpack and thus begin to provide more horizontal cover. New trees may regenerate in the shadow of these trees. However, logging would reverse, if not terminate, any such trend toward increasing density of horizontal cover.

The BA observes the lynx use of the existing understory:

The most recent aerial detection surveys describe tree mortality as substantial in the spruce-fir ecosystem (USDA Forest Service 2017) that directly overlaps with most all of the lynx habitat on the forest. However, what this information doesn't display is the vast amount of understory release associated with the canopy mortality and therefore the amount of live forest attributes that appear to still be supporting high densities of snowshoe hare, the primary prey species for Canada lynx. The current information also indicates that most known historic use areas are still being used by lynx, and that reproduction is occurring.

(BA at 38)

The BA discloses that forest stands not supporting the best lynx habitat, i.e., not meeting the threshold for Veg S7, may still have an important role in sustaining lynx and hare:

Outside of areas proposed for management under VEG S7, the remaining amount and distribution of multi-story mature and late successional spruce-fir stands (SRLA VEG S6) containing winter snowshoe hare habitat have not been identified. Stands retaining these conditions or other habitat characteristics may provide a heightened role in sustaining lynx and snowshoe hare given the reduced availability of this habitat on the landscape. Therefore, the effects of continued limited allowances for impacts to remaining VEG S6 stands within lynx high use areas and other vegetation management within habitat outside the lynx high use areas is uncertain.

(BA at 37; emphasis added)

It is concerning to see that there is no 95 percent use area in the northern portion of the RGNF, i.e., the Saguache Ranger District, including the important linkage at North Pass. The Biological Opinion for the Plan states:

Ivan (2011) considers the North Pass linkage one of the most important habitat connectivity areas in Colorado, because it facilitates lynx movement to and from the core area of the San Juan Mountains to areas in the remainder of the state, and beyond. In the northern part of the action area, the Poncha Pass linkage occurs where U.S. Highway 285 bisects lynx habitat. Connective habitat between administrative units in the San Juan Mountains is essential for facilitating movement of Canada lynx across the landscape. Recent telemetry data from the lynx reintroduction effort further demonstrates that the RGNF is important to both fine-scale movements of residential lynx as well as faster long-distance movement of lynx within areas near North Pass (Buderman et al. 2018). (BO at 12)

Thus, under the Plan, there would be no requirement to maintain any level of suitable habitat near a very important lynx linkage. Again, this could not be considered aiding the recovery of lynx to full viable populations.

The plan documents have omitted a key finding of the Squires et al. study regarding canopy closure that is relevant to planning: lynx are avoiding openings up to about 24 percent (Squires et al. 22, Table 4). Salvage logging would likely create openings, as dead standing spruce would be clearcut, and existing understory, i. e., horizontal cover, would be degraded, or even eliminated from some areas. Thus some habitat that is currently suitable for lynx would become unsuitable.

The deficiencies described above also violate NEPA, in that the environmental effects analysis in the FEIS to not meet NEPA's unambiguous requirement that the agency disclose and analyze the effects of its proposed actions, including disclosing baseline conditions, to ensure that the public has an opportunity to appropriately comment, and further ensure public officials have complete information before making decisions. 42 U.S.C. [sect][sect] 4332(2)(C)(i)-(v); 40 CFR [sect][sect] 1502.14(a), 1502.16, 1508.7, 1508.8, 1508.14. Indeed, "NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 CFR [sect] 1500.1(b). Importantly, the FEIS fails to describe how the plan components for lynx meet the requirements of the planning rule to maintain or restore the ecological conditions necessary to contribute to the recovery of Canada lynx. See 36 CFR 219.9(a)(1) and (b)(1).

The Plan fails to provide necessary species-specific plan components to protect Canada lynx against the threat of recreation.

We discussed the threat of recreational activities to lynx in previous comments on the Draft Plan and DEIS (Smith et al. 2017 at 69-86).

The FEIS acknowledged the threat of recreation to lynx, stating, that such activities can "result in snow compaction may facilitate increased access into lynx habitat and competition for food resources by competitors (primarily coyotes). Over-snow vehicle use is noted as a local concern on the Forest, with use demand on the increase" (FEIS at 232). The BA states,

Snowmobile use by recreationists often directly overlaps mapped lynx habitat because of human preferences for high-elevation, deep snow areas. Lynx can be negatively affected by use of over-the-snow vehicles due to noise and displacement. Winter periods can also be particularly stressful for lynx as they establish and reoccupy winter home ranges that will supply the food resources to feed themselves and often the previous years' kittens, and provide them with enough resources to prepare for the coming breeding season. The probability of negative impacts occurring likely increases with increasing snowmobile use and the amount of accessible terrain. The current increasing trend in snowmobile use in Colorado and on the Forest and the increased ability of the machines to pioneer into previously secluded habitat areas has the potential to increase potential displacement and/or disturbance of lynx in some areas. For example, requests for guide permits to lead snowmobile groups spruce-fir ecosystems that also support lynx are a recent activity on the Rio Grande National Forest.

Because almost all lands outside of wilderness are suitable for over-snow vehicle (OSV) use (see Plan's Over Snow Vehicle Use Suitability Map), it is likely that motorized use will overlap lynx habitat, and areas used by lynx in winter. Indeed, OSV use would be allowed in many LAUs containing the highest quality lynx habitat (i.e., having 95 percent probability of lynx usage) (BA at 32). The overlap between the 95 percent area and OSV use allowed areas is over 50 percent in three LAUs, and 30 percent or more in five additional ones (BA at 32). Overall, the 95 percent area covers 36.6 percent of all the RGNF's LAUs (BA at 32).

Yet, there are no plan standards or guidelines to constrain the growing threat of OSV use in lynx habitat. Human use (HU) objectives and guidelines from the SRLA: HU O1, HU O2, HU O3, and HU G3 meant to address recreation use, do not meet Planning Rule requirements for standards or guidelines. They do not provide sufficient constraints to avoid or mitigate potential adverse impacts.

There are 310 miles of groomed or designated routes with LAUs, with 196 miles of these being in lynx habitat (BA at 31).

Of note, the FEIS states: "All action alternatives include revised plan direction that directs the Forest to manage winter recreation activities within lynx analysis units such that lynx habitat connectivity is maintained or improved where needed" (FEIS I at 308). The relevant plan component from the Draft Plan, G-REC-1, however, was deleted in the Plan. The Response to Comments in FEIS, vol. II confirms that this proposed plan component was removed from the Plan, and furthers states that the direction is instead "prescribed in the Southern Rockies Lynx Amendment" (FEIS vol. II, at 115). These conflicting statements need to be reconciled, and failure to do so violates NEPA. Review of the SRLA components carried forward in the Plan at Appendix E (Plan at 181-89) does not reveal any similar plan components. We recommend that the G-REC-1 plan component from the draft plan be added back to the Plan.

To summarize, the Plan is unlikely to meet Planning Rule requirements 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1) in relation to lynx. There are no desired conditions that establish ecosystem condition needs for lynx, despite that availability of scientific information on these conditions, and measurable targets that can be monitored. The 7 percent allowance in VEG S7 stands seems not to be based on best available scientific information and must be justified. Furthermore, terminating the application of SRLA Standards VEG S1 and VEG S2 outside of the highest quality lynx habitat areas is likely to thwart the recovery of lynx and may even lead to a decrease in population. Updating of forest conditions that facilitate lynx movement are needed based on information in the Squires et al lynx study. Likewise, forest conditions that lynx are avoiding (0-10% canopy closure) were not incorporated into the Plan. Finally, the allowed OSV use would be detrimental to wintering lynx.

Suggested Improvement: Meeting Planning Rule requirements 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1) in the revised plan will require several improvements.

* There must be a desired condition that specifies the ecosystem conditions required to contribute to the recovery of lynx in terms of key structural, compositional, functional, and connectivity characteristics. The Squires et al. (2016; 2017; 2018) study must form the basis for developing this desired condition.
* The desired condition for lynx required ecosystem conditions must include winter habitat, mature forest, as indicated by Squires et al. 2010; Kosterman 2014; Holbrook et al. 2017.
* The prioritization scheme for salvage logging in lynx habitat must be clarified. The meaning of "prioritize" requires an explanation. Information must be provided about the amount of salvage harvesting that is possible or likely to occur among the priority categories. The revised plan must include standards to assure that lower priority stands cannot be treated until all higher priority stands have been. VEG S7 stands should not be included within the priority scheme; these should remain off-limits to entry.
* The 7 percent allowable harvest in VEG S7 stands should be eliminated, or if retained, it must be justified based on the best available science.
* The revised plan must mandate that no entry should occur in VEG S7 stands, as the Draft Plan did. This should be part of the standard or an additional standard.
* Application of SRLA standards Veg S1 and VEG S 2 must still be required in all suitable lynx habitat.
* OSV use in lynx habitat, especially in high quality habitat, must be reduced.
* G-REC-1 from the draft plan should be added as a plan component in the Plan.
* Revise the FEIS, and provide for additional public comment, on the various deficiencies in the environmental analysis as described above, including to describe how the plan components for lynx meet the requirements of the planning rule to maintain or restore the ecological conditions necessary to contribute to the recovery of Canada lynx.
* Update the connectivity guidance in the SRLA using the information from lynx use avoidance information provided in Table 4 of Squires et al. 2018 at 22.
* Update the hazard tree exemptions allowable under VEG S7 to exclude areas of administrative use that are behind closed gates or on roads effectively closed to the public. Exemptions for VEG S7 should only occur along roads and facilities that are maintained as open.
* The RGNF has considerable data on current and past denning areas. Include an updated standard about avoiding these areas during the reproductive period, April 1 through July 15.

Gunnison Sage-grouse

Objection Point: The Plan fails to provide the ecological conditions necessary to contribute to the recovery of the Gunnison sage-grouse, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The RGNF did not incorporate any of our recommendations for meeting the minimum habitat requirements for contributing to Gunnison sage-grouse recovery, which were based on a careful reading of the best available scientific information that we provided in comments: Smither et al. 2017 at 57-69.

The FEIS (p. 242) states the following regarding conditions necessary for Gunnison sage-grouse recovery:

The Gunnison Sage-Grouse Rangewide Steering Committee identified the following conservation strategy elements specific to Forest Service management of lands within the Poncha Pass population (page and section references below are applicable to the Gunnison Sage-Grouse Rangewide Conservation Plan (Gunnison Sage-Grouse Rangewide Steering Committee 2005):

* Incorporate grazing management practices (such as those presented on page 212) for both cattle and sheep that are compatible with, or enhance, Gunnison sage-grouse habitat on federal and state lands during the permit renewal process, or when monitoring indicates need.
* Implement recommendations from rangewide strategy on "Human Infrastructure: Powerlines, Other Utility Corridors, Wind Turbines, Communication Towers, Fences, and Roads" (p. 225).
* Implement recommendations from rangewide strategy on "Noxious and Invasive Weeds" (p. 232).
* Implement recommendations from rangewide strategy on "Recreational Activity" (p. 245).
* Evaluate suitability of vacant/unknown habitat classification and determine if habitat improvement techniques may enhance suitability.
* Implement timing restrictions provided in rangewide "Human Infrastructure: Powerlines, Other Utility Corridors, Wind Turbines, Communication Towers, Fences, and Roads" strategy (p. 225), and "Oil & Gas and Mining" strategy (p. 233).
* Implement recommendations from rangewide strategy on "Predation" (p. 243).
* Conduct inventory of vacant/unknown habitat areas using inventory technique developed at a rangewide level ("Habitat Monitoring" strategy, p. 220).
* Search for new or unknown existing leks utilizing survey methodology developed at rangewide level ("Habitat Monitoring" strategy, p. 220).
* Map Gunnison sage-grouse seasonal habitats in a GIS as defined per "Habitat Monitoring" rangewide strategy, Objective 1, Strategy #7 (see p. 220).

The Plan has adopted none of these conservation strategies in plan components. The Draft Plan included DC-TEPC-1 that specifically applied to sage-grouse habitat integrity and guideline G-TEPC-3, which aimed to "limit impacts" from "projects or activities," "livestock grazing," and "fuels treatment," and also to "Manage riparian areas and wet meadows to meet proper functioning condition[hellip]". The RGNF deleted all references to "Gunnison sage-grouse" from the plan components, and thus, there is no specific plan direction intended to contribute to the recovery of the species. The Plan includes the generic desired condition:

DC-SCC-1: Structure, composition, and function of sagebrush ecosystems meet the needs of associated species, including species of conservation concern. (Forestwide)

However, DC-SCC-1 provides no specifications regarding what the key structural, compositional, functional and also connectivity characteristics are that would maintain or restore the ecological conditions to meet sagebrush associated species' habitat requirements. Providing these details is necessary for meeting Gunnison sage-grouse habitat requirements but also to meet the requirements of 36 CFR 219.9(a)(2)(i).

We addressed this point several places in comments on the Draft Plan and DEIS (Smith et al. 2017 at 57-69).

Recommended Improvement: Adopt recommendations we provided in Smith et al. 2017 at 57-69, which reflect the best available science on the minimum ecosystem condition requirements for Gunnison sage-grouse and necessary species-specific plan components:

* Grass and shrub cover at nest sites should remain above 7.5 inches.
* Provide high quality winter habitat as defined by Moynahan et al. 2007 and Caudill et al. 2013.
* Riparian area and wetland conditions that are in line with recommendations by Connelly et al. 2000.
* Remove or reduce livestock grazing in sage-grouse habitat to slow the spread of cheatgrass (Bromus tectorum), decrease gaps between perennial plants, reduce trampling of biological soil crusts.
* Livestock should be removed from areas where cheatgrass occurs.
* There should be no surface occupancy associated with energy development in sagebrush habitat.
* Exclude renewable energy development in sage-grouse habitat.
* In areas of pinyon/juniper, avoid treating old-growth or persistent woodlands.

* In areas where sagebrush is prevalent or where cheatgrass is a concern, utilize mechanical methods rather than prescribed fire.
* Prohibit prescribed fire in sagebrush steppe with less than 12 inches annual precipitation or areas with moderate or high potential for cheatgrass incursion.
* Prohibit herbicide application within 1 mile of sage-grouse habitats during season of use; prohibit use of insecticides.
* Restore non-native seedings with native vegetation where it would benefit sage-grouse.
* Exclude new rights-of-way in sagebrush habitat.
* Develop valid existing rights-of-way in essential habitat in accordance with National Technical Team report prescriptions.
* Limit motorized travel to designated routes trails in essential habitat. Implement appropriate seasonal restrictions on motorized travel to avoid disrupting sage-grouse during season of use.
* Close existing trails and roads to achieve an open road and trail density not greater than 1 km/1km2 (.6 mi/.6 mi2) in sage-grouse habitat.
* Where valid existing rights-of-way are developed, restrict road construction within 1.9 miles of sage-grouse leks.
* Bury existing transmission lines in essential habitat, where possible.
* Install anti-perching devices on transmission poles and towers and dismantle unnecessary infrastructure.

All of the above must be incorporated into the plan as plan components.

Wolverine

Objection Point. The RGNF has disregarded its duty to conserve the wolverine as required by 36 CFR 219.9(b)(1).

The Plan has completely overlooked the wolverine, a species proposed for listing that may be present in the plan area, and ignored its ESA duty to confer (Section 7(a)(4)) with the USFWS about the impacts of the revised management plan and to provide plan components for conserving the wolverine as required by the Planning Rule (36 CFR 219.9(b)(1)). The wolverine is proposed for listing as threatened under the ESA (81 Fed. Reg. 71670). The species is threatened by climate change, recreation, and habitat fragmentation. Though wolverines have been known to occur in the plan area, the Forest has ignored the species in the Plan.

The FEIS states, "Wolverine have been historically documented on the Forest, but from 1919 until 2009 there were no confirmed sightings anywhere in Colorado, including on the Forest. In 1997 there was one sighting on the Forest, but that sighting remains in dispute" (FEIS at 247). The BA (p. 39, Table 3) states of the wolverine, there is, "[u]ncertainty regarding whether or not the species is currently present on the planning area." The RGNF has not provided a sufficient basis for excluding the wolverine in the BA, stating, "Historic (<20 years) occurrences on Forest. Currently considered extirpated in CO" (p. 10, Table 1). So, the species may be present in the plan area. We stated the following in previous comments (Smith et al. 2017: 86):

The RGNF is within the historic range of the wolverine. The DEIS notes that a disputed sighting occurred in 1997 in the Forest. The narrative in the DEIS seems to imply the lack of verified sightings is a rationale for ignoring the species in the management plan, which is not valid basis for failing to include a proposed or candidate species in planning under the planning rule. If lack of sightings is the rationale for ignoring the species, the RGNF is ignoring information provided in its wolverine overview prepared for the plan assessment (RGNF undated, Gulo gulo luscus), which lists sightings on the Forest in 1911, 1973, 1978, 1992, and 1997. A wolverine with a GPS collar was confirmed in Colorado, having traveled from Wyoming, in 2009 (CPW undated). See Need et al. (1985) for

information on additional confirmed occurrence records from Colorado. The RGNF plan must include plan components to contribute to the conservation of the wolverine, and must analyze effects of the plan to wolverines in the environmental impact statement.

We have provided comments on the wolverine in Smith et al. 2017 at 86.

Recommended Improvement: Include plan components that would provide the ecological conditions for conserving the wolverine.

SPECIES OF CONSERVATION CONCERN

We have commented extensively on SCC throughout the planning process, see Defenders et al. 2016a,b; Smith et al. 2017; Defenders et al. 2017.

Objection Point: The Plan fails to provide desired conditions that described the specific ecological conditions necessary to maintain the viability of wildlife and plant species of conservation concern that occur on the Forest.

In the Plan, the RGNF listed a set of generic desired conditions, apparently intended to apply to all SCC. Below is one example, and the others are similar.

DC-SCC-1: Structure, composition, and function of sagebrush ecosystems meet the needs of associated species, including species of conservation concern. (Forestwide)

Yet, providing a desired condition that specifies what the habitat conditions are that would maintain the viability of Species of Conservation Concern (i.e., the key structural, compositional, functional, and connectivity characteristics) is essential to meeting the requirements of the Planning Rule. A sufficient desired condition must, at minimum, include details about the natural range of variation for these characteristics in a way that progress toward the desired condition can be assessed through monitoring, and describe specific ecological conditions to achieve in management. None of the desired conditions in the DC-SCC list meet the requirements of 36 CFR 219.7(e)(1)(i)[6], and thus, cannot satisfy 36 CFR 219.9(b)(1)) or 36 CFR 219.9(a)(1)).

We did not raise issue in previous comments because the Draft Plan included desired conditions specific to Species of Conservation Concern (SCC) associated with the Forest that provided more detail about the ecological conditions required for these species to persist.

Suggested Improvement: Develop desired conditions for each species that may be present on the Forest that meet the requirements of 36 CFR 219.7(e)(1)(i) and provide specifications for the key structural, compositional, functional, and connectivity characteristics necessary for the recovery of these species, based on the best available scientific information as required by 36 CFR 219.3.

Objection Point: The plan components listed in Table 23 of the Plan as being associated with wildlife and plant species of conservation concern are not sufficient to provide the conditions necessary for the viability of these species.

Table 23 of the Plan (p. 177-180), "Crosswalk of species of conservation concern plan components," lists plan components associated with the identified SCC (Plan at 158). We provide an analysis of these components, below, in relation to SCC.

G-TEPC-1: To avoid or minimize adverse effects to listed species and their habitat, management actions should be designed with attention to threatened, endangered, proposed, or candidate species and their habitats. (Forestwide)

G-TEPC-1 is too vague and broad to be meaningful, even if it applied to SCC. Guideline G-TEPC-1 provides no management direction to apply to projects or activities, and therefore it is not clear how compliance can be assessed. It does not "clearly describe the circumstances and manner in which the guidelines apply so that other options may be carried out if they meet the purposes of the guidelines" as directed by FSM 1909.12, ch. 20, 22.14(3). For the species, G-TEPC-1 is not tiered to a desired condition (presumably DC-SCC-7 or DC-SCC-1) that provides specific descriptions of the structure, composition, function, and connectivity characteristics needed to maintain the viability of species dependent on the montane grassland or sagebrush ecosystem.

G-SCC-1: To maintain ecological conditions to support a viable population of species of conservation concern insects and plants, minimize negative impacts to pollinators when applying pesticides. (Forestwide)

Protecting pollinators from threats to the greatest extent possible is essential for maintaining viable populations. The intent of G-SCC-1 is important, but "minimize" is not sufficient direction for projects and activities to ensure protection of the species, unless the guideline provides a clear baseline. Substitute "should avoid pollinator colonies and nectaring plants when applying pesticides" for "minimize negative impacts to pollinators when applying pesticides." Include "neonicotinoids must not be applied."

G-SCC-2: To maintain ecological conditions to support a viability of species of conservation concern, roads and other permanent ground-disturbing structures and other authorized activities should not degrade vegetation within 100 feet of where plants that are listed as species of conservation concern are known to occur. Such barren or rocky areas include, but are not limited to, alpine fell fields, alpine cushion plant communities, talus slopes at any elevation, rock fields, boulder gardens, cliff faces, recently disturbed soils, exposed shale, gypsum, volcanic, or adobe soils, and other sparsely vegetated areas within other ecosystems.(Forestwide)

A disturbance buffer around habitats important to SCC plants is important and should be a standard. We do not see how this outcome could be achieved in a different way. However, the Plan or EIS should document the best available scientific information that supports a 100 foot buffer; it may be too shallow. Plants could still be affected by dirt and debris kicked up by ground-disturbing activities.

G-SCC-3: To maintain viability of species of conservation concern, reduce habitat fragmentation and maintain structural conditions of sagebrush ecosystems through design of management activities. Patch sizes should not be less than 5 acres. (Forestwide)

A key limitation of this guideline is that the desired condition for the sagebrush ecosystem does not provide specific characteristics for the structural, compositional, functional, and connectivity requirements for the habitat. We need to know what factors or threats fragment sagebrush habitat to these to be mitigated by the guideline. However, the patch size is consistent with the habitat requirements of the Brewer's sparrow.

G-SCC-4: To maintain ecological conditions to support alpine-related species of conservation concern, avoid road construction and other permanent ground-disturbing activities within 100 feet of alpine fell and talus rock fields, and alpine bogs. (Forestwide)

This guideline is helpful because it provides a constraint on forest activities and projects that provides

management direction. However, recreational activities and livestock grazing should also be included as ground-disturbing activities that should be avoided. Additionally, the guideline should be a standard because it is apparent that there is no alternative way to achieve the outcome than avoiding road construction 100 feet of the features.

G-SCC-5: To maintain habitat for bat species of conservation concern, retain adequate access for bats and reduce disturbance to resident populations when considering mine or cave closures. (Forestwide).

It is important to include a plan component to protect mines and caves for bats. However, such a plan component should be a standard; we see no other way to achieve the outcome of reducing disturbance of bats without closures of hibernacula and maternal roosts where bats occur.

G-FISH-1: New surface diversions should provide passage for native and desired nonnative aquatic species to maintain connectivity except when barriers are needed to protect from undesired nonnative fish. (Forestwide)

The component offers some protection for SCC fish from the threats of nonnative fish, but it only applies in limited cases of new surface diversions. It is not clear how the Forest will determine "when barriers are needed."

G-FISH-2: Newly constructed perennial stream crossings and aquatic organism passages allow natural streamflow, and bidirectional movement of adult and juvenile fish and other wildlife. (Forestwide)

Like the other fish components, this guideline may encourage conditions that do not support viable SCC fish populations by encouraging expansion of nonnative fish populations.

G-FISH-3: Fisheries activity period maps (external drive of maps located in the back of the document) should be consulted during project development and design, including recreational dredging. Date ranges associated with stream classes identified on the map are listed in Table 9.

It is not clear how the guideline addresses the ecological conditions necessary for the viability of SCC fish.

S-RMZ-1: Management activities may have short-term impacts (generally less than 5 years) to composition, function, and structure of riparian areas and fish habitat. Over the long term (generally greater than 20 years), projects shall not impair connectivity, composition, function, and structure. (Forestwide)

* This standard allows/encourages projects that have negative impacts to riparian areas and fish habitat. The EIS must demonstrate that this sustained and repeated harm will maintain conditions for viable populations of SCC fish.
* Further, there is no documented connection to the ecological conditions necessary for the persistence of the fish SCC and there are no measurable conditions/key characteristics for composition, function, structure of riparian areas and "fish habitat."

G-RMZ-1: To maintain ecological integrity and connectivity, new system roads and infrastructure should not be constructed in the riparian management zone. (Forestwide)

It is not clear if this guideline is meant to tier to a desired condition for integrity and connectivity. As noted above, DC-RMZ-1 does not meet Planning Rule requirements, and thus this guideline suffers from the same failures; it is not possible to determine compliance given that it is not possible to determine the ecological integrity and connectivity of riparian areas. Further, the plan component does not address threats emanating from the existing road system affiliated with riparian areas.

G-RMZ-2: To provide for the structural nesting habitat requirements for riparian-associated birds, design management activities to avoid healthy willow carrs. (Forestwide)

The guideline may offer some value for RGS but there needs to be desired conditions for "healthy willow carrs." A specific structural characteristic or characteristics must be used to describe "structural nesting habitat requirements for riparian-associated birds"? There is no logical connection to the ecological conditions necessary for the persistence of the fish SCC or other riparian-associated species that are not birds (e.g., river otter).

S-WA-1: Incorporate direction included in the National Core Best Management Practices (FS 990A) and Watershed Conservation Practices Handbook (FSH 2509.25), to develop project-specific best management practice prescriptions in project plans. (Forestwide)

If the direction is necessary to provide conditions necessary for the viability of SCC fish, it must be in the plan.

G-WA-1: Maintain or restore water quality by assuring that activities meet State of Colorado water quality standards. Management activities in watersheds where State of Colorado 303(d) listed impaired water bodies exist should assist in achieving State water quality standards. (Forestwide)

If the state water quality standards are needed to provide conditions necessary for the viability of SCC fish, they must be in the plan.

G-WA-2: Management actions should not cause long-term degradation to water resources, including lakes, streams, wetlands, and groundwater. Particular attention should be paid to public water supplies, sole source aquifers, and source water protection areas. (Forestwide)

Allows for short-term degradation of water resources, including lakes, streams, wetlands, and groundwater. Not clear how the Forest will evaluate "long-term degradation" to these resources.

G-GDE-1: To maintain ecosystem diversity and function, design projects to avoid or mitigate negative impacts to the ecological services that groundwater-dependent ecosystems provide. (Forestwide)

There are no measurable characteristics for "ecological services that groundwater-dependent ecosystems provide." Therefore, there is no logical planning connection to the ecological conditions necessary for the persistence of the fish SCC. We also note that this guideline seems be based on the presumption that maintenance of the current condition is sufficient for SCC fish viability.

G-MIN-1: Mining activities can be acknowledged when the activity does not cause substantial surface disturbance or unacceptable impacts to water quality or fish habitat. Aspects of operation will be contained in the notice of intent. A plan of operations will be required for any activities above the scope of a notice of intent. (Forestwide)

This guideline offers no means provided to determine "unacceptable impacts to water quality or fish habitat."

S-VEG-4: Select harvest systems to achieve desired conditions and objectives or to meet site-specific project needs, not primarily for the greatest dollar return or timber output.

This is merely repeating a plan requirement. This provides no real management constraint or direction. This

standard is too vague to provide clear direction to project planners. It offers almost complete discretion to project managers and provides no actual constraint(s) on management activities.

S-VEG-5: Clearcutting may be used where it has been determined to be the optimum method, and other types of even-aged harvest shall be used only where determined to be appropriate following interdisciplinary review. Determinations shall be based on site-specific conditions and the desired conditions for vegetation, wildlife habitat, scenery, and other resources. (Forestwide)

This plan standard, which restates an NFMA requirement, kicks decisionmaking down the road to the project level, yet this needs to be a planning level decision. The standard is likely in conflict with the ecosystem conditions required by forest associated species, as it provides no plan direction or constraint to protect these species from adverse effects of clearcutting.

G-VEG-1: Snag densities are related to disturbance regimes of various forest systems. Snags suitable for nesting and denning (typically larger sizes) are present across the Forest contributing to the diversity of forest structure and maintenance of habitat components important to the persistence of snag-associated wildlife species. Snags provide an important habitat component in the maintenance of habitat connectivity. Snag-retention should represent a variety of snag heights. At least 50 percent of the retained snags should represent the larger size classes available. Where larger snags are not available, trend toward a greater number of smaller snags. Snags are not required to be maintained on every acre. (Forestwide)

Guideline G-VEG-1 is written like a desired condition and provides no constraints on projects or activities, as required by 36 C.F.R. 219.7(e)(1)(iv). The Plan has not based its snag density, size, and height targets based on the best available scientific information as required by 36 C.F.R. 219.3. This includes science the RGNF compiled for its wildlife overviews, developed as part of the planning process (See American marten, boreal owl, flammulated owl overviews).

Though we raised concerns about numerous plan component in the Draft Plan in previous comments, Defenders et al. 2017, many of the components are new.

Recommended Improvement: The Plan must be extensively revised.

Objection Point - The revised plan fails provide ecological conditions necessary to maintain viable populations of Rio Grande cutthroat trout (RGCT), Rio Grande chub (RGC), and Rio Grande sucker (RGS), in violation of 36 CFR 219.9(b)(1) and 36 CFR 219.9(b)(1).

This section on the Forest's SCC fish presents an in-depth appraisal that demonstrates how the Plan fails to provide the ecological conditions necessary to maintain the viability of these species. Additionally, our analysis shows how the viability assessment conducted in the FEIS is fundamentally flawed. Our fish analysis is merely an example. The problems revealed apply to all SCC, including plants.

Plan components must provide the ecological conditions necessary for SCC fish viability

For SCC fish, the Forest listed the following as necessary ecological conditions for persistence in the EIS in Table 60.

1. Presence of nonnative fish and amphibians (RGCT, RGC, RGS)
2. Vegetation that overhangs water (RGCT, RGS)
3. Willow thickets and cottonwood galleries (RGS)
4. Coarse substrate (RGC, RGS)

Plan components must address these conditions, and the EIS must demonstrate that the conditions will be provided upon implementation of the plan. The first condition, applicable to all three SCC fish, qualifies as a non-habitat related condition necessary for the persistence of the SCCs within the plan area. The other three are essentially related to the composition, structure and function of habitat conditions within riparian areas and water bodies. Below we will demonstrate how the plan fails to ensure that these necessary conditions will be maintained or restored. We also illustrate how the EIS fails to demonstrate that the plan will lead to these conditions.

The EIS does not carry forward all of the conditions identified during the assessment phase for SCC fish. Additional information concerning necessary ecological conditions for SCC fish was presented in Assessment 5, Table 4:

1. RGCT require pools (within streams) with vegetated shorelines.
2. RGC require cool, fast flowing reaches with coarse substrate for breeding; riffles for breeding; and overhanging vegetation around pools in creeks and streams.
3. RGS require clear cold streams; cobble to boulder substrate with particle size 2.5 to 19.7 inches; glides; low-velocity stream reaches as shelter for Young-of-year; riffles; shaded by willow or other shrubs; stream depth 3.9 to 15.7 inches; low stream gradient; stream velocity below 3.7 fps preferably below 0.7.

The EIS should disclose why these specific conditions have been omitted from the plan as part of the discussion on the sufficiency of the proposed plan components for SCC fish viability.

Plan components must address risk factors and threats to conditions necessary for SCC fish viability

The plan documents risk factors and causes of concern for the fish SCC in Table 21 of Appendix D, and Table 4 of Assessment 5.

For RGC, "the primary threats to this species include reduction of stream flows, increased sediment loads, and competition with and predation by nonnative fish. The limited remaining habitat for this species also renders the species at risk from stochastic events." Table 4 in Assessment 5 documents sedimentation; presence of non-native fish including trout, northern pike, common carp, white sucker; habitat loss or fragmentation due to urbanization or other development) or dewatering as primary risk factors to conditions necessary for RGC viability.

Given this documented information, we expect the plan to include plan components that alleviate reduced flows, sedimentation and pressure from nonnative fish. Because RGC is only present in three stream segments within the Forest, the risk of stochastic events eliminating the entire or majority of the planning area population must be effectively addressed. It is clear from this information that the maintenance of current conditions will not be sufficient to reduce risks to population viability and that the plan must pursue strategies to restore ecological conditions for RGC.

For RGCT, the planning area population is "very vulnerable to habitat degradation from a variety of causes, competition and hybridization with nonnatives, over-utilization, and stochastic events." RGCT exist in "small, isolated populations" in 27 stream segments and 2 lakes in the Forest. Table 3 in Assessment 5 notes that "Substantial concern exists about the species capability to persist over the long term in the plan area due to

population declines and loss of habitat." Table 4 in Assessment 5 documents non-native trout and whirling disease as primary risk factors to conditions necessary for RGCT viability. Like RGC, the plan must alleviate current stressors and promote strategies to restore conditions for RGCT, given the limited and vulnerable existing distribution. Below we demonstrate how the plan fails to address the current condition.

For RGS, "competition with and predation by nonnative species are extensive threats to the health and persistence" of the Forest populations. RGS is known to occur in nine stream segments within the Forest. Table 4 in Assessment 5 documents development, including dewatering or reduced stream flow; habitat fragmentation due to development or dewatering; sedimentation; wildland fire as a source of sedimentation; and presence of non-native fish, including trout, northern pike, and white sucker as primary risk factors to conditions necessary for RGS viability. Like the other SCC fish, RGS is acutely threatened by the presence and expansion of nonnative fish populations, yet the plan fails to provide sufficient protections to reduce that particular threat to viability.

Plan components for SCC fish viability

Table 23 in Appendix D presents the plan components that are intended to provide the ecological conditions necessary to maintain viable populations of SCC fish within the planning area; plan components related to groundwater, riparian zones, watersheds, and fisheries are touted as providing the conditions necessary for viability. The EIS does not address the effectiveness of these components in any detail.

The plan components cited for viability are the same for all three of the SCC fish. No desired conditions are cited as providing ecological conditions necessary to maintain viable SCC fish populations. Lack of desired conditions that describe the ecological conditions that are necessary for viable populations of the species may indicate a violation of the Planning Rule, given that the plan must lead to the necessary conditions.

The information presented below illustrates how the touted plan components will not effectively provide the ecological conditions necessary for the persistence of SCC fish. We evaluated desired conditions and relevant objectives, even though the Forest does not cite them as plan components that provide for SCC fish viability. In some cases, proposed desired conditions actually pose a threat to SCC fish viability [see objection for table].

In summary, the touted plan components do not effectively address what is necessary to maintain and restore SCC fish viability. There are no explicit measurable conditions for the presence of nonnative fish, or levels of riparian vegetation, willow thickets and cottonwood galleries, and coarse substrates to provide for viability. Other necessary conditions and threats are left unaddressed. In fact, some of the components pose a threat to conditions necessary for viability.

The EIS fails to demonstrate that the plan components for SCC fish will provide conditions for viability

As noted above, the following conditions were assessed for SCC fish:

* Willow thickets and cottonwood galleries (RGS). These are described as "Riparian vegetation dominated by mature cottonwood trees and dense willow."
* Presence of nonnative fish and amphibians (RGCT, RGC, RGS). A "risk factor" is provided: "Compete with, predate, or outbreed native species."
* Vegetation that overhangs water (RGCT, RGS). Described as "Trees and shrubs that overhang the banks, ponds, lakes, or slow moving pools in rivers and creeks."
* Coarse substrate (aquatic) (RGC, RGS). No description provided.

The direct and indirect effects analysis beginning on p. 271 for SCC largely ignores SCC fish; in fact, the analysis

essentially lumps all SCCs together.

It is difficult to find the effects analysis for conditions needed for SCC fish viability. Effects on the select SCC conditions (from Tables 60 and 61) are presented starting on p. 274, under "Cumulative Effects." For "Willow thickets and cottonwood galleries" the EIS discloses that:

Human activities in the planning area include grazing, removal of trees, and construction of dams and diversions that regulate water flow, block aquatic organisms, and alter erosional processes. Declining groundwater levels and the elimination of flooding have altered plant composition and structure, notably causing the decline of cottonwoods and willow systems.

But concludes that:

At the programmatic scale, the cumulative effects on species of conservation concern are not expected to increase beyond current trends.

This is a conclusory statement that includes zero analysis of the effects of plan components. There does not appear to be an effects analysis for the "coarse substrate" condition necessary for the viability of RGC and RGS. The only reference to "vegetation that overhangs water" is within Table 61. There is no effects analysis for this condition.

Analysis for SCC fish is also addressed in the Aquatic Ecosystems section, beginning on p. 183, but it is not clear that these analyses used the same methods described for the SCC analysis. SCC fish are also implicated in the Watershed Resources effects analysis, further confusing the matter and making it difficult to find the actual effects analysis on the conditions needed for SCC fish viability. Unfortunately, the effects analysis in the Aquatic Ecosystems section suffers from the same fatal flaws as the SCC effects analysis. There is no reference to specific plan components, either positive or negative. There is no reference to the plan components contained in Table 23 within the plan appendix. There is no explicit discussion of the expected condition of conditions necessary for viability, based on those plan components.

On p. 188 the EIS concludes that, as a general matter, there will be no effects on the conditions necessary for the viability of SCC fish:

Watershed conservation practices, best management practices, forest plan standards and guidelines, and management approaches prescribe extensive measures to protect soil, riparian, and therefore aquatic ecosystems. When applicable measures are implemented and effective, adverse effects to these resources from management activities will be minimized or eliminated (p. 188)

We note for the record that management approaches cannot be relied upon as having effects for compliance purposes. A presentation of how the measures will achieve these effects is not provided.

The EIS acknowledges the threats posed by the forest plan from vegetation management to SCC fish: "(T)he greatest impacts related to timber harvest on fisheries may be from road construction and reconstruction, as well as from the subsequent sedimentation and nitrification contributing to degrading fishery habitat. Also "fisheries and aquatic species can be impacted by a reduction of streamside vegetation" (p. 188). The "greatest impacts" from logging will come from alternative C, followed by B Modified. But according to the EIS there will be no effects from logging, because "(a)ll of the action alternatives contain updated plan components, which provide adequate protection for aquatic ecosystems" (p. 189). There is no reference to the components that will do this, and no analysis to support this conclusion. The role of the EIS is to demonstrate the "adequacy" of the protective plan components.

It is not defensible for the agency to provide conclusory statements about viability. A conclusory statement is one made without supporting evidence, underlying logic, or reasoning. All statements related to compliance with legal requirements must be substantiated with documented facts or analytical results. This is especially important with respect to conclusions about species persistence. Similarly, the EIS must show the actual effects on the ecological conditions necessary for the persistence of SCC fish; a relative comparison across alternatives cannot be used to determine compliance with NFMA.

For fire management effects on aquatic ecosystems, the EIS assures the reader that "(s)ediment trapping buffers would generally remain around stream channels in order to reduce the amount of sediment delivered to the stream" (p. 189). The problem is that no plan component is cited that provides this protection; we found none in our evaluation of the plan. In that same discussion, the EIS concludes that "these treatments are beneficial" and that "uncontrolled wildfires" will cause severe damage to aquatic systems. This does not constitute an empirical effects analysis.

In addition, the EIS assures us that "(r)arely do entire watersheds burn as a result of prescribed burns or wildfires managed for multiple resource benefits" (p. 189). The EIS cannot assume that no effects will occur. In general, NEPA analysis concerns uncertain future effects, and it should recognize the possibility of low probability events occurring if they may have significant impacts. It is important to recognize that the uncertainty created by the absence of binding components in the plan must be reflected in the effects analysis by showing a greater probability of adverse effects occurring. What is not prohibited by plan components may occur, and an assumption that something will not occur must be thoroughly documented. Where the plan does not limit effects through plan standards and guidelines, the DEIS must disclose the worst possible effects that would be allowed by the plan, and should also disclose the most likely effects.

For livestock grazing, the EIS documents that "the primary impact to fisheries and aquatic species would be mainly due to degraded habitat resulting from erosion and sedimentation and increased stream temperatures caused by long-term concentrated grazing in riparian areas where streambank trampling and trailing,, stream widening, and streamside vegetation removal can occur, resulting in insufficient overhead cover for fish" (p. 189). Nevertheless, the EIS concludes that the "(a)pplication of plan direction in alternatives[hellip]should ensure proper grazing management and reduce the effects to fisheries and aquatic ecosystems. Overall, the long-term impacts related to livestock grazing on aquatic ecosystems would be minor" (p. 189). The components that supposedly provide this assurance must be presented. It is not enough to conclude that effects may be avoided or that they will be "reduced."

Sedimentation is documented as a key threat to the viability of SCC fish. On p. 190 the EIS presents information on the harmful effects of roads and road management actions, but simply concludes that "application of plan direction (especially related to riparian management zones and activity periods), alternative D, followed by alternatives B, A, B Modified, and C, will more effectively minimize potential impacts to fisheries and aquatic ecosystem, respectively" (190). Is there further analysis indicating how the plan will be implemented to reduce road induced sedimentation risks to SCC fish?

Nonnative fish and other invasive species present perhaps the greatest threat to the viability of SCC fish, yet the EIS glosses over the effect of the plan on these conditions. On p. 190 the EIS states that threats are incurred from "any nonnative plant or animal species and disease that threatens the diversity or abundance of native species[hellip]" and that "(w)hile nonnative fish such as brook and rainbow trout are desirable in many locations, there are places where they are not. For example, in wilderness[hellip]" The EIS completely fails to look at whether areas necessary for the viability of SCC fish will remain free from nonnative fish. The EIS ignores the fact that there are no desired conditions for areas free of nonnative fish, no components to maintain the integrity of those areas, and that there are several plan components that encourage nonnative fish expansion.

The EIS discloses that Alternative D "proposes special interest areas and areas focused on improving and

maintaining habitat for native fish" (p. 191), yet concludes that such designations are not necessary for providing ecological conditions for SCC fish viability, only that they would be "more effective". It is not clear what "more effective" means in this case in the context of Planning Rule requirements for viability. The EIS concludes without analysis that the "management direction in all action alternatives to address habitat connectivity and ecosystem integrity related to aquatic ecosystems applies regardless of the designations listed above." The EIS suggests that Alternative D may be necessary for SCC fish viability but fails to illustrate the effects of each alternative.

For minerals, the EIS states that "(f)orest plan components combined with project-specific mitigation are expected to protect aquatic species across all alternatives[hellip]" "Project-specific mitigations", unless they are in the plan (and the EIS must document them), are not applicable to this plan level analysis.

For cumulative effects the EIS states:

If all applicable measures are implemented and if they are effective, then adverse effects from any of the alternatives should be minimized. It is unlikely that plan components will prevent all adverse effects from occurring for each and every action that may be implemented on the Forest. Therefore, alternatives that propose higher levels of activity for various resources pose greater inherent risks to aquatic and riparian resources. (p. 193)

It is the role of the EIS to look at the specific effects of the "greater inherent risks" to SCC fish. It does not do this.

For RGCT the conclusions in the cumulative effects analysis are grim: "As the result of introductions of nonnative fish species and past local and regional cumulative impacts, the Rio Grande cutthroat trout is a species of conservation concern. The primary adverse cumulative impacts, under all of the alternatives, would continue to occur[hellip]" (p. 193). This admission is an indictment of the plan's ability to provide conditions necessary for RGCT persistence.

Recommended Improvement: The Plan and EIS must be significantly revised.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for boreal owl viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 265-266, Table 60 and 266, Table 61) lists the ecological conditions necessary for boreal owls as:

* Large trees and snags, late-seral forests
* Large aspen trees
* Prey: Small mammal population (prairie dogs, shrews, voles, squirrels, hares, rabbits)
* Northern flicker cavities

As noted above, the Plan does not sufficiently maintain or restore snags, late seral forest, and northern flicker cavities. Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan components as being associated with the boreal owl: G-VEG-1, S-VEG-4, and S-VEG-5. This set of plan components is not sufficient to provide ecological conditions necessary for the species.

G-WLDF-1 from the Draft Plan which protected raptor nests, including for boreal owl, from human disturbance (as guided by Appendix G in the Draft Plan). The Plan did not include this guideline, and this is unacceptable.

In sum, the plan components required to provide ecological conditions necessary for boreal owls are insufficient or non-existent. Human disturbance buffers and timing restrictions to protect boreal owl nests has been deleted.

The Plan fails to provide the plan components necessary to maintain boreal owl viability.

We raised this issue in comments on the Draft Plan and DEIS: Smith et al. 2017.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that supports boreal owl viability. The plan must also have species-specific components if necessary to ensure habitat needs are achieved and maintained. The Plan requires a major revision to provide the conditions and protections necessary for boreal owls. Consult the RGNF's Boreal Owl Overview for ecological condition needs, especially in relation to snags. Include the deleted raptor disturbance direction from the Draft Plan (Appendix G) as a plan standard.

Objection Point: The Plan does not provide the ecological conditions necessary for American marten viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 265-266, Table 60 and 266, Table 61) lists the ecological conditions necessary for American marten as:

* Large trees and snags, late-seral forests
* Prey: Small mammal population (prairie dogs, shrews, voles, squirrels, hares, rabbits)

As noted above, the Plan does not sufficiently maintain or restore snags and late seral forest. Additionally, down dead wood provides critical winter foraging habitat for the species, allowing them martens to hunt under the snow. Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 178) lists the following plan components as being associated with the American marten: G-VEG-5 and S-TEPC-2. This set of plan components is not sufficient to provide ecological conditions necessary for the species. The Plan fails to provide the plan components necessary to maintain American marten viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that supports American marten viability. The plan must also have species-specific components if necessary to ensure habitat needs are achieved and maintained. The Plan requires a major revision to provide the conditions and protections necessary for American martens. Consult the RGNF's American Marten Overview for ecological condition needs, especially in relation to snags.

Objection Point: The Plan does not provide the ecological conditions required for olive-sided flycatcher viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

No ecological conditions were listed in the FEIS or Plan for the olive-sided flycatcher. The is a serious plan deficiency. Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan components as being associated with the olive-sided flycatcher: G-VEG-1, S-VEG-4, and S-VEG-5. This set of plan components is not sufficient to provide ecological conditions necessary for the species.

We raised this issue in Defenders et al. 2017.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that supports olive-sided flycatcher viability. The plan must also have species-specific components if necessary to ensure habitat needs are achieved and

maintained. The Plan requires a major revision to provide the conditions and protections necessary for the species.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for flammulated owl viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 265-266, Table 60 and 266, Table 61) lists the ecological conditions necessary for flammulated owls as:

* Large trees and snags, late-seral forests
* Large aspen trees
* Prey: Small mammal population (prairie dogs, shrews, voles, squirrels, hares, rabbits)
* Northern flicker cavities

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan components as being associated with the flammulated owl: G-VEG-1, G-VEG-4, S-VEG-4, and S-VEG-5. This set of plan components is not sufficient to provide ecological conditions necessary for the species. Human disturbance buffers and timing restrictions to protect flammulated owl nests and those of other species, G-WLDF-1 in Draft Plan and Appendix G, have been deleted in the Final. The Plan fails to provide the plan components necessary to maintain flammulated owl viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections, such as species-specific components, against threats that supports flammulated owl viability. The Plan requires a major revision to provide the conditions and protections necessary for flammulated owls. Consult the RGNF's Flammulated Owl Overview for ecological condition needs, especially in relation to snags. Include the deleted raptor disturbance direction from the Draft Plan (Appendix G) as a plan standard.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for northern goshawk viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 265-266, Table 60 and 266, Table 61) lists the ecological conditions necessary for boreal owls as:

* Large trees and snags, late-seral forests
* Large aspen trees

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan components as being associated with the northern goshawk: G-VEG-1, G-VEG-5, S-VEG-4, and S-VEG. G-WLDF-1 from the Draft Plan which protected raptor nests, including for boreal owl, from human disturbance (as guided by Appendix G in the Draft Plan). The Plan did not include this guideline, and this is unacceptable. The deleted guideline stated, in part: "Protect inactive nests as needed[hellip]". This is important for goshawk, as this species is known to re-use nests.

In sum, the plan components required to provide ecological conditions necessary for northern goshawks are insufficient. Human disturbance buffers and timing restrictions to protect northern goshawk nests have been deleted. The Plan fails to provide the plan components necessary to maintain northern goshawk viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that supports northern goshawk viability. The plan must also have species-specific components as necessary to ensure habitat needs are achieved and maintained. The Plan requires a major revision to provide the conditions and protections necessary for northern goshawks. Consult the RGNF's Northern Goshawk Overview for ecological condition needs, especially in relation to snags. Include the deleted raptor disturbance direction from the Draft Plan (Appendix G) as a plan standard.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for fringed myotis viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 265-266, Table 60 and 266, Table 61) lists the ecological conditions necessary for boreal owls as:

* Large trees and snags, late-seral forests
* Northern flicker cavities
* Prey: Insects
* Large caves and mines (stable interior temperature)

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 178) lists the following plan components as being associated with the flammulated owl: G-VEG-1, S-VEG-4, and S-VEG-5. The Plan, likely mistakenly, did not include guideline G-SCC-5 in the crosswalk, which is:

G-SCC-5: To maintain habitat for bat species of conservation concern, retain adequate access for bats and reduce disturbance to resident populations when considering mine or cave closures. (Forestwide).

It is important to include a plan component to protect mines and caves for bats. However, such a plan component should be a standard; we see no other way to achieve the outcome of reducing disturbance of bats without closures of hibernacula and maternal roosts where bats occur.

In sum, the plan components required to provide ecological conditions necessary for the fringed myotis are insufficient. The Plan fails to provide the plan components necessary to maintain fringed myotis viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that supports fringed myotis viability. The plan must also have species-specific components if necessary to ensure habitat needs are achieved and maintained. The Plan requires a major revision to provide the conditions and protections necessary for fringed myotis. Consult the RGNF's Fringed Myotis Overview for ecological condition needs.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for western bumblebee viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 265-266, Table 60 and 266, Table 61) lists the ecological conditions necessary for the western bumblebee as:

* large trees and snags, late-seral forests
* willow thickets and cottonwood galleries
* northern flicker cavities

RGNF's Western Bumblebee Overview (p. 2) includes additional ecological conditions that are habitat requirements:

* suitable nesting sites for the colonies
* nectar and pollen from floral resources available throughout the duration of the colony period (spring, summer and fall)
* suitable overwintering sites for the queens
* underground cavities for nesting, such as old squirrel or other animal nests and in open west-southwest slopes bordered by trees (although a few nests have been reported from above-ground locations such as in logs among railroad ties)

The FEIS (at 558, Table 145) notes the following threats to the species:

* effects of a microsporidian Nosema bombi and an imported protozoan parasite from Europe.
* land use changes and habitat loss
* changes in nectar flora
* overgrazing
* poorly timed fire in suitable nesting habitat
* changes to temperature and precipitation regimes
* competition with honey bees
* effects of pesticides especially persistent neonicotinoids

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan component as being associated with the western bumblebee: G-SCC-1. In sum, the plan components required to provide ecological conditions necessary for western bumblebees are insufficient. The Plan fails to provide the plan components necessary to maintain western bumblebee viability.

Recommended Improvement. There must be a desired condition that specifies the ecological conditions and other required protections against threats that supports western bumblebee viability. The revised plan must include a prohibition on the use of neonicotinoids and strong protections to limit habitat degradation from livestock grazing. Additional plan standards and guidelines are necessary, particularly to protect known and potential pollinator sites from livestock grazing. This was recommended in the RGNF Western Bumblebee Overview (p. 2). As we've stated elsewhere, existing plan components do not adequately mitigate damage caused by livestock. See section VII of this objection. Consult the RGNF Western Bumblebee Overview for some, though not all, management mechanisms for how to provide the conditions required for the species. The Plan requires a major revision to provide the ecological conditions and species-specific protections necessary for western bumblebees, as well as numerous other species, as discussed elsewhere in this objection.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for Gunnison's prairie dog viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 265-266, Table 60 and 266, Table 61) did not list the ecological conditions necessary for the Gunnison's prairie dog. However, the RGNF's Gunnison's Prairie Dog Overview (p. 2) did provide some important information about the species' habitat:

Gunnison's prairie dogs inhabit grasslands and semi-desert and montane shrublands. The species is associated with intermountain valleys, benches, and plateaus that offer prairie-like topography and vegetation. These intermountain valleys, benches, and plateaus can range from very arid to mesic sites. Gunnison prairie dogs can occupy mesic plateaus and higher mountain valleys, as well as arid lowlands. The species is generally found in

groups of several individuals, and often times forming colonies. They dig burrows that are used for raising young, and provide cover from predators (Fitzgerald et al. 1994, Knowles, 2002, cited in Seglund et al. 2005).

The FEIS noted the following threat to the species, "sylvatic plague, which often wipes out most if not all of infected colonies and often involving much larger populations than found on the Forest" (FEIS at 562, Table 145). The Gunnison's Prairie Dog Overview (p. 4-5) identified additional threats that must be addressed by management:

* Sylvatic plague
*
Oil and gas extraction, and related:

* Clearing and crushing vegetation
* Reduction in available habitat
* Road development
* Displacement and killing of animals
* Alteration of surface water drainage
* Soil compaction
* Disrupting social systems

* Shooting by OHV users (increased access to remote areas)
* Livestock grazing (during drought conditions)
* Noxious weeds
* Altered fire regimes
* Shooting
* Drought

Another threat includes poisoning due to human intolerance of this ecologically important species.

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan components as being associated with the Gunnison's prairie dog: G-TEPC-1 and G-SCC-3. In sum, the plan components required to provide ecological conditions necessary for Gunnison's prairie dogs are insufficient or non-existent. The Plan fails to provide the plan components necessary to maintain Gunnison's prairie dog viability.

Recommended Improvement. There must be a desired condition that specifies the ecological conditions and other required protections against threats that will support Gunnison's prairie dog viability. The plan must also have species-specific components to ensure habitat and population needs are achieved and maintained. The revised plan should include a plan component aimed at cooperation with Colorado Parks and Wildlife to help mitigate sylvatic plague, the most severe threat to the species. The Plan must place restrictions on oil and gas development, road construction, OHV use, noxious weeds, and livestock grazing during periods of drought in prairie dog colonies and expansion areas. Though Colorado Parks and Wildlife maintains a spring prairie dog shooting restriction across the state, with which the RGNF abides, the Forest should create a standard that prohibits shooting year-round, given the small Gunnison's prairie dog population on the Forest and the potential for shooting to have population-level effects. Consult the RGNF's Gunnison's Prairie Dog Overview (p. 3-4) for the ecological and other conditions necessary to maintain viability. The Plan requires a major revision to provide the conditions and protections necessary for Gunnison's prairie dog.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for white-veined arctic butterfly viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS did not list the ecological conditions necessary for white-veined arctic butterfly persistence. The RGNF's White-veined Arctic Butterfly Overview (p. 2) stated, "This species is dependent on grasses and sedges growing on or near wet tundra bogs near tundra. On this unit all tundra is alpine tundra [hellip]"

The FEIS identified climate change as the only threat to the species (FEIS at 558, Table 145). White-veined Arctic Butterfly Overview (p. 2) also noted climate change to be a key threat and, "Additionally, this species is dependent upon monocot species - grasses, sedges, and rushes. Any actions that displace those species in favor of woody species or forbs could be a threat to this species." And, recreational activities and livestock grazing can impact the plants required by the butterfly. People can trample plants and create trails through habitat. Livestock can trample and eat plants and change plant composition to one with a larger woody plant component.

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan components as being associated with the white-veined arctic butterfly: S-SCC-1 and G-SCC-4. In sum, the plan components required to provide ecological conditions necessary for white-veined arctic butterflies are insufficient or non-existent. The Plan fails to provide the plan components necessary to maintain white-veined arctic butterfly viability.

Recommended Improvement. There must be a desired condition that specifies the ecological conditions and other required protections against threats that supports white-veined arctic butterfly viability. In particular, the revised plan requires standards and guidelines that limit livestock grazing and recreation in the species' habitat; the current plan components are not sufficient to mitigate these threats.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for southern white-tailed ptarmigan viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 266, Table 61) lists the ecological condition necessary for the southern white-tailed ptarmigan as:

* Large patches of snow willow

The Southern White-tailed Ptarmigan Overview (p. 2-3) identified the following ecological conditions associated with the species:

* Breeding habitats consist of snow-free areas on gentle to moderate slopes where willow is a major component.
* Elevations vary by latitude, slope, and aspect, ranging from 11,000 - 14,000 feet in Colorado
* Most territories are situated near treeline early in the breeding season and encompass stands of willows more than 1.6 ft tall that protrude above the snow.
* Nest sites typically occur within breeding territories on moderate slopes that are snow-free by June. Habitats selected in Colorado consist of krummholz (both evergreen and willow), rocky areas, and meadows often with the nest located next to rock or vegetation structure that serves as protection against inclement weather (Giesen et al. 1980).
* Brood-rearing and summer habitats consist of high, rocky, windswept ridges, benches, and mountain tops with late-lying snow fields, solifluction terraces or other moist sites in a mosaic of rock fields and low vegetation consisting of grasses, forbs and/or sedges. Selected areas are located above breeding areas at elevations typically above 3,658 meters (12,000 feet), but as low as 3,506 meters (11,500 feet) (Braun 1971, Knight 1994 summarized in Hoffman 2006).
* Bird movement to fall habitats, located downslope within the breeding territory at the upper edges of willow communities, coincides with the first severe snowstorm (Hoffman 2006).

The FEIS noted climate change to be a threat to the species (FEIS at 561, Table 145). The Southern White-tailed Ptarmigan Overview (p. 3) also identified the following threats:

* Past livestock grazing in alpine areas, during which long-term use and improper herding occurred, have had a substantial impact on the structure and composition of many alpine areas.
* Range management practices that are designed to increase forage production for livestock (e.g., reseeding, applying herbicides and fertilization)
* Grazing by wild ungulates also may negatively impact alpine habitats.
* Any activity that reduces the forb component of plant communities in areas used by ptarmigan during the summer and fall will have negative consequences to the species (Hoffman 2006).
* Recreational activities, in the form of hiking, camping, off-road vehicles (including snowmobiles), fishing, hunting, back-country skiing, downhill skiing, mountain biking, rock climbing, nature viewing, and photography, continue to be major uses and causes of disturbance and potential habitat impacts in alpine areas (Hoffman 2006).
* Other potential risk factors include mining, climate change, reservoir construction, and exposure to Cadmium (Hoffman 2006).

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan component as being associated with the southern white-tailed ptarmigan: S-SCC-4. In sum, the plan components required to provide ecological conditions necessary for the southern white-tailed ptarmigan is insufficient or non-existent. The Plan fails to provide the plan components necessary to maintain the species' viability.

Recommended Improvement. There must be a desired condition that specifies the ecological conditions and other required protections against threats that supports southern white-tailed ptarmigan viability. In particular, the revised plan requires standards and guidelines that limit livestock grazing and recreation in the species' habitat.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for boreal toad viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 265-266, Table 60) lists the ecological condition necessary for the boreal toad as:

* Presence of nonnative fish and amphibians

The RGNF's Boreal Toad Overview (p. 3) added:

* shallow wetlands for breeding
* terrestrial habitats with vegetative cover for foraging
* burrows for winter hibernation

The FEIS (p. 558, Table 145) summarizes threats to the species and habitat, stating:

Primary localized threats on the Forest involve chytrid fungus with four of five known sites testing positive. Other local concerns involve water and air quality factors, nonnative species, recreation management and perhaps fire and timber management in localized areas. Climate change vulnerability assessments for areas surrounding the Forest have determined that this species is "highly vulnerable" to negative impacts from changes in temperature are precipitation regimes.

The Boreal Toad Overview (p. 3) included those and added a few others:

* Disease (bacterial and fungal, including chytrid Batrachochytrium dendrobatidis)
* Decreased water and air quality
* timber harvest
* livestock grazing
* fire management
* chemicals, environmental pollutants
* non-indigenous species
* recreation management

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan components as being associated with the boreal toad: S-GDE-1,

G-GDE-1, S-RMZ-1, G-RMZ-1, G-RMZ-2, G-WA-1, G-WA-2, G-FISH-1, G-FISH-2, G-FISH-3, G-MIN-1. In sum, the plan components required to provide ecological conditions necessary for boreal toads are insufficient. There is no description of the species' terrestrial habitat or standards or guidelines to mitigate threats to this habitat. The Plan fails to provide the plan components necessary to maintain boreal toad viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that will support boreal toad viability. The revised plan must include components to mitigate the threats identified in the Boreal Toad Overview. The Plan requires a major revision to provide the conditions and protections necessary for the species.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for river otter viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 266, Table 61) lists the ecological conditions necessary for the western bumblebee as:

* vegetation that overhangs water

Regarding threats, the FEIS states, "Otters are threatened with extirpation mostly because they are already uncommon, and as such they are susceptible to stochastic events and human harassment" (FEIS at 562, Table 145). The River Otter Overview (p. 4) identified the following threats to the species and its habitat:

* water depletions and water development
* decline in water quality
* loss of riparian vegetation
* pollution from past mining
* recreation
* incidental trapping
* illegal take

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan components as being associated with the river otter. S-GDE-1,

G-GDE-1, S-RMZ-1, G-RMZ-1, G-RMZ-2, G-WA-1, G-WA-2, G-FISH-1, G-FISH-2, G-FISH-3, G-MIN-1. In sum, the plan components required to provide ecological conditions necessary for river otters are insufficient or non-existent. The Plan fails to provide the plan components necessary to maintain river otter viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that supports river otter viability. Consult the RGNF's River Otter Overview for ecological condition needed for recovery (p. 3-4). The Plan requires a major revision to provide the conditions and protections necessary for the species.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for hoary bat viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS does not list the ecological conditions necessary for the hoary bat. The RGNF's Hoary Bat Overview (p. 2) identified the following ecological conditions necessary for the species:

* Trees for roosting, both coniferous and deciduous
* mature forest canopy
* Prey: strong preference for moths, but are also known to eat beetles, flies, grasshoppers, termites, dragonflies, and wasps

The FEIS noted the following potential threat: "Potential habitat loss a concern due to the loss of spruce habitat due to the impacts of spruce beetle" (FEIS at 573, Table 145). The Hoary Bat Overview added the following threats (p. 2-3):

* Loss of roosting habitat due to timber harvest
* Use of pesticides on public forest lands may also be a potential source of mortality to roosting bats and their insect prey

There are no plan components in Table 23, "Crosswalk of species of conservation concern plan components," in the Plan that apply to the hoary bat. However, the Plan includes the following desired condition:

DC-WLDF-2: Habitat conditions for bats are suitable for reproduction and roosting. (Forestwide)

The desired condition would be stronger if it read "ecological conditions provide suitable habitat for successful bat reproduction and roosting" to enable monitoring for the presence of bats. However, the desired condition lacks associated standards and guidelines necessary to support its achievement in relation to the hoary bat.

In sum, plan components required to provide ecological conditions necessary for hoary bats are insufficient or non-existent. The Plan fails to provide the plan components necessary to maintain hoary bat viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that supports hoary bat viability. Consult the RGNF's Hoary Bat Overview for ecological condition needs (p. 2). The Plan requires revision to provide the conditions and protections necessary for the species.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for Townsend's big-eared bat viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 266, Table 61) lists the ecological conditions necessary for the Townsend's big-eared bat as:

* Large caves and mines

Townsend's Big-eared Bat Overview (p. 2) provided more detail about required ecological conditions:

* Saxicoline brush, sagebrush, semi-desert scrub, pinyon- juniper woodland, ponderosa pine woodland, and likely spruce-fir and lodgepole
* spacious cavern-like structures for roosting during all stages of its life cycle, most notably for maternity and winter roosting as well as buildings, bridges, rock crevices and hollow trees as roost sites
* edge habitats along streams, adjacent to and within a variety of wooded habitats for foraging
* prey: primarily moths

The FEIS (at 564, Table 145) describes some threats to the species and habitat:

Concern for the persistence stems from white-nose syndrome. Although not yet detected within Colorado, the disease continues to spread west. [hellip] In addition, Climate change vulnerability assessments for the state indicate that this species may experience a slight increase in vulnerability due to changes in its physiological hydrological niche and physical habitat due to changes in temperature regimes and precipitation patterns.

Townsend's Big-eared Bat Overview (p. 3-4) identified some additional threats:

* Uninformed closure of abandoned mines
* Recreational exploration of caves and mines
* Renewed mining at historical sites
* Elimination of forest canopy
* Elimination or alteration of wetland habitat

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 178) lists the following plan components as being associated with the Townsend's big-eared bat: G-SCC-5. In sum, the plan components required to provide ecological conditions necessary for Townsend's big-eared bats are insufficient. The Plan fails to provide the plan components necessary to maintain Townsend's big-eared bat viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that supports Townsend's big-eared bat viability. Consult the RGNF's Townsend's big-eared bat species overview for ecological conditions for viability (p. 2-3). The Plan requires a major revision to provide the conditions and protections necessary for the species.

Objection Point: The Plan does not provide the ecological conditions required for Brewer's sparrow viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS (p. 265-266, Table 60) lists the ecological conditions necessary for the western bumblebee as:

* Sagebrush

The RGNF's Brewer's Sparrow Overview (p. 2) provided more about the species' habitat requirements:

Landscape level attributes that are positively associated with Brewer's sparrow density include sagebrush with high shrub cover, large patch size, little fragmentation, low disturbance, and habitat heterogeneity. Knick and Rotenberry (2002) found that the occurrence of Brewer's sparrows increased with increasing area of sagebrush patches and decreasing fragmentation (cited in Holmes and Johnson 2005). In Colorado, 75 percent of Brewer's sparrow detections were in sagebrush habitat (Knick and Rotenberry 1995, Lambeth 1998 cited in Holmes and

Johnson 2005).

The FEIS noted climate change as the threat facing the Brewer's sparrow (FEIS at 560, Table 145). More details can be found in the Brewer's Sparrow Overview (p. 3), which identified the following threats:

* The synergistic pattern of ground disturbance (due to excessive livestock grazing, failed agriculture, and intentional eradication of sagebrush)
* fragmentation and loss sagebrush habitat due to fire occurrence, and increased dominance of exotic vegetation
* Habitat loss and fragmentation from:
*
* road and power-line rights of way
* oil and gas development
* range improvement programs that remove sagebrush by burning
* herbicide application
* mechanical treatment, replacing sagebrush with annual grassland to promote forage for livestock.

* complex interactions among agriculture, livestock grazing, and invasion of exotic plants, especially cheatgrass
* brown-headed cowbird presence, which is known to parasitize Brewer's sparrow nests, associated with livestock grazing
* trampling of nests by livestock

Table 23, "Crosswalk of species of conservation concern plan components," in the Plan (p. 177) lists the following plan components as being associated with the Brewer's sparrow: G-TEPC-1 and G-SCC-3. In sum, the plan components required to provide ecological conditions necessary for Brewer's sparrows are insufficient or non-existent. The Plan fails to provide the plan components necessary to maintain Brewer's sparrow viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that supports Brewer's sparrow viability. Because Brewer's sparrows depend on the same habitat and similar ecosystem conditions as the Gunnison's sage-grouse, the same improvements recommended in above are recommended for the sparrow. The Plan requires a major revision to provide the conditions and protections necessary for this and other species.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for northern pocket gopher viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS does not list the ecological conditions necessary for the northern pocket gopher. The RGNF's Northern Pocket Gopher Overview identified the following conditions:

* Alpine
* grassland/herbaceous
* savanna
* shrubland/chaparral
* woodland/conifer
* woodlands
* It prefers deep soils along streams and in meadows

The FEIS states the following about the viability of the species, "Stochastic human or natural events could extirpate this species due to the very small size of the area occupied by this subspecies. The subspecies is also very rare across its range, which is limited to the San Luis Valley (endemic)" (FEIS at 562, Table 145).

The Northern Pocket Gopher Overview (p. 2) provided additional details:

* Vegetation treatments that affect forb availability may negatively impact northern pocket gophers. On an area treated with the herbicide 2,4-D in Colorado that reduced production of forbs by 83% and increased production of grasses by 37%, the diet of T. talpoides shifted from 82% forbs and 18% grasses to 50% each forbs and grasses.
* Roads with wide clearance limits may create barriers to movement (NatureServe 2015).

Given that there are no apparent plan components to protect the species and its habitat, the Plan fails to provide the management direction necessary to maintain northern pocket gopher viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats and provides the necessary ecological conditions that will support northern pocket gopher viability. The revised plan must provide the conditions and protections necessary for the species.

Objection Point: The Plan does not provide the ecological conditions or species-specific conditions required for plains pocket mouse viability, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The FEIS does not list the ecological conditions necessary for the plains pocket mouse.

The RGNF's Plains Pocket Mouse Overview (p. 2) identified the following conditions:

* generally confined to areas of sandy or sandy-loam soil
* dunes with sparse vegetation cover
* may occasionally occupy non-sandy atypical habitats such as rocky soils in pinyon-juniper

The FEIS states the following regarding the species' persistence, "The concern for persistence is due to the limited habitat and very small area occupied by the species. Due to this small size, stochastic natural or human caused events could extirpate this species" (FEIS at 562, Table 145).

The Plan developed no plan components to provide for the species' habitat or mitigate threats, and thus fails to provide ecological conditions and other measures necessary to maintain plains pocket mouse viability.

Recommended Improvement. As stated elsewhere, there must be a desired condition that specifies the ecological conditions and other required protections against threats that supports plains pocket mouse viability. The RGNF's Plains Pocket Mouse Overview recommends conservation and maintenance of sandy habitats and maintaining disturbance regimes in suitable habitats. The Plan requires a major revision to provide the conditions and protections necessary for this and other species.

THREATS AND ECOSYSTEM STRESSORS

Range Management

Objection Point: Range Management (RNG) plan components do not sufficiently limit the threat of livestock grazing to the ecological conditions necessary to several at-risk species that occur on the Forest, in violation of 36 CFR 219.9(a) and (B) and 36 CFR 219.8(a)(1)(iv).

This section provides an analysis of the Range Management plan components, which show that the RNG plan components are inadequate to protect at-risk species and their habitats from uses the can be threats to species and habitats, like livestock grazing. This is but one of several examples where management threats are not sufficiently mitigated by plan direction. Others include vegetation management, mineral management, roads and infrastructure. Additionally, the Plan is absent plan components that will help the Forest ecosystems and species to adapt to climate change or that will help mitigate the effects of climate change.

The FEIS's analysis of effects of livestock grazing on SCC states, "Livestock grazing has the potential to impact plant species of conservation concern through herbivory, soil disturbance, and impacts to riparian areas" and "Grazing would have minimal effect on cavity-nesting species," (which not true because livestock grazing can affect forest structure, composition, and function and thus affect tree cavity availability and quality) (FEIS at 272). Livestock grazing is a stressor that can degrade the following, and possibly additional, ecological conditions for at-risk species, according to the FEIS (p. 265-267, Tables 60 and 61):

* Willow thickets and cottonwood galleries
* Sagebrush
* Alpine ecosystem, including cushion plan communities, alpine fell-fields, and talus slopes
* Fens
* Large patches of snow willow
* Vegetation that overhangs water
* Occasional disturbance
* Floating vegetation mats

Based on information in the Plan, FEIS, Assessment reports, and/or Species Overviews, livestock grazing poses a threat to the following species:

* Southwestern willow flycatcher
* Uncompahgre fritillary butterfly
* Canada lynx
* Gunnison sage-grouse
* Western bumblebee
* Southern white-tailed ptarmigan
* Boreal toad
* Brewer's sparrow
* Rocky Mountain bighorn sheep
* Rio Grande chub
* Rio Grande cutthroat trout
* Rio Grande sucker
* SCC Plants such as the dwarf alpine hawksbeard, Arizona willow, and Ripley's milkvetch

The RGNF determined livestock grazing is suitable for almost all management areas under the plan (FEIS at 56). Given how widespread its use, the Range (RNG) and other plan components do not provide sufficient protections for at-risk species, their habitats, and many of the ecosystem conditions they depend on. The following analysis of the RNG plan components demonstrates this.

DC-RNG-1: Domestic livestock grazing is managed to promote landscape diversity (composition, structure, and function) with both a spatial context (what species, what kind of structure, and what landscape patterns are natural for each ecosystem) and a temporal context (which seral stages and how many are natural for each ecosystem). (Forestwide)

DC-RNG-1 does not provide targets for management that can be measured through monitoring and does not meet requirements of 36 CFR 2019(e)(1)(i). It is too broad and, at minimum, must be separated by ecosystem type to enable an understanding of how livestock grazing is consistent with restoring or maintaining the natural range of variation for composition, structure, function, and connectivity by ecosystem type. Regarding the description of "spatial context," the plan must specify "what species, what kind of structure, and what landscape patterns are natural by ecosystems." The use of "temporal context" here indicates the Forest may not understand what temporal context means (i.e., relating to time), and it is not clear what "which seral stages and how many are natural by ecosystem" means.

DC-RNG-2: Forage, browse, and cover needs for wildlife and authorized livestock are in balance with available forage. (Forestwide)

DC-RNG-2 does not provide targets for management that can be measured through monitoring and does not meet requirements of 36 CFR 2019(e)(1)(i). The DC must make clear what "in balance with the available forage" means and what the baseline is and also how this is measurable. It does not provide helpful direction for management actions.

DC-RNG-3: Temporary forage is available for grazing within existing, permitted allotments in coordination with other resource needs, e.g., reforestation. (Forestwide)

DC-RNG-3 must be linked to a standard or guideline that provides a constraint on the use of temporary forage to prevent or limit ecological damage caused by concentrating livestock in one area. The DC should describe the conditions under which temporary forage will be permitted. The DC must be clear about what "in coordination with other resource needs, e.g., reforestation" means.

DC-RNG-4: Range improvements support ecologically sustainable grazing and benefits for wildlife when opportunities exist. New and replacement improvements are designed to benefit aquatic and terrestrial species. (Forestwide)

This desired condition is too broad to enable the public to understand what the "range improvements" are to which it is being applied or to provide clear management direction. The DC should be linked to standards and guidelines that provide constraints or requirements on practices and infrastructure that could be considered range-improving, for example, fencing (which should conform to wildlife-friendly practices).

OBJ-RNG-1: Restore 150 acres of upland ecosystems over the next 15 years. (Forestwide)

The objective does not have a measurable outcome to be achieved to be able to meet 36 CFR 219.7(e)(1)(ii). What is the outcome of "restoration" for upland ecosystems that require restoring?

G-RNG-1: Develop site- and species-specific vegetation use and residue guidelines during rangeland planning, and document them in allotment management plans. In the absence of updated planning or an approved allotment management plan, the utilization and residue guidelines in Table 1 and Table 2 will apply. (Forestwide)

The guideline should be worded to assure that it is consistent with the best available science on at-risk species cover, forage, and other vegetation needs. The science used to develop Table 1 must be documented to assure

it is the best available, based on at-risk species vegetation needs.

G-RNG-2: Authorized grazing should not occur on an individual unit for the entire vegetative-growth period. This would be acceptable when the grazing system involves complete rest for that unit for two or more years after a full growing season treatment. (Forestwide)

This guideline is confusing and ambiguous.

G-RNG-3: Authorized grazing in riparian management zones and groundwater dependent ecosystems should be in compliance with residual stubble heights identified in Forest Service Technical Report INT-263, Managing Grazing of Riparian Areas in the Intermountain Region (Clary and Webster 1996). (Forestwide)

The Intermountain Research Station's Forest Service Technical Report INT-263 was actually published in 1989, 30 years ago, not in 1996, as the guideline indicates. This is no longer the best available science about protecting riparian areas from livestock grazing degradation.

G-RNG-4: Authorized grazing in aspen stands should ensure sprouting and sprout survival to perpetuate the long-term persistence of the clones, unless elimination of the clone is planned. (Forestwide)

The caveat after the comma of this guideline renders it meaningless as management direction.

In sum, most of the plan components intended to provide management direction for livestock grazing fail to meet 219.7(e) requirements.

Travel and Recreation

Objection Point: The RGNF plan violates the Travel Management Rule, Executive Order 11644 as amended by Executive Order 11989, and the Planning Rule because it fails to provide for sustainable winter recreation, restrict over-snow vehicles (OSV) to designated places, and locate trails and areas to minimize impacts. It also violates NEPA because it fails to take a hard look at the impacts from OSV use under the alternatives.

The Forest Service must provide for sustainable recreation, including recreational settings, in forest plans. 36 CFR 219.10(b) (plans must "include plan components, including standards or guidelines, to provide for: (i) Sustainable recreation; including recreation settings, opportunities, and access; and scenic character."). The Forest Service is also required to "designate" specific areas and trails for OSV use, and is prohibited from allowing OSVs (e.g., snowmobiles) to travel outside of the designated system. See 36 CFR [sect][sect] 212.80(a), 212.81(a), 261.14. Further, the Forest Service is obligated to locate areas and trails open to OSV use to minimize resource damage and recreational use conflicts (36 CFR 212.81(d) and Executive Order 11644 as amended; also see WildEarth Guardians, 790 F.3d at 930-31). It is widely acknowledged that establishing OSV designations and winter recreational settings are critical elements of sustainable recreation. The RGNF has not completed a winter travel management plan and does not have a designated system for OSVs as required by Subpart C.

Objectors in multiple comment letters identified necessary element for sustainable winter recreation management supported by best available science. These included disallowing OSVs off a designated system per the requirements of the Travel Management Rule, establishing winter recreational settings, committing to conduct timely winter travel management planning, establishing a minimum snow depth for over-snow vehicle use to

prevent soil and vegetation damage, locating trails and areas to minimize damage, identifying areas suitable for over-snow vehicles that consider adequate snowpack and climate change effects, and establishing plan components that protect resources from OSV damage and reduce conflict.

Despite this, the revised plan barely addresses winter recreation. It includes one plan component restricting OSVs in big game winter range from December 1 to April 15 and snow compaction restrictions in lynx habitat.[7] The FEIS identifies areas suitable for OSVs although the suitability determinations are not reflected consistently in the plan nor supported by a reasoned analysis. See the next objection point. The revised plan does not acknowledge that the forest is not in compliance with Subpart C or establish direction to achieve compliance. Even more egregious, the plan actually establishes direction in clear violation of the plain language of subpart C stating "Over-the-snow motorized vehicle use is allowed unless specifically restricted" (Plan at 55). Further, the plan allows OSV use across wide swaths of the National Forest but makes no attempt as required to locate areas to minimize impacts and recreational conflict. In sum, the plan's direction for winter recreation management falls far short of the Forest Service's mandate to provide for sustainable recreation, including recreational settings, in violation of the Planning Rule, and fails to comply with the Travel Management Rule's mandate to restrict OSVs to designated places that are located to minimize impacts.

NEPA requires the Forest Service to take a hard look at the impacts of the alternatives. In the context of OSV use and winter recreation management, the Forest Service utterly failed to meet this obligation. We cannot find a detailed effects analysis related, for example, to the impacts of OSV area allocations and management direction on wildlife, water quality, vegetation, soils or other recreational users and settings. This is despite the fact that we submitted detailed information on OSV best management practices.[8] This failure to take a hard look is a violation of NEPA.

This issue was raised in the following comment letters: Scoping letter dated October 28, 2016 from The Wilderness Society, pages 45-50; and letter dated December 22, 2017 the Draft EIS and Plan from Rocky Smith et al at 148 to 160.

Recommended Improvement: The RGNF in its Plan must:

* Establish that OSVs will be restricted to a designated system and correct the misstatement to the otherwise on page 55 of the plan;
* Establish a sustainable framework for winter recreation. This includes but is not limited to:

* Establishing winter Recreational Opportunity Settings;
* Committing to timely winter travel management planning to designate discrete routes and areas for over-snow vehicles in accordance with subpart C of the Travel Management Rule;
* Identifying areas with inadequate snowpack, taking climate change into account, and finding them unsuitable for over-snow vehicle travel;
* Establishing a minimum snow depth for over-snow vehicle use; and
* Establishing direction in plan components that the resultant areas and trails that are designated as open to OSVs are consistent with winter Recreational Opportunity Settings.
* Identifying places open to OSV such that resource impacts and recreational conflict are minimized.

* Revise the FEIS so that it takes a hard look at the social and environmental impacts resulting from OSV use.

Objection Point: The FEIS does not take a hard look at OSV suitability or provide a reasoned explanation for its OSV suitability findings.

The FEIS in five places offers information on OSV use suitability. First, on page 294, the FEIS explains:

"Motorized over-snow vehicle suitability maps for alternatives A through D (contained on an external drive located in the back of this document) reflect areas on the Forest where motorized over-snow vehicle use would be suitable and unsuitable for each alternative. This process does address motorized and nonmotorized settings during the winter season to determine suitability of these activities throughout the Forest. Over-snow vehicle use suitability determinations were made based on considerations for recreation user group preferences, wilderness areas, wildlife habitat, and areas of the Forest under long-term closure orders where applicable. Each alternative was then analyzed for the total number of acres and percentage of the Forest where motorized over-snow vehicle use would be suitable, unsuitable, and limited to designated routes. [Emphasis added]

Second, Pages 305-307 describe the areas found suitable and unsuitable for OSV use.

"Areas suitable for motorized over-snow vehicle use across all action alternatives (B, B Modified, C, and D) include Roadless (MA 3.5 and 3.6), General Forest (MA 5.11), and Scenic Byways (MA 4.21). Motorized over-snow vehicle use is also suitable under alternatives B, B Modified, and C in the following special interest areas: Bachelor Loop, Elephant Rocks, and Wagon Wheel Gap Experiment Station. Suitable areas under alternatives B and D also include dispersed and developed recreation, forest production, and grassland production...

Areas unsuitable for motorized over-snow vehicle use across action alternatives include existing wilderness areas, eligible wild, scenic, and recreational rivers, ski-based resorts, all research natural areas, and the following special interest areas: Blowout Pass Geologic, Devil's Hole, and Liberty-Duncan. Motorized over-snow vehicle use across all alternatives is also unsuitable within areas on the Forest with closure orders. Specifically, the long-term closure order for a 543-acre area in the vicinity of Chama Basin is specifically in place to prevent winter recreation use conflicts.

Under alternative B, 58,669 acres of recommended wilderness would also be unsuitable for motorized over-snow vehicle use. Under alternative D, all special interest areas would be unsuitable for motorized over-snow vehicle use. Additional unsuitable areas under alternative D are: backcountry, congressionally designated trails, and 284,853 acres of recommended wilderness. Alternative C does not have any recommended wilderness[hellip]"

Third, Pages 54-57 provide charts showing the activities, including over-snow vehicle travel, that are allowed in each Management Area for each of the alternatives.

Fourth, the FEIS provides maps showing geographic depictions of motorized over-snow vehicle suitability for each alternative.

Fifth, in a response to a comment, the FEIS states: "Areas suitable for over-snow vehicle use include restrictions that minimize environmental damage and conflicts while providing for the protection of endangered species and winter habitat for deer and elk" (FEIS Volume 2 at 106) [Emphasis added].

The charts and text in the FEIS and the plan components in the revised plan are not consistent with one another in how they characterize OSV suitiability, making it difficult to understand what exactly the FEIS is analzying. For instance,

* Table 9 on page 56 (showing allowable uses by Management Area for Modified B) shows OSV travel is allowable in special interest areas and wild and scenic river eligible segments. However, the FEIS states "Areas unsuitable for motorized over-snow vehicle use across action alternatives include eligible wild, scenic, and recreational rivers" and some special interest areas.
* The revised plan at 68 does not include a plan component that Wilderness is unsuitable for motorized or mechanized travel. (Note that Recommended Wilderness Management Area has this plan component, see:

SUIT-MA 1.1a-5).
* The revised plan does not include a plan component related to suitability of Special Interest Areas (Management Area 4.1) for OSV use. See page 72.
* The revised plan does not include plan components related to suitability of eligible wild and scenic river segments (Management Area 4.34) for OSV use even though the FEIS states that eligible scenic and recreational rivers are unsuitable for OSV use. It also more generally does not include plan components disallowing OSV use in wild and scenic eligible river segments.

NEPA requires that the Forest Service take a hard look at the effects of the alternatives and that there be a rational nexus between the analysis and the decision. While the FEIS states in two places that it considered environmental factors and recreational preferences and conflicts in assigning OSV suitability, we cannot find any evidence of these analyses or how the analyses led to the suitability designations described in the FEIS and reflected in the revised plan. As far as we can tell, the Forest Service assigned OSV suitability by Management Area and did not apply more nuanced criteria. The result is that large swaths of the forest are found suitable for OSVs regardless of terrain, recreational preferences, recreational conflict, snowfall, habitat, wildlife connectivity, etc. The absence of a hard look at areas suitable and unsuitable for OSVs and a rational basis for deciding suitability is a violation of NEPA.

This issue was raised in the following comment letters: Scoping letter dated October 28, 2016 from The Wilderness Society, pages 45-50; and letter dated December 22, 2017 the Draft EIS and Plan from Rocky Smith et al at 148 to 160.

Recommended Improvement: The RGNF must revise the FEIS to include a detailed analysis of places suitable and unsuitable for OSV use considering relevant resource (e.g., wildlife disturbance, wildlife connectivity, snowfall, climate change, soils, vegetation) and social (e.g., recreational conflicts, preferences and use patterns) factors. The RGNF must reconcile differences between the FEIS and the revised plan so that the FEIS accurately analyzes the management direction set forth in the revised plan and other alternatives. The RGNF must explain how it arrived at its final suitability findings.

Objection Point: The FEIS does not consider a range of reasonable alternatives for over-snow motorized vehicle (OSV) management, including an alternative submitted by conservation organizations, in violation of NEPA.

The analysis of alternatives under NEPA is the "heart" of an EIS. 40 CFR [sect] 1502.14. The Forest Service is required to "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." 40 CFR [sect] 1502.14. Reasonable alternatives are those that are viable, feasible, meet the stated goals of the project, or are reasonably related to the purposes of the project.

The Wilderness Society in its scoping comments proposed a detailed "framework for management of OSV use and subsequent implementation-level winter travel planning." See The Wilderness Society's scoping letter submitted October 28, 2016, pages 49-50.[9] The Wilderness Society's proposed OSV framework alternative included:

* An objective that implementation-level subpart C planning will be completed within three years of forest plan approval;
* A standard setting a minimum snow depth of 18 inches for cross-country OSV travel, consistent with the best available scientific information;
* Suitability determinations for OSV use that address both legal suitability and practical suitability based on terrain, snowpack, wildlife habitat, and other conditions that impact OSV travel;

* Winter-specific ROS classifications; and
* Clear statements that subsequent area and route designations will be consistent with suitability determinations and winter ROS classifications, but that all suitable, motorized areas will not necessarily be open to OSV use; instead, the forests will designate discrete open areas and trails within those areas that are located to minimize resource impacts and conflicts with other recreational uses.

The proposed OSV Framework alternative was reasonable; it proposed specific plan components designed to meet the stated purpose and need for the plan revision[10] and it was firmly grounded in regulatory and policy direction and supported by best available science.

The FEIS failed to analyze the proposed OSV framework alternative or provide a reasoned explanation for not analyzing it. The final action alternatives, which do not vary in regard to plan direction, barely address winter recreation and certainly do not encompass the proposed OSV Framework. It includes one plan component restricting OSVs in big game winter range from December 1 to April 15 and snow compaction restrictions in lynx habitat.[11] The FEIS alternatives also include winter suitability (See FEIS Volume 1 at 305-306), although the suitability evaluation is not conducted in the way suggested in our OSV Framework proposal and the basis for the suitability finding is not supported by a reasoned analysis. See the preceding objection point.

The failure to include our alternative in the range of alternatives or to explain why it was eliminated from more detailed study, and to provide a range of reasonable alternatives, is a violation of NEPA.

This issue was raised in the following comment letters: Scoping letter dated October 28, 2016 from The Wilderness Society, pages 45-50; Letter on Draft EIS and Plan submitted by Defenders of Wildlife et al on December 29, 2017 at 148-160.

Recommended Improvement: Revise the FEIS to provide a range of alternatives for managing sustainable over-snow recreation. Include an alternative that reflects the OSV Framework alternative. Revise and reissue the Record of Decision accordingly.

Objection Point: The FEIS does not consider a range of reasonable alternatives for road system management, including an alternative submitted by conservation organizations, in violation of NEPA.

The analysis of alternatives under NEPA is the "heart" of an EIS. 40 CFR [sect] 1502.14. The Forest Service is required to "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." 40 CFR [sect] 1502.14. Reasonable alternatives are those that are viable, feasible, meet the stated goals of the project, or are reasonably related to the purposes of the project.

The Wilderness Society in its scoping comments proposed a transportation management alternative that included a detailed suite of plan components. See The Wilderness Society's scoping letter submitted October 28, 2016, pages 40-44; also see DEIS comment letter submitted by Defenders of Wildlife and The Wilderness Society, pages 61-64. The proposed transportation alternative was reasonable; it proposed an integrated set of plan components designed to meet the stated Need for Change (B5: "Revise the current plan to include management direction that ensures sustainable infrastructure related to recreation, forest health, and habitat connectivity"), and it was firmly grounded in regulatory and policy direction and supported by best available science.

The FEIS does not acknowledge or analyze the proposed transportation alternative (e.g., the section at 46 on alternatives considered but eliminated from detailed study does not mention a proposed transportation alternative). It also does not provide a range of alternatives relative to transportation management (FEIS at 279)

("No alternative proposes changing the current road system.").

The failure to include our alternative in the range of alternatives or to explain why it was eliminated from more detailed study, and to provide a range of reasonable alternatives, is a violation of NEPA.

This issue was raised in the following comment letters: Scoping letter dated October 28, 2016 from The Wilderness Society, pages 31-45; Letter on Draft EIS and Plan submitted by Defenders of Wildlife et al on December 29, 2017 at 61-64.

Recommended Improvement: Revise the FEIS to provide a range of alternatives for managing the road system. Include an alternative that reflects our proposed transportation management alternative. Revise and reissue the Record of Decision accordingly.

Objection Point: The Forest Service has failed to take a hard look at the impacts of the transportation system on forest resources and sustainability.

The Forest Service is required to take a hard look at the effects of the alternatives. This is so the agency and the public can understand and compare the environmental consequences of the various alternatives and make decisions accordingly.

Related to the management of the road system, the FEIS states that the alternatives are all the same (FEIS at 279). It also asserts that because "there are no proposed changes to the roads and road maintenance program, there are no direct or indirect effects" (Id). The FEIS does not include an effects analysis related to road management direction.

Factually, the statement that all the alternatives are the same is incorrect. Alternative A is substantively different from the action alternatives. Alternative A, the no action alternative, is the existing 1996 Land and Resource Management Plan. Road related direction, including standards and guidelines, that differ from those proposed in the action alternatives can be found on pages I-5, III-39-40, II-3, IV-9, IV-13, IV-17, and IV-31. While the 1996 Land and Resource Management Plan contains multiple pages of of standards and guidelines related to road management, the revised Land Management Plan contains no standards and guidelines related to road management. Also note that the FEIS (at 276) acknowledges that the alternatives vary relative to roads contradicting its later claim that the alternatives are all same ("Differences among alternatives are based on limitations and desired conditions in the alternatives that would guide future site-specific decisions about roads and access.").

In addition to not providing a discussion on effects, the information that the FEIS provides on the road system is woefully inadequate. The only information it provides is a breakdown of the RGNF's road system by maintenance level (FEIS at 277). In contrast, we provided extensive relevant information on the impacts of roads including a comprehensive review of the scientific literature in both scoping and comments on the DEIS and draft plan (See, e.g., Letter submitted by The Wilderness Society et al on April 13, 2015 at 18-32; also see comment letter on the DEIS and draft plan submitted by Defenders of Wildlife et al on December 29, 2017 at 52-54; and comment letter on the Draft Assessment Chapter 11 submitted by The Wilderness Society and Defenders of Wildlife on April 23, 2016). In addition to providing extensive information, we also pointed out the gaping deficiencies in the Draft EIS' discussion on roads and pointed to specific missing information (See Defenders of Wildlife et al comment letter on Draft EIS and draft plan, supra, at 64-66).

The complete absence of an effects analysis is the epitome of failing to take a hard look. The RGNF violated NEPA when it failed to take a hard look at the impacts related to the road system and its management.

This issue was raised in the following comment letters: Letter submitted by The Wilderness Society et al on April 13, 2015 at 18-32; comment letter on the DEIS and draft plan submitted by Defenders of Wildlife et al on December 29, 2017 at 52-54 and 64-66; comment letter on the Draft Assessment Chapter 11 submitted by The Wilderness Society and Defenders of Wildlife on April 23, 2016; scoping letter dated October 28, 2016 from The Wilderness Society, pages 39-40.

Recommended Improvement: Revise the FEIS so that it includes a robust discussion the road system and its impacts. Revise and reissue the Record of Decision accordingly.

Objection Point: The DEIS alternatives do not satisfy the purpose and need for the proposed action or address the Need for Change.

The FEIS states that the purpose and need for the plan revision "includes revising the current plan to incorporate new policies, priorities, information from monitoring reports, and scientific research as required under the 2012 Planning Rule[hellip]. Most importantly, the purpose and need is to address the identified needs to change the existing plan that was presented to the public in March 2016." This final Need for Change document included the following: "B5: Revise the current plan to include management direction that ensures sustainable infrastructure related to recreation, forest health, and habitat connectivity."

The revised plan's direction for the management of the infrastructure, including the road system, consists of one plan component. It is a desired condition (DC) statement: DC-INFR-1 -- The transportation system is commensurate with resource management needs, public safety, emergency access, and public access to use and enjoy the Forest. Road restrictions occur for resource management activities that protect, maintain, and enhance habitat, soil, and water objectives, among other values. Desired conditions (DC) do not restrict or compel actions but rather express a vision. Future projects are not required to advance the vision and instead simply must not foreclose the opportunity to achieve the vision over the long term. 36 CFR 219.15(d)(1). In other words, desired condition statements will alone not change the status quo.

The planning record is clear that the RGNF's road system is anything but sustainable, and without deliberate action will only further decline with implications to natural resources and safety.[12],[13] The revised plan's one plan component, which does not call for any specific actions or impose constraints, is hopelessly inadequate to achieve the stated need to "ensure sustainable infrastructure related to recreation, forest health, and habitat connectivity." Failure for alternatives to meet the articulated purpose and need is a violation of NEPA.

This issue was raised in the following comment letters: Comment letter on the DEIS and draft plan submitted by Defenders of Wildlife et al submitted on December 29, 2017 at 51-63; letter submitted by The Wilderness Society et al on April 13, 2015 at 18-32; scoping letter dated October 28, 2016 from The Wilderness Society, pages 31-45.

Recommended Improvement: Revise the FEIS to ensure that the action alternatives meet the articulated purpose and need for the plan revision - i.e., "ensur[ing] sustainable infrastructure related to recreation, forest health, and habitat connectivity." Revise and reissue the Record of Decision accordingly.

NEPA AND AT-RISK SPECIES

Objection Point: The FEIS fails to take a hard look at the impacts of the plan components on at-risk species and the ecological conditions necessary for their recovery, conservation, and viability, in violation of NEPA.

A national forest or grassland management plan revision process must be integrated with the procedures outlined in NEPA, and an EIS must be prepared as part of the process. 36 CFR 219.5(a)(2)(i).

Management plans propose a program of projects and activities over the life of the plan, which is usually at least 15 years. These projects and activities will have effects on at-risk species. In order to contribute to the recovery of threatened and endangered species, conserve species proposed or candidates for listing under the ESA, and maintain the viability of species of conservation concern, a plan must have significant beneficial effects and minimize adverse effects to the greatest extent possible. Adverse impacts of forest uses on at-risk species addressed by the plan must also be disclosed in the EIS. The effects analysis must be more than a subjective, qualitative, and comparative estimation[mdash]it requires in-depth analyses of significant issues, including species viability requirements.

Note that under the CEQ Regulations governing application of NEPA, agencies must, "to the fullest extent possible":

Use all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment. (40 CFR 1500.2(f))

Nowhere is this mandate more important than with at-risk species, for which impacts from human uses can drive them closer to extinction, where recovery might become impossible. A full disclosure of the impacts on these species is critical to ensuring that measures can be applied and management can be directed to facilitate their maintenance and recovery on the landscape.

Thus the EIS must properly characterize what the plan components direct the Forest to do. The plan components comprise the "action" that must be analyzed. The analysis must detail how specific plan components affect each ecological condition needed by each at-risk species. This requires an evaluation of both plan components that are directly related to at-risk species and the ecological conditions upon which they depend and also plan components of the multiple uses that may adversely affect the species and/or the ecological conditions they depend on, such as vegetation management, livestock grazing, recreation, roads and other infrastructure, and mining. The FEIS for the proposed RGNF Plan completely fails in this regard. It is impossible to see how the RGNF can meet its NEPA obligations without producing an EIS that analyzes the effects of the desired conditions, objectives, standards, and guidelines proposed in the plan.

Recommended Improvement: Issue a supplemental EIS for public comment that comprehensively analyzes the effects of the plan components on at-risk species and the conditions necessary for the recovery of threatened and endangered species, conservation of federally proposed or candidate species, and viability of species of conservation concern.

Objection Point. The FEIS fails to analyze effects on the Uncompahgre fritillary butterfly and southwestern willow flycatcher of not retaining applicable standards from the 1996 land and resource management plan in the Plan, in violation of NEPA.

There is no evidence among the RGNF's planning documents that the Forest seriously considered whether the 1996 LRMP plan components needed to change in relation to the UFB and southwestern willow flycatcher.

The 1996 LRMP include the following standards that pertain to the Uncompahgre fritillary butterfly and its habitat,

though there may be others.

1996 Wildlife Standard 13. No ground-disturbing activity shall be allowed in potential Uncompahgre fritillary butterfly habitat unless a survey is conducted to determine the existence of the species. Ground-disturbing activities include trail building, livestock driveways, or domestic sheep bedding grounds. The usual grazing associated with livestock in the area is not considered ground disturbing. Potential habitat definitions and survey protocols are found in the Uncompahgre Fritillary ButterflyRecovery Plan.

1996 Wildlife Standard 14. If any new Uncompahgre fritillary butterfly populations are discovered, a "No Butterfly Collecting" regulation shall be imposed on the area.

The 1996 LRMP included the following standards and guidelines that pertain to southwestern willow flycatcher habitat, though there are likely others.

* Hydrologic Function: 2 standards, 4 guidelines
* Riparian Areas: 6 standards, 26 guidelines
* Wildlife: Standard 2, Standard 7, Standard 10

These standards and guidelines could offer a higher level of protection to riparian habitat than plan components or offer protections not included in the Plan. For example,

* Riparian Standard 1. In the water influence zone (WIZ) next to perennial and intermittent streams, lakes, and wetlands, allow only those land treatments that maintain or improve long-term stream health.
* Riparian Guideline 1.5. Keep stock tanks, salt supplements, and similar features out of the WIZ if feasible and out of riparian areas always. Keep stock driveways out of the WIZ except to cross at designated points. Harden water gaps and designated stock crossings where needed and feasible.
* Riparian Guideline 1.7. Avoid season-long grazing in riparian areas. Apply short-duration spring grazing, as feasible, to help regrowth and reduce utilization of willows. Control grazing-period length in spring-use riparian pastures to minimize utilization of regrowth; this is normally 20-30 days.
* Riparian Guideline 1.9. Maintain the extent of stable banks in each stream reach at 80% or more of reference conditions. Limit cumulative stream bank alteration (soil trampled or exposed) at any time to 20-25% of any stream reach.
* Wildlife Standard 7. Areas should be closed to activities to avoid disturbing Threatened, Endangered, and Proposed species during breeding, young rearing, or at other times critical to survival. Exceptions may occur when individuals are adapted to human activity, or the activities are not considered a threat.

The lack of a comparative analysis of these, and possibly other related, plan components from the 1996 LRMP and the applicable plan components from the Proposed Final Plan has not been conducted in violation of NEPA. Moreover, absent such an analysis, the "not likely to adversely affect" finding is unsupported and arbitrary because it fails to address an important aspect of the problem. The assessment must answer: are there adverse effects of transitioning to a management plan that is potentially less protective of suitable and potential habitat for the southwestern willow flycatcher and what are these effects? Because the Plan fails to meet the 2012 Planning Rule's "contribute to recovery" requirement (36 C.F.R. 219.9(b)(1)), this is particularly important. It may be that the 1996 LRMP includes standards and guidelines that should be carried forward in the final plan and/or be revised to conform to plan component definitions under requirement 36 C.F.R. 219.7(e).

We raised the issue of the need to consider the no action alternative in previous comments: Defenders et al. 2017.

Recommended Improvement: Conduct an effects analysis that compares the no action alternative plan components to the Plan components that are applicable to protecting and recovering Uncompahgre fritiallary

butterfly and southwestern willow flycatcher potential and suitable habitat.

Objection Point: The FEIS fails to incorporate the 2018 Lynx Analysis Unit mapping into its environmental effects analysis in violation of NEPA.

After the submission of our 2017 Draft Plan and DEIS comments, the Forest Service updated "[h]abitat baseline conditions involving lynx habitat on the Forest[hellip]in February 2018, including the delineating of Lynx Analysis Units" (FEIS II at 205). However, the FEIS does not appear to incorporate this information into its analysis. Indeed, this process, its results, its impacts on the environmental effects analysis for lynx, or the resulting impacts from the Plan direction related to lynx (including SRLA plan components) based on the new LAU mapping are not mentioned, disclosed, discussed, or analyzed in any way in the FEIS.

In fact, the FEIS actually relies on outdated information for its environmental effects analysis. For example, Table 55 in the FEIS, "Miles of estimated designated and groomed winter routes on the Forest" notes that the figures in it related to miles of winter trails and routes in lynx habitat within LAUs, and between LAUs, are based on information in the 2007 SRLA FEIS, and presumably the LAUs as they existed at that time. At a minimum, this table needs to be updated to reflect the mileage of winter trails and routes through LAUs based on the February 2018 delineation of LAUs on the Forest.

Our Draft Plan and DEIS comments did, however, ask the Forest Service to provide LAU maps, as well as information about the LAUs themselves, "including all information that is reported to the USFWS about each LAU under the SRLA's reporting requirements" (Smith et al. 2017 at 83-84). We further asked the Forest to disclose "[t]he size of the LAUs, their current condition, how much habitat is suitable, how much management each LAU has seen, and any other information that the Forest has on LAUs[hellip]along with a discussion of potential effects from implementation of the revised Forest Plan on the LAUs" (Smith et al. 2017 at 84). The Forest service failed to do this in violation of NEPA.

The Forest Service's failure to update its effects analysis based on the February 2018 process, or otherwise disclose the results of this process and resulting effects, violates NEPA's unambiguous requirement that the agency disclose and analyze the effects of its proposed actions, including disclosing baseline conditions, to ensure that the public has an opportunity to appropriately comment, and further ensure public officials have complete information before making decisions. 42 U.S.C. [sect][sect] 4332(2)(C)(i)-(v); 40 CFR [sect][sect] 1502.14(a), 1502.16, 1508.7, 1508.8, 1508.14.

Suggested Improvement: Revise the FEIS to fix its reliance on outdated information, and provide the requisite analysis related to LAUs and impacts to them as a result of implementation of the revised plan.

THE ENDANGERED SPECIES ACT

Not only did the Forest Service violate its mandatory obligations under the Planning Rule and NEPA, it also violated its ESA section 7(a)(1) and 7(a)(2) obligations as well. ESA section 7(a)(1) requires the Forest Service, like all federal agencies, to "utilize [its] authorities in furtherance of the purposes of [the ESA] by carrying out programs for the conservation of endangered species and threatened species." 16 U.S.C. [sect] 1536(a)(1)). Yet nothing in the proposed Final Plan furthers the ESA's conservation goals for the listed species affected by the Plan. Indeed, the proposed Final Plan lacks any plan direction that could promote recovery of these species. Relatedly, and perhaps as a result of the lack of substantive direction, the Biological Assessment provides no discernable analysis regarding the Plan's impacts on recovery or attempted compliance with section 7(a)(1).

ESA section 7(a)(2) requires the Forest Service to ensure that its actions are not "likely to jeopardize the continued existence" of any listed species or "result in the destruction or adverse modification of" critical habitat. 16 U.S.C. [sect] 1536(a)(2). To ensure compliance with these prohibitions, the Forest Service must engage in a consultation with FWS upon proposing to authorize, fund, or carry out any "agency action" that "may affect" a species or its critical habitat. Id.; 50 C.F.R. [sect] 402.14(a). The Forest Service's findings in the Biological Assessment for the consultation on the proposed Final Plan fall far short of ESAstandards and are arbitrary. For example, the Forest Service's "no effect" findings apply the wrong statutory standard and are unsupported. Similarly, the findings in the Biological Assessment for the species the agency consulted on are unsupported by, and contrary to, the facts in the BA. Moreover, the Forest Service relied on forest plan provisions that in some cases violate Planning Rule requirements, in others fail to adequately address the recognized threats to listed species, and in still others do not even exist. The Biological Assessment also fails to evaluate several significant impacts that will be caused by the proposed Final Plan, relies in part on speculation about anticipated benefits to the species from the proposed Final Plan, and in some respects is contrary to the best available science. For these and other reasons, the Forest Service failed to comply with its ESA section 7(a)(2) procedural obligations for the proposed Final Plan. As such, if the Forest Service adopts the proposed Final Plan as is, the agency will violate its substantive ESA section 7(a)(2) duty to avoid jeopardizing any listed species.

OPTIONAL PLAN CONTENT

Objection Point: The Plan cannot substitute option plan content, such as management approaches, for plan comonponents to provide management direction necessary to provide ecological conditions and species-specific management direction that applies to at-risk species.

The plan cannot substitute "management approaches or strategies," referred to as "optional content in the plan" by 36 CFR 219.7(f)(2), for plan components by including substantive plan provisions in optional content. Management approaches must not be written like a plan component (FSH 1909.12, Ch. 20, 22.4). The Planning Rule clearly states that it is plan components that must provide the necessary ecological conditions for at-risk species (36 CFR 219.7(d)(3)). Optional plan content carries no legal weight and is unenforceable (projects need not be consistent with them). Justification for not including plan components should be sought in such cases. Plan components are limited to optional goals, and required desired conditions, objectives, standards, guidelines and suitability of lands. Information may be included in a plan with "management approaches or strategies (36 CFR 219.7(f)(2))," but these are not plan components and cannot be relied on to meet the diversity requirement.

We raised this issue in previous comments: Smith et al. 2017 and Defenders et al. 2017.

Recommended Improvement: The Plan must not rely on management approaches where mandatory plan components are necessary.

THE SPRUCE HOLE/OSIER/TOLTEC AREA

During the scoping period on the Rio Grande National Forest (RGNF) management plan revision, a coalition of organizations recommended that the Forest designate the Spruce Hole/Osier/Toltec Landscape Connectivity Zoological Area as a Special Interest Area (SIA).

See our scoping comments of October 28, 2016 at p. 10, which references Appendix 7 of an alternative we submitted with those comments. This Appendix describes in detail our proposals for designating SIAs, including the one at issue here.

The proposed designation occurs in the southern most reaches of the Forest in the Conejos Peak Ranger District and borders the state of New Mexico as well as the Carson National Forest. See map below.

The Rio Grande National Forest (RGNF) considered the proposed SIA in Alternative D of the draft revised management plan. However, the RGNF declined to designate the Spruce Hole/Osier/Toltec region as an SIA in the Forest's proposed Land Management Plan (Plan), issued in August 2019. Yet, there is continued public interest in the RGNF designating this SIA.

Not only would protecting the Spruce Hole/Osier/Toltec SIA promote wildlife habitat connectivity, the designation is also consistent with the purposes of the 2012 Planning Rule. For example, the designation and appropriate management direction could potentially help:

[bull] Affirm the Forest's distinctive role and contribution to habitat connectivity within the broader landscape[mdash]the Upper Rio Grande region[mdash]consistent with 36 CFR 219.2(b) and 36 CFR 219.7(f)(1)(ii).

[bull] Maintain or restore habitat connectivity for mule deer, elk, pronghorn, Rocky Mountain bighorn sheep, Canada lynx, mountain lions, black bears, and other species, consistent with 36 CFR 219.8(a)(1) and 36 CFR 219.9.

[bull] Maintain or restore ecological connectivity in riparian areas, consistent with 36 CFR 219.8(a)(3)(i)(E).

[bull] Provide an opportunity for broader-scale monitoring strategies across the larger Upper Rio Grande region, consistent with 36 CFR 219.12(a)(3) and 36 CFR 219.12(b).

We request that the Forest Supervisor reconsider the benefits of designating the Spruce Hole/Osier/Toltec SIA.

In initially reviewing the proposed SIA designation, the planning documents indicate that the RGNF overlooked some key elements of the decisionmaking process. For example, the proposal's management direction was not considered in any of the alternatives. The effects analysis did not assess the beneficial impacts of the designation. These objection points are detailed below.

Objection Point: The Forest Service should not have declined to designate the Spruce Hole/Osier/Toltec Special Interest Area, which is a science-based, stakeholder proposed designation that supports the collaborative spirit and principles of the planning rule.

Under the 2012 Planning Rule, the forest and grassland management plan revision is intended to be a collaborative process with the public. A key purpose and need for the Planning Rule included:

5. Provide for a transparent, collaborative process that allows effective public participation. See 77 Fed. Reg. 21164 (See also 21173 and 21176; 36 CFR 219.4)

Enabling effective, meaningful public participation is embodied in Planning Rule requirements in 36 CFR 219.4. The SIA recommendation represents a collaborative effort that reflects guiding principles from the Forest Service's planning directives intended to:

* Encourage public commitment to the planning process. FSH 1909.12, ch. 40, 41(1); the proposal of the Spruce Hole/Osier/Toltec Special Interest Area was developed by stakeholders committed to this planning process.
* Provide information to the public and seek suggestions as well as feedback on potential issues and concerns. FSH 1909.12, ch. 40, 41(Exhibit 01).

* Help the Responsible Official facilitate problem-solving and identification of creative solutions as well as constructive dialogue, debate, and deliberation. FSH 1909.12, ch. 40, 41.1(5).
* Public participation opportunities should be designed to allow for input from a broad range of people who are interested in land management planning for a National Forest unit -- local, regional, and national. FSH 1909.12, ch. 40, 41.1(8).
* Help in the development of plan components FSH 1909.12, ch. 40, 42.12(b).

Recommended Improvement. Reconsider designating the Spruce Hole/Osier/Toltec Special Interest Area. Work with stakeholders to develop collaborative, cooperative management direction during the objection process.

Objection Point: In failing to designate the Spruce Hole/Osier/Toltec Special Interest Area, the RGNF has missed an opportunity to maintain or restore wildlife habitat connectivity, consistent with 36 CFR 219.8(a)(1).

As presented in the initial proposal, designating and providing management direction for the Spruce Hole/Osier/Toltec SIA would have provided crucial protected and connected habitat for large game species, large carnivores, fish, and other wildlife and plant species.

The proposed connectivity zoological area is a key movement path for wide-ranging species between southern Colorado and Northern New Mexico. Natural Heritage New Mexico identified this area as the northern reach of the Northern Taos Plateau Wildlife Movement Focal Area that spans through the RGNF, Carson National Forest, and the Rio Grande del Norte National Monument that is managed by the Bureau of Land Management. Mule deer and elk migrate through the area, and Rocky Mountain bighorn sheep make seasonal shifts to and from summering and wintering habitat there.

Protecting remaining intact habitat large enough to allow freedom of movement for these iconic species has never been more important. Habitat loss, deterioration, and fragmentation have caused Colorado's mule deer population to decline. This is cause for concern, because significant numbers of families, particularly in the local area, rely on the species for food. Disease and habitat loss have put Colorado's bighorn population in jeopardy. Designation of the corridor as a Wildlife Connectivity Zoological Area would help maintain and restore ecological conditions necessary for a variety of species to persist in the Forest and beyond the plan area.

Canada lynx have used this corridor since they were reintroduced by Colorado Parks and Wildlife in 1999. Having an established population of lynx back in Colorado is a source of pride for all wildlife lovers in the state. Protecting linkages for lynx is incredibly important for their long-term viability, and especially now following the large spruce bark beetle outbreak on the forest. Lynx are stressed by climate change, timber harvesting, roads, and winter recreation. Establishing the corridor will reduce some of these stresses on lynx.

The Response to Comments (FEIS Appendix D) responds to our request to designate the SIA as follows:

The forest plan does not recommend Spruce Hole/Osier/Toltec as a special interest area for a number of reasons. First, the wildlife values represented by the Spruce Hole/Osier/Toltec area are adequately protected through sections of the plan dealing with species of conservation concern; federally listed, proposed, and candidate species; and plants and wildlife. Goal 1 of the forest plan, along with multiple plan components throughout these sections, provides direction that will direct project-level planning and analysis to consider impacts on habitat connectivity. The second reason that the Spruce Hole/Osier/Toltec area was not included in the forest plan is because the creation of additional special interest areas would increase the complexity of management areas in contradiction of Revision Topic 3, which was included in the need for change. (FEIS, vol. II at 135)

As is argued elsewhere in this objection (sections IX and X), proposed plan components for at-risk species are completely absent, except for lynx, where they are inadequate and likely harmful. Other plan components for wildlife and connectivity, to the extent they even exist for the latter, are also inadequate. Thus the wildlife habitat and connectivity values of this SIA would not be protected under the current version of the final revised plan. (See further argument in subsection E below.) Adding the requested SIA would not increase plan complexity by much, and as argued in this objection section, such designation is needed to ensure the maintenance and protection of very important values.

Recommended Improvement. Designate the Spruce Hole/Osier/Toltec Special Interest Area in the Plan.

Objection Point: In not designating the Spruce Hole/Osier/Toltec Special Interest Area, the RGNF has failed to take advantage of opportunities to coordinate with other federal entities engaged in management planning processes and take an and the "all lands approach" to planning.

The proposed SIA corridor connects to a similar proposal - called the San Antonio Management Area (SAMA) -- made by New Mexico citizens to the Carson National Forest as part of its forest plan revision process. The proposal was based on the findings from the New Mexico Natural Heritage Program's Wildlife Doorways report which found that this area of the Carson National Forest, and the area to the north on the Rio Grande National Forest, is a hotspot for wildlife movement. Tribes, sporting groups, elected officials, and conservationists have endorsed establishing protections to maintain and restore connectivity for wildlife in the Upper Rio Grande region. To be responsive to public comment and best available science, the Carson National Forest is considering establishing the SAMA in several of the forest plan alternatives, including the preferred alternative. Through an "all lands approach" to coordination, the Forest Service and partners had a unique and inspiring opportunity to establish a landscape-scale linkage that could benefit wildlife on into the future.

The 100,000-acre SAMA is designed to conserve important habitat for several species. The SAMA includes several plan components that will help to maintain and restore connectivity. The Wildlife Doorways report, cited above, finds that several wildlife species are moving across this landscape between the Rio Grande and Carson National Forests. Establishing the SAMA on the Carson National Forest will help provide for wildlife movement by maintaining and restoring connectivity, but the success of the SAMA may be limited if similar management direction is not established on the Rio Grande. The Rio Grande's refusal to establish the Spruce Hole/Osier/Toltec Special Interest Area is a missed opportunity to ensure an important landscape connection is maintained. It's also a missed opportunity to demonstrate that the Forest Service is capable of collaborating with the public and adjacent land managers. It also reflects poorly on the Forest Service's ability to coordinate with other units within its own agency and deliver on the frequently touted need to take an all-lands approach to planning.

Suggested Improvement. Reconsider designating the Spruce Hole/Osier/Toltec Special Interest Area.

Objection Point: In not designating Spruce Hole/Osier/Toltec Special Interest Area, the RGNF is leaving open the area to the risk of significant oil and gas development, which is a major cause of habitat fragmentation.

It has been documented that the oil and gas potential of the Spruce Hole Area is high. See map of potential for oil and gas on the RGNF, attached as Exhibit 3. Under this Administration's energy dominance agenda, there are no guarantees that this area would be spared if the Forest Service undertook a leasing decision for the forest, or that any leases issued would have sufficient measures to protect the wildlife values within the area. Given that only a relatively small portion of the lands covered by the SIA overlap with a Colorado Roadless Area, the area is

vulnerable to energy development. Establishing the Spruce Hole SIA will help maintain connectivity should a leasing analysis be undertaken, or industry interest expressed for leases in this area in the foreseeable future.

Under the proposed plan, most of the proposed SIA is assigned to MA 5, under which:

A full range of activities is present with an emphasis on the production of commercial wood products. These areas have a high potential for timber growth, and operations focus on wood production. (Plan at 79)

This emphasis would not ensure that the area's important wildlife values would be protected; in fact, it would probably lead to adverse impacts for wildlife as the plan is implemented over its lifetime.

The strip of land that connects the Rio Grande National Forest to the Carson National Forest is only about 17 miles wide. The Spruce Hole Area is not very big, but it serves an outsized function in terms of connecting this landscape. The lands adjacent to this portion of the Rio Grande are mainly private with some Bureau of Land Management land on the east side.

There are no guarantees that the private land directly adjacent to the Rio Grande will remain intact; it could conceivably be subdivided and further developed (fences, roads, housing, energy exploration and production, etc.). With population growth exploding in Colorado, it is not unreasonable that this land could be developed over the life of the plan. That leaves the RGNF as the backstop for connecting this landscape if population growth and development occur on the adjacent private lands. However, if the Forest Service allows development to occur on its land, it could severely fragment this relatively small, but very important, area.

Why would the Forest Service want to wait until a threat is looming and damage is occurring before deciding to establish direction in the forest plan that would conserve this area? That's crisis management, which is not a desired approach to land management. An important concept to resource management planning is to think ahead regarding how a resource should be managed. If we know there's a place that's a hotspot for connectivity - like the Spruce Hole area - then why not establish management direction to maintain that connection over the life of the plan? Why wait until an area is at risk before taking action?

Recommended Improvement. Reconsider designating the Spruce Hole/Osier/Toltec Special Interest Area.

Objection Point: The RGNF did not take into account the full Spruce Hole/Osier/Toltec Special Interest Area proposal, including recommended plan direction, in any of the alternatives, and this restricted the range of considered alternatives offered to the public.

Below is the recommended management direction outlined in the original SIA proposal:

* Management actions should be driven by the primary need to ensure continued or enhanced habitat connectivity and viability of the zoological area for wildlife movement.
* Activities currently authorized by the agency in this zoological area shall coexist with wildlife movement, migration and dispersal. Changes to current activities and infrastructure may be required if found incompatible with the area's wildlife values.
* Where possible, augment wildlife values through purchase from willing sellers, exchange, transfer or donation of additional acreage of crucial wildlife habitat for their migration, movement and dispersal. Acquired lands are to be managed consistent with the corridor's standards and guidelines.
* Winter, including over-snow vehicle use, and summer recreation activities should conform to best available scientific knowledge for mitigating impacts to at-risk and other sensitive wildlife species.
* Do not authorize new permanent roads within the corridor in order to maintain unfragmented habitat for wildlife

migration and dispersal.
* Establish road and motorized trail density standards within the management area to conform to the best scientific recommendations, generally less than one mile per square mile (Lyon 1979; Van Dyke et al. 1986a, b; Fox 1989; Trombulak and Frissell 2000; Reed et al. 1996; Strittholt and DellaSala 2001; Davidson et al. 1996). Ensure that there will be no net increases in densities above a scientific credible threshold. If these densities do not exist today, the Forest Service will develop a strategy to achieve them.
* All temporary roads are removed and the lands and waters on which they were located are restored to natural conditions within one year of the termination of the purpose for which they were established.
* Decommission and reclaim unauthorized routes and unneeded system roads.
* Establish and implement in a timely manner mitigation standards for existing roads and Highway 17 to facilitate movement of wildlife including a reduction in mortality of wildlife from vehicle collisions (modified from BLM 2012: 2-55). Coordinate with CDOT on planning and projects.
* Limit disturbance footprint resulting from vegetation management activities within the corridor spatially and temporally (e.g., establish maximum width and acres of any one ground disturbance, and limit total acreage of ground disturbance at any one time)
* Minimize fencing for livestock and make all fences wildlife friendly. Coordinate with permittees to identify fencing that is not critical for livestock operations; fencing that is not critical for livestock operations and that is impeding wildlife movement is removed. Any new livestock fencing that is installed should be constructed in a manner that will minimize disruption to wildlife movement, taking into consideration seasonal migration and water resources.
* Preclude the granting of new right-of-ways for energy development that would negatively impact wildlife, their habitat and its connectivity.
* Withdraw the corridor from location and entry under the Mining Law, subject to valid existing rights.
* Access to inholdings must be maintained at no greater than current standards, and reduced or avoided entirely if possible.
* The Connectivity Zoological Area must be discretionary no oil and gas leasing It should be withdrawn from mineral entry.

Recommended Improvement. Work with stakeholders to develop collaborative, cooperative management direction during the objection process.

Objection Point: The Final Environmental Impact Statement fails to take a hard look the ecologically beneficial effects of designating the Spruce Hole/Osier/Toltec Special Interest Area, including recommended management direction.

Had the RGNF chosen Alternative D or incorporated the Spruce Hole/Osier/Toltec SIA into Alternative B modified, the Proposed Action, rather than choosing Alternative B, there would be significant beneficial effects. The failure to sufficiently analyze those impacts violates the National Environmental Policy Act, which requires the Forest Service to take a "hard look" at the environmental consequences of a proposed action, including its direct, indirect, and cumulative effects. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 348 (1989); 42 U.S.C. 4332(2)(C); 40 CFR 1502.16, 1508.7, 1508.8. The required hard look encompasses effects that are "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." 40 CFR 1508.8.

In its description of the SIA, the FEIS states the following,

The special interest area would enhance habitat connectivity for large game species including mule deer, elk, pronghorn, and Rocky Mountain bighorn sheep as well as for large carnivores such as Canada lynx, mountain

lions, and black bears. It would also enhance ecosystem integrity to maintain habitat for several species of conservation concern and federally protected species, including boreal owl, peregrine falcon, Brewer's sparrow, flammulated owl, Rio Grande cutthroat trout, Gunnison's prairie dog; Ripley's milkvetch, slender cliffbrake, Plumber's cliff fern, Colorado divide whitlow grass, and flowered gilia; federally protected species such as Mexican spotted owl, southwestern willow flycatcher, yellow-billed cuckoo, and New Mexico meadow jumping mouse; migratory birds including ferruginous hawks, black swifts, sage sparrows, burrowing owls, Cassin's finches, Grace's warblers, gray vireos, juniper titmouse, Lewis's woodpeckers, loggerhead shrikes, long-billed curlews, mountain plovers, pinyon jays, and Virginia's warblers.

This area includes three different potential conservation areas recommended by the Colorado Natural Heritage Program (FEIS at 100):

* Portions of Peak Site, Osier Creek, Cascade Creek at Osier, Rito Hondo Creek and Bighorn Creek potential conservation areas.
* The Peak Site PCA has an unranked occurrence of a globally vulnerable bird subspecies, the American peregrine falcon (Falco peregrinus anatum).
* Osier Creek and Cascade Creek at Osier PCAs both contain a good occurrence of a fish that is vulnerable on a global scale, the Rio Grande cutthroat trout (Oncorhynchus clarki virginalis).
* Rito Hondo PCA contains two good occurrences of a plant species vulnerable on a global scale, Ripley's milkvetch (Astragalus ripleyi).
* Bighorn Creek PCA contains a fair occurrence of Ripley's milkvetch (Astragalus ripleyi).

The FEIS offers a very brief discussion of the direct and indirect effects of the proposed special designation under the EIS's alternatives. Unfortunately, the section lacks detail and fails to provide analyses or data to support the conclusions about effects on the at-risk species listed above and their associated ecosystems.

The FEIS touches on the SIA in relation to Canada lynx, stating,

Alternative D, however, includes a significant increase in acreage tied to special interest areas and recommended wilderness areas that include suitable habitat for lynx, including the Spruce Hole/Osier/Toltec and Deep Creek Special Interest Areas. All action alternatives include plan direction from the Southern Rockies Lynx Amendment, however, with revised plan direction specific to Canada lynx in late-successional spruce-fir forests to provide for suitable habitat. Additional special designations would not elevate management direction already required because of the threatened status of the species. (FEIS at 240)

Given that a significant extent of road-building and vegetation management, both threats to lynx, is allowable under the Proposed Final Rule, in the proposed SIA, the management direction included with our SIA proposal would reduce the adverse effects of these forest uses in the area.

Recommened Improvement. Consider a small revision to the EIS and Draft ROD that takes into account the beneficial effects of designation of the Spruce Hole/Osier/Toltec SIA.

CONCLUSION

We have appreciated the opportunity to participate in the RGNF's management plan revision process. We look forward to discussions with Supervisor Dallas and the planning team on ways to reconcile the problems we have raised about the Plan, FEIS, and Draft ROD.

[1] However, the EIS on p. 211 states that: "Species that are not adequately assessed using the coarse-filter approach may require additional species-specific plan components, particularly to help in recovering federally

recognized species or where it may not be possible to maintain ecological conditions that support viable populations of some at-risk species within the plan area. This need may also be associated with circumstances beyond the authority of the Forest Service or due to limitation in the inherent capability of the land. Examples include local species such as the boreal toad, Rocky Mountain bighorn sheep, and several avian and bat species." The Forest clarify if it is indeed making a determination under 36 CFR 219.9(b)(2) that it is not able to meet the requirements under 36 CFR 219.9(b)(1).

[2] The species overviews for at-risk fauna can be found at:

https://www.fs.usda.gov/detail/riogrande/landmanagement/projects/?cid=fseprd534370.

[3] The Planning Rule definition here is: "A desired condition is a description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates."

[4] See Draft Record of Decision at 8, 20.

[5] A benefit would only occur if the created opening enhanced the development of multi-layered stands via regeneration, i.e., contributing to "small gap dynamics". See BA at 26. Salvage logging would create large openings, which would hinder or prevent regeneration, as Engelmann spruce and subalpine fir are shade tolerant and do not regenerate or grow in early years in areas well-exposed to sun. See Alexander, 1987 at 26-30 and section II D of this objection. (Reference for Alexander is there.) Also, salvage logging would damage or destroy any existing understory. See, again, BA at 26.

[6] All of them say "meet the needs of associated species" without specifying what conditions need to be achieved to meet these needs.

[7] The plan also includes DC-REC-1: A variety of enduring recreation opportunities are available across a variety of settings that foster high-quality, year-round developed and dispersed experiences. Development of facilities and travel routes is consistent with the recreation opportunity spectrum class designations. Recreation facilities and programs incorporate universal design concepts and meet current Federal accessibility guidelines unless doing so fundamentally alters the setting or character of the program. While in theory this desired condition statement applies to winter recreation, in reality its effect is minimal given that the recreational opportunity spectrum class designations only apply to summertime recreation. FEIS Volume 1 at 66.

[8] Switalski (2016) provides a robust discussion of the impacts of OSVs to forest resources and the best management practices to address them. We provided the Forest Service a copy of Switalksi's peer-reviewed scientific papers as part of our comments on the DEIS and draft plan. See Switalski, Adam. 2016. Snowmobile Best Management Practices for Forest Service Travel Planning: A Comprehensive Literature Review and Recommendations for Management. Journal of Conservation Planning 12: 1-28.

[9] The request for the OSV Framework was reiterated in the letter submitted on the Draft EIS and Plan by Rocky Smith et al., dated December 22, 2017, pages 148 - 150.

[10] Item A9 in the Need for Change document is "Develop sustainable management direction for current and future recreation uses. The Need for Change document states that "[t]he Initial Proposal will develop plan

components related to sustainable recreation management on the RGNF." Additionally, the Notice of Intent to develop an EIS states that "[u]pdates and modifications to management direction are needed to address suitability of certain areas for particular uses, address access and sustainable recreation and provide for the management of existing and anticipated uses." 81 Fed. Reg. 62707 (September 12, 2016).

[11] The plan also includes DC-REC-1: A variety of enduring recreation opportunities are available across a variety of settings that foster high-quality, year-round developed and dispersed experiences. Development of facilities and travel routes is consistent with the recreation opportunity spectrum class designations. Recreation facilities and programs incorporate universal design concepts and meet current Federal accessibility guidelines unless doing so fundamentally alters the setting or character of the program. While in theory this desired condition statement applies to winter recreation, in reality it does not because the recreational opportunity spectrum class designations only apply to summertime recreation. FEIS Volume 1 at 66.

[12] The Assessment Report's Chapter 11 describes the challenges to achieving a fiscally sustainable roads system, stating that "[hellip]with aging infrastructures and continued budget decreases, maintenance to a desirable standard is difficult. The deferred maintenance backlog will continue to increase and this trend is not sustainable. The deferred maintenance is a safety issue for the public and the employees of the Rio Grande." See Assessment Report Chapter 11, Page 8. Also see see FEIS at 397 (because of budget shortfall, numerous roads will have to be closed affecting access, water quality, etc.), and 185 ("Considering the likely future increase in road use, the probability of incurring additional resource damage and destruction to aquatic, riparian, and wetland ecosystems is relatively high.").

[13] For example, as described in Defenders of Wildlife et al letter submitted December 29, 2017 on the Draft EIS and Draft Plan at 52, the RGNF currently receives under 8% of the funds required to maintain its existing road system. The road maintenance backlog was estimated in 2015 at $33 million with about 10% deemed health and safety critical. The cited source of this information is: USDA Forest Service, 2015b. "Rio Grande National Forest Forest-wide Travel Analysis Process Report." Rio Grande National Forest, October 2015. Report and attachments are at http://www.fs.usda.gov/detailfull/riogrande/landmanagement/projects/?cid=fseprd484850&width=full. Also see: letter from The Wilderness Society et al dated April 13, 2015 at 18-32.