ARGUMENTS IN SUPPORT OF OBJECTION

I. INTRODUCTION

Objectors have participated in the revision process for the Rio Grande National Forest Plan (RGNF) since its inception. We hoped to work with the agency to produce a management plan that we could all accept. Throughout the revision process, we have made clear our belief that reasonably strong plan components are necessary to ensure protection of resources and comply with the Planning Rule. In our comments on the draft plan and draft environmental impact statement (DEIS), dated December 23, 2017, we expressed strong concern that the plan's direction was too weak, and in some cases, non-existent. We made many specific recommendations for strengthening plan components to improve the plan.

We hoped the RGNF would adopt at least some of our recommendations. However, under the guise of avoiding or reducing complexity, it has instead gone backward and issued a final plan that is even more devoid of needed direction for protection of the marvelous resources found on the RGNF. In other words, the RGNF has gone out of its way to ignore our comments. The net result is that the Plan does not provide sufficient direction for protection of many resources, especially at-risk species, sometimes to the point of violating the Planning Rule. Therefore, we must file this objection.

All the points raised in this objection were addressed in previous comments, mainly those of various groups submitted on December 23, 2017 and December 29, 2017.

From here on, "Plan" refers to the 2019 Final Land Management Plan unless otherwise stated. "FEIS" or "I FEIS" refers to volume I of the Final Environmental Impact Statement for the Plan. "II FEIS" refers to volume II, which is FEIS Appendix D, Public Involvement and Response to Comments. "RGNF" refers to the Rio Grande National Forest. "Mgmt Appr" means management approach, as used in the Plan.

II. SOME LANDS FOUND SUITABLE FOR TIMBER PRODUCTION SHOULD NOT BE SUITABLE

Objectors raised this issue beginning on p. 116 of our comments on the draft documents. We find no response in II FEIS to most of the points we raised.

A. ECONOMIC FACTORS MUST BE USED TO HELP DETERMINE TIMBER SUITABILITY.

The National Forest Management Act requires the following:

> In developing land management plans pursuant to this Act, the Secretary shall identify lands within the management area which are not suited for timber production, considering physical, economic, and other pertinent factors, to the extent feasible, as determined by the Secretary.

16 U.S.C. 1604(k).

However, there appears to be no consideration of economic factors in the determination of which lands are suitable for timber production in the final revised plan for the RGNF. See Plan Appendix C, Plan at 153-154. Lands that cannot be commercially cut economically should be removed from the suitable timber base. These lands would include, but not necessarily be limited to, areas with any of the following characteristics: far from the existing road system, long haul distance, small trees, low volume per acre, require helicopter or cable yarding systems, etc. Notably, the Plan admits that such areas are probably not likely to be cut:

> some inclusions in the suitable timber base may not be currently feasible for timber production. This includes areas that are very difficult to reach (either because of distance or because they lack an appropriate transportation system), areas that would require helicopter logging, cable yarding, and areas that are extremely isolated.

Plan at 155.

Failing to find unsuitable those lands that cannot be harvestable economically leads to artificially inflated calculations for sustained yield limit, projected timber sale quantity, and projected wood sale quality.

B. LANDS WITH HIGH MASS MOVEMENT POTENTIAL MUST NOT BE SUITABLE FOR TIMBER PRODUCTION.

According to FEIS p. 149,

> Areas considered unsuitable for timber production include, but are not limited to, wilderness areas, Colorado roadless areas, research natural areas, areas with soil types having "high mass movement potential," areas with no reasonable assurance of adequate restocking, non-forest land, areas with nonindustrial species, riparian areas, wild, scenic, and recreational rivers, special interest areas, buffers along national

> scenic, historic, and recreation trails, backcountry areas, and the ski-based resort areas.

Emphasis added.

However, all alternatives have suitable land that has high erosion potential and mass movement potential:

> Alternative A has the lowest portion of timber-suitable soils on high-erosion-potential rated soils at 33 percent, followed by alternative B at 34 percent and, alternatives B Modified, C and D at 35 percent. Mass movement potential had very little difference among high potentials: alternative A had the highest percentage at 3 percent, with the other alternatives at 2 percent.

FEIS at 175. In fact, "Across all alternatives, acres with a low erosion hazard rating are minimal". Ibid; see also id. at 176. High mass movement potential lands are included in the timber-suitable lands even though "most areas that are high in mass movement potential do not have many trees". FEIS at 176.

C. AREAS WITH POOR REFORESTATION POTENTIAL, FEW OR NO TREES, BIGHORN SHEEP HABITAT OR BIG GAME WINTER RANGE MUST NOT BE SUITABLE FOR TIMBER PRODUCTION.

The preferred alternative B-modified likely includes almost 50,000 acres of lands with poor reforestation potential as timber-suitable. FEIS at 176, 178.[1] This is about 10 percent of the land that may be suitable for the entire Rio Grande National Forest.

Areas with, at best, minimal timber value are considered suitable for timber production in the final plan:

> Two main timber suitability differences in alternative A pertain to the grassland resource production and bighorn sheep management areas. The grassland resource production management areas are being considered suitable for timber production in alternatives B, B Modified, C, and D, which is a change from alternative A, where they are not suitable. In addition, the bighorn sheep management areas in alternative A were merged with winter range to create the big game winter range management

[1] The calculation was not performed for alternative B-modified, but it is expected that the acreage with poor reforestation potential would be similar to alternative C. FEIS at 177.

areas in alternatives B, B Modified, C, and D.[2] As a result, these areas are now considered suitable for timber production.

FEIS at 147.

Bighorn sheep habitat usually has few trees, as the animals rely on sight over long distances as part of their strategy for avoiding predators and humans. According to Beecham et al, 2007:

> [bighorn sheep] current distribution is confined to scattered populations in open or semi-open, often precipitous, terrain characterized by a mix of steep or gentle slopes, broken cliffs, rock outcrops, and canyons and their adjacent river benches and mesa tops…
>
> Slope steepness appears to be a significant feature of Rocky Mountain and California bighorn sheep habitat. Rocky Mountain bighorns use slopes of 36 to 80 percent in Montana and Colorado, while avoiding slopes less than 20 percent…

Id. at 21, citations omitted.

While bighorns will occasionally use open forests, they clearly prefer open areas where there is no vegetation, or low vegetation that allows good sight distance. Id. at 21-22. Areas of bighorn sheep habitat must not be suitable for timber production.

However, under the plan, bighorn sheep habitat that was previously considered unsuitable will not be suitable:

> Two main timber suitability changes from the 1996 Rio Grande Revised Land and Resource Management Plan pertain to the Grassland Resource Production areas (Management Area 6.6) and Bighorn Sheep management areas. The Grassland Resource Production areas are being considered suitable for timber production, a change from the 1996 plan, where they were not suitable. In addition, most, but not all, of the Bighorn Sheep management areas in the 1996 plan were merged into the Big Game Winter Range management area (Management Area 5.41) and are now considered suitable for timber production as a result.

Plan at 155. This is a little confusing because the Plan, which is alternative B-modified, and also alternative C, do not use MA 5.41; instead they use MA 5. (See further discussion below.). But

[2] There are no "big game winter range management areas" in alternatives B-modified and C. Plan Table 4 at 49. Rather, winter range is merged into other management areas. See further discussion below.

the meaning is still clear – most, bighorn sheep habitat is now considered suitable for timber production, even though there probably are not very many trees on this habitat.

Big game winter range provides important cover for big game animals, shielding them from cold wind and wind-driven snow. Commercial logging would reduce or remove this cover.[3] But under the final Plan, logging could even be emphasized in areas of winter range. For alternative B-modified, most of the big game winter range appears to fall under management area 5, which is part of the suitable timber base (Plan at 82, SUIT-MA 5-2). Under this MA, desired conditions call for: "[a] full range of activities is present with an emphasis on the production of commercial wood products", "stand conditions that are conducive to providing a sustained yield of forest products", and "operations [that] focus on wood production". Plan at 79; emphasis added.[4]

Neither bighorn sheep habitat nor big game winter range should be suitable for timber production. Commercial timber harvest should absolutely not be emphasized in big game winter range areas.

Other areas that likely have few if any trees have been found suitable for timber production: 20,211 acres of areas in the 1M and 2S structural stages are considered "may be suitable" and are used in the sustained yield limit calculation, which is "is the amount of timber that can be produced on all lands that may be suitable for timber production". Up to 500 cubic feet per acre per year could be cut from these lands. Plan at 154. However, stage 1M is "natural meadow", and stage 1S is "natural shrubland" (FEIS at 85); these are clearly structural stages that do not have many, if any, trees and are not expected to have them.[5] These lands are chiefly not forested and not expected to become forested; thus, quite obviously, they must not be suitable for timber production.

Another category of land that is timber-suitable is "Other - timber", which has 51,388 acres, from which 1000 cubic feet per acre per year could be harvested. Plan at 154[6]. This "other" category is not further described in the FEIS or Plan.

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[3] These areas could be thinned or otherwise treated non-commercially if needed to ensure retention of cover on, or otherwise improve, winter range. However, commercial harvest would at some point require regeneration harvest, meaning winter range areas that were commercially logged would be too open to provide the cover needed by wintering animals.

[4] Under the current plan, timber harvesting is allowed in big game winter range areas (MA 5.41; see current plan at IV-33), but the emphasis in this MA is on providing winter range, NOT on timber production.

[5] Note that there is a structural stage for lands that are currently open but previously had trees: "1T/2T Grass/Shrub Previously Trees (sic)". FEIS at 85. These areas have canopy cover of 0-10 percent. Assessment 1 and 3 for Terrestrial Ecosystems at 15. Forested land is defined as: "Land at least 10 percent occupied by forest trees of any size, or form[erly] having had such tree cover and not currently developed for nonforest use." Plan at 114; Planning Rule at 36 CFR 219.19.

[6] FEIS Table 38 lists the other category as having 24,003 acres. FEIS at 146

There is even some area of alpine terrain – 130 acres in all alternatives except no action[7] - in the suitable timber base. See FEIS at 119. There should be no land in the alpine in the suitable timber base because alpine areas, by definition, have no trees.

D. STANDS WITH ENGLEMANN SPRUCE OR FORMERLY HAVING THIS TIMBER TYPE SHOULD GENERALLY BE UNSUITABLE FOR TIMBER PRODUCTION.

Spruce beetles have affected an estimated 610,000 acres (FEIS at 82), and in most if not all of these areas, a high percentage of the mature spruce have died, usually 90 percent or more. Id. at 92.[8] These areas are thus devoid of mature spruce, and many of these areas likely have few or no younger spruce because the understories are mostly subalpine fir. Fir is more shade-tolerant than spruce, thus it can grow in total shade under a canopy formed by mature trees better than spruce can.

Subalpine fir is not a commercial species because the wood has poor strength and warps easily when dried. It decays rapidly after age 150, averaging 35 percent of board-foot volume in trees at least 9.5 inches in diameter. Worrall and Nakasone, 2009. It is thus a "nonindustrial species" which makes lands dominated by this species unsuitable for timber production. See Plan at 153.

Regeneration of spruce on the lands affected by spruce bark beetle is uncertain. With the death of the overstory, more sunlight hits the forest floor. This had led to an increased herbaceous and aspen-dominated understory in beetle-affected stands. FEIS at 261. With a thick ground vegetation cover, there may be no places for new seedlings to establish. But even if there are such areas, spruce does not regenerate much or survive well in the early years in open areas, and in any habitat, spruce seedling mortality is quite high, especially in the first year after establishment. See Alexander, 1987, at 26-30.

Planting can be done on some areas, but certainly not on anywhere near all the acres affected by spruce beetle. Also, planted seedlings do not always survive. See Alexander, id., at 29. Given the high altitude and short growing season, any seedlings that do get established will grow very slowly. See Alexander, id., at 71-72.

In short, it may be 150 years or more before any new Englemann spruce trees are old enough to commercially log, and the number of acres that could be available at that age or a later age for such logging is uncertain, due to the uncertainty of spruce regeneration. Nevertheless, 165,756 acres of spruce are considered "may be suitable". Plan at 154. (Inexplicably, on FEIS p. 146, this

[7] No action alternative A has 239 acres of alpine land in the suitable timber base.
[8] A 2017 internal report cited in the Biological Assessment (BA) for the plan revision, September 28, 2018, states that spruce overstory mortality is 100 percent. BA at 17, 38.

figure is 208,878 acres.)[9] Given the uncertainty about how much land will have spruce trees that can be reliably expected to grow into maturity and thus be available for commercial timber harvest, lands formerly dominated by Englemann spruce should not be considered suitable for timber production.

Much more land is "may be suitable" under all the action alternatives versus no action alternative A.[10] This is the case even though some acreage of Englemann spruce hit by spruce bark beetles is likely to be unsuitable for some time, as discussed above. Thus at a minimum, acreage of land suitable for timber should not increase over the level in the 1996 plan, and it should probably decrease considerably with a new analysis properly conducted.

The problems noted above are not cured by reducing the lands that "may be suitable" (499,936 acres) to "Total lands suitable for timber production (timber production is compatible with the desired conditions and objectives established by the plan)" for alternative B-modified (471,896 acres) (FEIS at 147). This difference is small compared with the acres that are considered "may be suitable" that should not be, and in many cases cannot be, suitable.

The inflated suitability acreage affects the calculation of the sustained yield limit as well as the projected timber sale quantity and the projected wood sale quantity. Calculations relying on a considerable acreage of land that is not suitable means that acres that are truly suitable may be too heavily cut in order to meet the sale quantities. Thus the inflated suitability determination may give the public, as well as agency staff and decisionmakers, an unrealistic idea of how much timber could be cut over the life of the revised plan.

E. CONCLUSION AND SUGGESTED IMPROVEMENT:

The timber suitability analysis includes many acres of land as "may be suitable" for timber production that should not, and in some cases, cannot, be suitable. The timber suitability and the sustained yield limit must be recalculated, eliminating areas that have and are expected to have few if any trees and/or have mass movement potential. Big game winter ranges and bighorn sheep habitat must not be suitable. Economic factors affecting possible timber harvest must be considered. The new timber suitability analysis will result in new calculations of the projected timber sale quantity and the projected wood sale quantity.

[9] Acreages of all but one of the other cover types vary between the two tables also.
[10] Under no action alternative A, 320,567 acres would be suitable; under preferred alternative B-modified, the figure is 471,896 acres. FEIS at 147.

III. **THE PLAN MUST CONTAIN ENFORCEABLE DIRECTION FOR WHEN OPENINGS BECOME CLOSED**.

Objectors addressed this issue on p. 106 of their comments on the Draft Plan and DEIS.

The Final Plan, like the draft plan, has a Mgmt Appr outlining when openings no longer are openings. Final Plan at 30. Direction for openings is important, as it will be needed to ensure that the RGNF does not violate the 40-acre maximum opening size prescribed in the Planning Rule. See 36 CFR 219.11(d)(4)[11].

The Plan Rule allows plans to have exceptions to the maximum opening sizes specified in the Rule. Id. at (d)(4)(i). In the Final Plan, one of those exceptions, allowing for created openings larger than 40 acres, is in S-VEG-6, which includes the following: "When the area that is cut does not meet the definition of openings". Plan at 35.

This would allow the responsible official for a project to apply a standard with a flexible definition that is only a Mgmt Appr. In other words, s/he could change the definition to allow the creation of openings of unlimited sizes for any project. If the standard relies on a definition, that definition also needs to be a standard. As a Mgmt Appr, the definition is essentially meaningless, or at least unenforceable, since it is <u>not</u> a plan component.[12] Note that in the current plan, the openings definition is a guideline. See current plan at III-21.

SUGGESTED REMEDY: use the definition for when an opening is closed or a similar one, and make it at least guideline, and preferably a standard, so it can be applied as needed with one or more other Plan standards.

IV. **THE PROPOSED SALVAGE LOGGING IS UNATTAINABLE AND MUST BE REVISED**

Objectors expressed concern about potential level of salvage logging in our Draft Plan/DEIS comments beginning on p. 120.

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[11] We are well aware that the maximum opening size does not apply to openings created in response to "natural catastrophic conditions such as fire, insect and disease attack, or windstorm". 219.11(d)(4(iii). But major salvage logging is likely done for the RGNF. See section IV below. Also, one objective in the plan aims for offering 12,000 CCF per year after year 5, when any salvage logging will be completed. See Plan OBJ-VEG-5, p. 34. Direction on openings is needed for the land that might be used to supply this timber volume.

[12] See the Planning Directives at FSH 1909.12, section 22.4. This section states that optional content, including Mgmt Appr, "<u>must not be labeled or worded in a way that suggests it is a plan component</u>. In addition, optional content must not include, or appear to include, a "to do" list of tasks or actions."

Under proposed alternative B-modified, salvage harvesting in the first six years the plan is effective would be accelerated, with 62,800 CCF (31,400 MBF) authorized annually for years 1-3, and 20,000 CCF (10,000 MBF) authorized each year for years 4 and 5. FEIS at 149.

This is a large amount of timber, likely more than the mills could handle in a short time, even if the wood was sound and the mills desired it. But the wood quality in the beetle-killed trees is already degraded. The Forest Service admits that the spruce-beetle-killed wood is deteriorating rapidly:

> The rate of deterioration of the standing dead spruce has been higher than initially expected. The estimated salvage volume for alternative B Modified incorporated this, with the estimated salvage program lasting only 5 years, rather than 6 to 10 years, and with the estimated salvage volume reduced overall.

II FEIS at 145; see also id. at 172.

> The Timber Processing Capacity and Use by Size Class section addresses the trends and challenges associated with salvage harvest. The analysis notes, "One of the major risks and drivers affecting the continued provision of the Forest's commercial timber supply is the large amount of Engelmann spruce mortality from spruce beetle. Although efforts have been underway to increase the harvest of these trees in recent years, the harvest is sustainable only in the near short to medium term because the larger, and financially viable, dead trees cannot retain their value as saw or house logs indefinitely. The market for lower quality woody biomass such as decayed dead timber is difficult (Forest Stewardship Concepts, Ltd. 2014[13])".

II FEIS at 128.

However, it is unlikely the wood is utilizable even now, let alone for the five years that salvage of it would be authorized under the proposed action. Much of it has been dead for several years, and considerable deterioration has already occurred. With the deterioration, it likely cannot be made into products that existing mills could manufacture. Webb, 2015, states: "In a recent letter to the US Forest Service, Rocky Mountain Regional Forester, Intermountain Forest Association (IFA) observes that beetle-killed spruce is deteriorating much faster than anticipated." Id. at 2-3. Also:

> Montrose Forest products and Rocky Mtn. Timber Products personnel have both mentioned that beetle kill much older than 5 years may be problematic because lumber recovery is significantly affected by cracks and checks.

[13] Objectors cited this paper on p. 121 of our comments on the draft plan and DEIS.

Id. at 3.

To prepare and offer this salvage volume, supplemental funding would be required. FEIS at 149. Such funding will not likely be available.

The Forest Service is well aware of the situation with regard to wood quality:

> Because of the large-scale mortality due to spruce beetle, the Forest has been increasing timber sale volumes. Whether this increase can be sustained depends on how long the larger dead trees retain their utility as saw or house logs (Forest Stewardship Concepts, Ltd. 2014). As the larger dead trees decay, there may be a large volume of low-value material available. It may be difficult to find a market for this lower quality woody biomass. Timber sale offerings on the Forest are becoming harder to sell as the quality of the product decreases over time (personal communication with Kirby Self, Vegetation Program Manager, June 19, 2018).

FEIS at 146.

At an August 28, 2019 public meeting in Saguache on the proposed final plan, Forest Supervisor Dan Dallas stated that the Rio Grande National Forest will not be preparing any salvage logging of beetle-killed spruce.

Note that even the adjacent Grand Mesa-Uncompahgre-Gunnison National Forest, where the spruce beetles hit later than they did on the RGNF, is about to end its spruce salvage logging program (under the "SBEADMR" project) because the trees are no longer viable for wood products. See Gunnison Country Times article, July 4, 2019, attached as Exhibit 1.

Salvage logging at the scale envisioned would be harmful to lynx habitat because of the adverse alteration of this species' habitat. See detailed argument in section IX below.

In spite of the strong unlikelihood of any significant salvage of beetle-killed spruce occurring under the new plan, this activity would still be authorized under the plan. Since for a number of reasons, as discussed above, it will never happen, and if it did, it would quite harmful to lynx, the large program of salvage logging must be greatly reduced or be removed from the plan.

SUGGESTED IMPROVEMENT: remove authorization for most or all of the proposed spruce salvage logging from the plan.

REFERENCES

(Note: all of these references are either Forest Service publications or were previously sent with comments submitted by objectors.)

Alexander, Robert R., 1987. Ecology, Silviculture, and Management of the Englemann Spruce-Subalpine Fir Type in the Central and Southern Rocky Mountains. USDA Forest Service, Agricultural Handbook No. 659, March, 1987.

Beecham, John J., Cameron P. Collins, and Timothy D. Reynolds, 2007. Rocky Mountain Bighorn Sheep (Ovis canadensis): A Technical Conservation Assessment. Prepared for the USDA Forest Service, Rocky Mountain Region, Species Conservation Project.

Webb, James, 2015. Spruce Sawlog Quality Changes Due to Spruce Bark Beetle Mortality, Rio Grande National Forest. Rio Grande Watershed Emergency Action Coordination Team. This paper was submitted as an attachment to our December, 2017 comments.

Worrall, James J., and Karen Nakasone, 2009. Decays of Englemann Spruce and Subalpine Fir in the Rocky Mountains. USDA Forest Service, Forest Insect and Disease Leaflet 150, April 2009.

V. **BIG GAME WINTER RANGE NEEDS ITS OWN MANAGEMENT AREA TO ENSURE PROTECTION OF WINTERING ANIMALS**

This issue arose after the comment period on the draft Plan and DEIS, as the draft plan (EIS alternative B) had a separate management area (MA) for big game winter range. See also the argument on big game winter range in section II C above.

The importance of winter range for deer and elk is well-recognized. These animals need shelter from wind and snow, and need to be protected from human disturbance during the wintering period, in order to conserve their energy and make it through the winter. Instead of having a separate area for big game winter range, as all previous RGNF plans did[14], the Final Plan appears to include most or all winter range in new MA 5, general forest and rangelands. See Plan at 79 et seq.[15] This MA is assigned to 837,269 acres of the RGNF under the Final Plan.[16] Plan at 63.

[14] In the most recent draft plan, MA 5.41, big game winter range, had weak plan components for protecting wintering animals.

[15] For MA 5, the Plan states "This management area combines several management areas that were designated in the 1996 forest plan into one large area". Id. at 79.

[16] Compare map of Alternative G Management Areas in the 1996 Plan with the corresponding map for Alternative B-modified in the 2019 Plan. There appears to be considerable overlap.

A sizable portion of this may be winter range, as 189,090 acres in the previous plan was assigned to MA 5.41, Deer and Elk Winter Range. 1996 Plan FEIS at S-3.[17]

Under MA 5 in the 2019 plan, very little development activity is prohibited. Commercial timber production is emphasized via the following desired condition:

> 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. Suitable forested areas are maintained with commercially valuable species at ages, densities, and sizes that allow growth rates and stand conditions that are conducive to providing a sustained yield of forest products.

Plan at 79.

Lands in this MA are also likely to be well-roaded, as another desired condition states:

> This area has a well-developed transportation system that provides access for recreation opportunities and management.

Id. at 80. A desired condition would limit road density to one mile per square mile in "in areas used for winter concentration, critical winter range, calving areas, and transition habitat." Plan at 80. If such roads are open to motorized use in the winter, it would be more than enough to stress big game. And the road density limit is a desired condition, so it may not be attained over the life of the plan, and in any case is not enforceable.

The MA is suitable for livestock grazing and is part of the suitable timber base. Id. at 82.

Many activities potentially detrimental to wintering big game animals would be allowed in MA 5, including: vegetation management, livestock grazing, road use, various recreational activities, and prescribed fire. Activities in areas adjacent to winter range, such as vegetation management, could also adversely affect wintering big game. A standard prohibits off-road travel in winter range areas during the primary use season of December 1 through April 15. Ibid. However, winter range locations are not identified in the Plan or FEIS. It might thus be difficult to determine where this prohibition applied. Also, other activities that could take place on winter range are not prohibited, as discussed above.

[17] Among the alternatives in the 1996 Plan FEIS, land assigned to MA 5.41 varied from 126,920 to 284,370 acres. Ibid.

The analysis of potential effects on winter range from implementation of the any alternatives is rather sparse. The FEIS states that all alternatives

> include a number of protective measures for deer, elk, and where applicable, bighorn sheep, including measures to ensure adequate forage and consideration of wildlife needs in the development of grazing strategies.

FEIS at 257. However, the Plan contains very few measures for protection of wintering animals, as discussed above. None of the stated limitations on human activity that are stated are standards or guidelines, with the exception of the above-cited prohibition on winter off-road use. Given all the activities that can occur in the large MA 5, the stated plan components are not sufficient to ensure protection of wintering animals.

Winter range should not be part of MA 5, an MA that allows a wide variety of activities, some of which would be inconsistent with maintaining winter range. Note the following definition form the Planning Rule:

> *Management area*. A land area identified within the planning area that has the same set of applicable plan components. A management area does not have to be spatially contiguous.

36 CFR 219.19. Any plan components for winter range would apply to only part of MA 5. Thus having winter range in an MA like MA 5 is inappropriate.

CONCLUSION: a separate MA for big game winter range is needed to ensure that winter range is discernible to the public and agency staff. Adequate protection to ensure winter survival can then be applied to these identified areas of winter range.

SUGGESTED IMPROVEMENT: put all areas of big game winter range on the RGNF in a separate MA in the plan. Show this MA on maps in the plan or EIS so people will know where not to go during winter, and agency staff will know what areas need to be avoided during any winter activities, such as prescribed fire or restoration work. Develop stronger plan components to ensure wintering big game animals have a good chance to survive even harsh winters.

VI. **DIRECTION ON SCENERY MUST BE CLARIFIED**

Objectors addressed concerns about scenery on p. 110 of our December, 2017 comments.

Scenery is an important resource on the RGNF as well as all other national forests. Many people visit the RGNF at least in part because of its distinctive scenery. To address the scenery issue, the Plan has scenic integrity objectives (SIOs), which are defined as follows:

> Scenic integrity objectives serve as the desired conditions for the scenic resources and represent the degree of intactness of positive landscape attributes. Scenic integrity objectives are categorized into five levels. …

Plan at 131. FEIS 285 reinforces this by saying "Scenic integrity objectives represent desired conditions to be managed toward".

To meet these desired conditions, plans need to have standards and guidelines to ensure management is consistent with these desired conditions and to allow the desired conditions to be attained. To that end, the Plan contains the following standard for meeting SIOs: "Management activities are consistent with identified scenic integrity objectives." Plan at 61.

However, SIOs are not identified for MAs, except as described below, where there is confusing direction. In MA 4.34, the SIO is high for eligible and suitable wild rivers according to G-4.34-2. Plan at 78. But this is a guideline, as are G-4.34-3 (for eligible and suitable scenic rivers) and G-4.34-4 (for eligible and suitable recreational rivers), under which "Activities will meet the adopted scenic integrity objective." Plan, ibid; emphasis added. In MA 4.1, G-4.1-1 states: "Activities should meet the assigned recreation opportunity spectrum class and scenic integrity objectives". Plan at 73, emphasis added.

The cited components are all guidelines. But the forest-wide direction to meet the SIO is a standard. This conflicting direction needs to be resolved.

Under the agency's planning directives, guidelines "[m]ust not restate other plan components". FSH 1909.12, section 22.14 (5). Guidelines are also supposed to "use the words 'should' and 'should not'." Id. at (2).

SUGGESTED IMPROVEMENT: state the SIO(s) applicable for each MA. Retain the forest-wide standard requiring management activities and projects[18] to be consistent with the applicable SIO. Delete the confusing guidelines in MA 4.34.

[18] The term "and projects" should be added to the standard to be clear that all management must comply with the applicable SIO.

VII. **WEAK PLAN COMPONENTS WILL NOT ENSURE PROTECTION AND RECOVERY OF RANGELANDS NOR PROTECTION OF TREE REGENERATION IN AREAS OF LIVESTOCK USE**

Objectors addressed concern about tree regeneration in beetle-affected stands on pp. 119 and 122 of our December, 2017 comments, and about range condition on p. 127 therein.

The FEIS notes that past grazing practices caused impacts that are still evident today. Id. at 155, 157. Now another issue has arisen, with widespread spruce bark beetle mortality removing the overstory in many stands,

> resulting in the understory providing a flush of forage. Initially, the flush of understory forage is providing an attractant to redistribute livestock into these once unsuitable grazing areas. At the same time, access into these areas is also improved. In some cases there may be a short-term loss of a barrier that once was used for livestock management. …If timber harvest activities are implemented in these spruce-fir sites, livestock access and available understory forage may remain high. Reforestation goals also often require that livestock be excluded from an area until trees have become established and reach a size that limits damage from livestock.

FEIS at 157; emphasis added. See also id. at 161.

The increased forage and loss of barriers to livestock access probably will not be "temporary" in most cases, as Englemann spruce if sound (i. e., free of internal rot) when killed by bark beetles, often remain standing for at least 20-30 years, with same standing for 50-70 years. FEIS at 219. See also Schmid and Hinds, 1974, who found that Englemann spruce killed by bark beetles fell at the rate of only 1.5 to 3 percent per year.

Thus increased forage attracting livestock to areas formerly inaccessible or not containing sufficient, if any, forage (due to then-dense canopy cover) will remain an issue for many years. Use of these areas by livestock will continue to adversely affect tree regeneration, both existing seedlings and any that regenerate in the upcoming decades, possibly incuding areas that are planted.

The proposed plan has no components to address this problem, let alone to prohibit stock use "until trees have grown to a size at which cattle impacts are minimal". FEIS at 161. In fact, one desired condition states that temporary forage will be available, in coordination with other needs, including reforestation. DC-RNG-3, Plan at 20. But there are no plan components that restrict livestock use in areas affected by spruce bark beetle that have, or are likely to have tree

regeneration, nor any measures requiring fencing or other structural barriers be used to limit or prohibit access to such areas.[19]

The Plan has no standards to ensure protection, and where necessary, improvement, of rangelands.[20] There are no standards that would, e. g., restrict livestock use of rangeland in unsatisfactory condition.[21] Indeed, one guideline would allow grazing on range in unsatisfactory condition. (G-RNG-1, Plan at 21.) However, we do not know how much rangeland is in unsatisfactory condition because the FEIS presents no specific information on this issue.

CONCLUSION. Plan components are needed to ensure protection of tree regeneration within areas having substantial overstory mortality from spruce bark beetle.

SUGGESTED IMPROVEMENT: Add plan components, preferably standards, that require protection of regeneration in areas opened up by spruce beetle mortality. These can include: prohibiting use of such areas (e. g., where there is a considerable density of young seedlings and/or saplings susceptible to damage from livestock use), construction of fences or other barriers to limit or prohibit access, requiring riders to keep stock out of areas with regeneration, and/or other measures to minimize livestock damage to regeneration.

Also needed are stronger plan components, i. e., standards, to ensure that good range condition is attained and maintained. The final Plan's range guidelines (Plan at 21) should be standards. There should be an additional standard requiring improvement of allotments, or parts of them, in poor condition.

Finally, the FEIS needs a supplement showing range condition and trend for allotments across the RGNF.

REFERENCE

Schmid, J. M., and T. E. Hinds, 1974. Development of Spruce-Fir Stands Following Spruce Beetle Outbreaks. USDA Forest Service, Research Paper RM-131, Rocky Mountain Forest and Range Experiment Station (now the Rocky Mountain Research Station).

[19] It is telling that the one Mgmt Appr addressing protection of regeneration does not include openings created by spruce bark beetle mortality. See Plan at 20. Of course, a Mgmt Appr is not a plan component and would not ensure protection of regeneration in such areas even if spruce beetle-affected areas were mentioned.
[20] The FEIS for the 1997 plan found almost as much acreage in unsatisfactory conditions as was in satisfactory condition. See 1997 FEIS at 3-189. There is no specific information on range condition in the current FEIS.
[21] FEIS at 179 mentions "resting range in poor condition" as a method of improving soils, but no plan components require this.

VIII. **THE RGNF MUST HAVE A SUSTAINABLE MINIMUM ROAD SYSTEM**

WildEarth Guardians joined Defenders of Wildlife, The Wilderness Society and the Western Environmental Law Center in filing supplemental comments on December 29, 2017 for the draft revised RGNF Plan and Draft Environmental Impact Statement (hereafter, "Supplemental Comments"), which followed the comment letter our organizations (along with several other organizations) submitted on December 23, 2017. These Supplemental Comments covered additional topics including ecological integrity, species at risk, and the transportation system.

A. INFRASTRUCTURE PLAN COMPONENTS ARE INCONSISTENT WITH THE 2012 PLANNING RULE REQUIREMENTS AND FOREST SERVICE DIRECTIVES**.**

We urged the Forest Service to comply with the substantive mandates of the 2012 planning rule and Subpart A of the Travel Management Rule (TMR) by including components to ensure the RGNF will achieve an ecologically and fiscally sustainable road system. Supplemental Comments at 51. We explained that given the significant aggregate impacts of the road system on landscape connectivity, ecological integrity, water quality, species viability and diversity, and other forest resources and ecosystem services, the Forest Service cannot satisfy the rule's substantive requirements without providing specific Plan components necessary to achieve an ecologically sustainable transportation system. *Id.* at 58. As such, we further stated the Plan must provide standards and guidelines to ensure management of the RGNF's transportation infrastructure maintain and restore ecological integrity, landscape connectivity, water quality, and species diversity. *Id.* citing 36 C.F.R. § 219.8(a). Yet, the Plan fails to include the necessary components to do so, and specifically to identify a minimum road system (hereafter, "MRS"), remove unneeded system roads, or otherwise promote sustainable transportation infrastructure that helps maintain and restore ecological integrity as the regulations require. Supplemental Comments at 55-63. The RGNF fails to adequately respond to these comments, in both I FEIS and II FEIS.

The I FEIS contains a section that erroneously suggests the TMR Subpart A is wholly separate from requirements under the 2012 Forest Planning Rule, namely by focusing its discussion on land suitability, as well as the TMR's requirement for forest units to develop and maintain a transportation atlas. I FEIS at 12-13. To clarify, rules applicable to the forest travel transportation atlas direct the Forest Service to display system roads, and that "…the atlas may be updated to reflect new information on the existence and condition of roads,…" 36 C.F.R. § 212.1 and 212.2(b). The forest transportation atlas could potentially display a minimum road system, but the Forest Service does not discuss such a possibility in the I FEIS, and fails to explain the intersection between the transportation atlas, the MRS and the 2012 Planning Rule requirements. As such, it is not apparent how referencing the transportation atlas is germane, and the discussion fails to respond to our comments. Likewise, the I FEIS mentions the 2012 Planning Rule requirements to address land suitability. I FEIS at 12. Yet, the section is not specific to the TMR Subpart A requirements and their necessary application under the 2012 Planning Rule's direction to provide for ecological sustainability. Each discussion fails to acknowledge the intersection between the identification of unneeded roads and an MRS that protects national forest system lands. It also fails to address the need for the Plan to contain, "…components, including standards or guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic

ecosystems and watersheds in the plan area. 36 C.F.R. § 219.8(a)(1). In other words, the Forest Service cannot separate the requirements under the TMR Subpart A and the 2012 Planning Rule as we explained at length in our previous comments. Supplemental Comments at 58-60.

Further, the Forest Service failed to respond to our comments in the II FEIS. In fact, we could only find tangential responses where the RGNF addressed comments labeled INFRA-11, 12 and 14. II FEIS at 55-56. Here the agency responds to comments regarding road and trail maintenance, and road decommissioning by asserting travel management and associated direction in the Forest Service directives guides such actions, so it is unnecessary to include them in the forest plan. *Id.* Yet, in its response, the RGNF acknowledges that "[t]ravel analysis provides a bridge from strategic guidance in the forest plan to project-level travel management decisions and can help in prioritizing road management options and priorities, such as maintenance." *Id.* at 55. Travel analysis also supports decisions that identify an MRS and unneeded roads. Ironically, the Plan lacks sufficient strategic guidance that could provide a bridge between travel analysis recommendations for an MRS and project level decisions, primarily due to the absence of necessary plan components. As we previously commented, the land management plan is the appropriate and only venue currently available to the Forest Service for establishing a large-scale framework for transportation management, and for assuring that the RGNF will achieve its legal and policy responsibilities under the planning rule, travel management rule and other relevant authorities. Supplemental Comments at 61. Here, the RGNF failed to adequately respond our comment or include the requisite framework.

As it stands, the Plan lacks any strategic guidance that will ensure the forest meets its obligations under the TMR Subpart A, and provide for an ecologically sustainable transportation system. The draft Forest Plan includes only one desired condition specific to the transportation system, and an optional management approach specific to travel management. Plan at 55-56. Specifically, DC-INFRA-1 states, "[t]he transportation system is commensurate with resource management needs, public safety, emergency access, and public access to use and enjoy the Forest." Id. at 55. Absent in this desired condition is the necessary direction that an MRS provide for the protection of national forest lands. *See* 36 C.F.R. § 212.5(b)(1). The desired condition does state that "[r]oad restrictions occur for resource management activities that protect, maintain, and enhance habitat, soil, and water objectives, among other values." Plan at 55-56. Yet, the Forest Service cannot conflate road restrictions with meeting its duty to have a desired condition in the plan that provides "a basic framework for an appropriately sized and sustainable transportation system that can meet [identified access and other] needs." FSH 1909.12, ch. 20, §23.23l(2)(a) at 116. In other words, restricting road access is not the same as providing for an ecologically and fiscally sustainable transportation system, as their presence on the ground can still have significant, harmful environmental consequences. Supplemental Comments at 52-54.

The Plan does provide a management approach that states, "[t]he travel management process is followed during project-level design and analysis to move toward a sustainable Forest road system." Plan at 55. The inadequacy of this management approach is twofold. First, it fails to provide the requisite framework necessary to ensure the forest as whole identifies its minimum road system and unneeded roads. The Forest Service established the Roads Rule in 2001. Fed Reg 66 FR 3217, January 12, 2001. Since that time, the RGNF has yet to meet its requirements

across the forest, and it remains unclear how many miles of road the forest must analyze under NEPA to fully identify its MRS.

Considering the Forest Service has relied on project-by-project approach for the last 18 years, and has yet to fully comply with the TMR Subpart A requirements, it is arbitrary for the RGNF to assert the same approach will be sufficient, let alone successful. As it stands the RGNF has 2,242 miles of system roads, 29% of which are closed to the public. I FEIS at 277. In our previous comments we cited the RGNF's 2015 Travel Analysis report explaining the agency cannot maintain this current system, that its deferred maintenance backlog is unsustainable, and even if the Forest Service implemented its recommended MRS, it could still only maintain a paltry 8.3% of its road system. Supplemental Comments at 52. The result is a continuously deteriorating road system that will degrade the RGNF's ecological integrity. *Id.* at 52-54.

The Plan's management approach of "[m]oving toward a sustainable road system…," (id. at 55) is an insufficient response, lacks adequate direction and fails to provide the requisite components necessary to comply with 2012 Planning Rule, which raises our next point. Management approaches are not plan components, rather they are "optional plan content…" that "…can convey a sense of priority and focus among objectives and…," which, "… relate to desired conditions and ***may*** indicate the future course or direction." Emphasis added, FEIS at 5. Yet, the Plan lacks sufficient desired conditions to ensure the RGNF will ever fully meet its obligations under the TMR Subpart A, and completely lacks objectives upon which the management approach would rest. As such, the Plan fails to indicate a specific future direction for the RGNF to follow in adhering to the TMR Subpart A requirements. Moreover, the management approach cannot overcome the lack of any standards or guidelines necessary to maintain or restore ecological integrity as it relates to the RGNF's deteriorating road system.

Overall, the Plan fails to comply with the 2012 Planning Rule by omitting the necessary components to maintain or restore ecological integrity due to its lack of desired conditions, objections, standards and guidelines necessary to ensure the RGNF provides for an ecologically sustainable transportation system. Our comments explained the regulatory history of the Roads Rule clarified that the Forest Service intended land management plans would address TMR Subpart A compliance. Supplemental Comments at 60. The RGNF fails to respond to this comment, but the Forest Service did explain in its response to comments to the proposed Roads Rule, that, "[t]he planning rule provides the overall framework for planning and management of the National Forest System. The road management rule and policy which are implemented through the planning process must adhere to the sustainability, collaboration, and science provisions of the planning rule." Supplemental Comments at 60,. citing 66 Fed. Reg. at 3209. Here, the Plan fails to adhere to the sustainability requirements in the 2012 Planning Rule.

Suggested improvement: Revise the Plan to include desired conditions, objectives, standards and guidelines we provided under Exhibit 2 in our previous comments, (attached).

Monitoring Program

Under the 2012 planning rules, the Forest Service must develop a monitoring program that enables the responsible official to determine if a change in plan components or other plan content is needed. 36 C.F.R. § 219.12(a). Monitoring is meant to increase knowledge and understanding of changing conditions, uncertainties, and risks identified in the best available scientific information as part of an adaptive management framework. *See* Revised Plan at 7. The requirement to consider best available science is meant to help identify indicators that address associated monitoring questions, and to further development of the monitoring program. FSH 1909.12, § 07.11. The Forest Service's monitoring parameters for roads and trails fails to comply with these requirements.

Specifically, we commented on the insufficiency of previous Plan's proposed monitoring question related to roads and trails. Supplemental Comments at 68. The RGNF failed to respond in the II FEIS, and actually shortens the question in the current Plan under Monitoring Question 18 to simply ask "What is the status and trend of roads and trails?" Plan at 99. The RGNF retained all the previous indicators. It is telling the plan component this question tiers to is DC-REC-1, which conflates recreation with infrastructure (see Plan at 59-60), thereby exemplifying the Plan's flaw in providing necessary components to achieve an ecologically and fiscally sustainable transportation system.

As we explained, in our Supplemental Comments, the proposed indicators will only provide a snapshot in time of the work the forest has done but will not illuminate the overall condition of, and trends related to, the transportation system (e.g., how many roads and trails meet their maintenance objective by maintenance level, how many miles of roads and trails by maintenance level are impacting water quality?) or the sustainability of the system (e.g., what percent of road and trail miles were maintained to standard? What is the deferred road and trail maintenance, and how much did it change? What percent of the forest outside of wilderness has an identified minimum road system? What percent of the forest outside of wilderness has an implemented minimum road system?).

Suggested Improvement: Revise the Plan to include monitoring questions and indicators we provided under in our previous comments. See Exhibit 2, attached.

IX. **THE PROPOSED FINAL PLAN WILL NOT CONTRIBUTE TO THE RECOVERY OF CANADA LYNX**

A. THE PROPOSED FINAL PLAN FAILS TO PROVIDE SUFFICIENT ECOSYSTEM PLAN COMPONENTS TO MAINTAIN OR RESTORE THE ECOLOGICAL CONDITIONS NECESSARY TO CONTRIBUTE TO THE RECOVERY OF CANADA LYNX, IN VIOLATION OF 36 C.F.R. 219.9(a)(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. … 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 proposed Final Plan are insufficient to achieve the ecosystem conditions required by lynx and contribute to the species’ recovery. The proposed Final 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 Final 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 (at 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 Final 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)

Final 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—without SRLA limits—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 Final 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. Id. at 231. However, the Final 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 C.F.R. 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 Final Plan (at 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:

> Objective[30] 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 cover[19], and high densities of snowshoe hare. Provide winter snowshoe hare habitat[51] in both the stand initiation structural stage and in mature, multi-story conifer vegetation.
>
> Objective VEG O3: Conduct fire use[11] activities to restore[40] ecological processes and maintain or improve lynx habitat.
>
> Objective VEG O4: Focus vegetation management[50] in areas that have potential to improve winter snowshoe hare habitat[52] 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 C.F.R. 219.7(e)(1)(i)).[22] They are all written more like standards or guidelines as defined by the

[22] 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

Planning Rule (36 C.F.R. 219.7(e)(1)(iii)&(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 at 234 and the 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 Final Plan (at 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 Final 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 C.F.R. 219.7(e)(1)(i), do not satisfy 36 C.F.R. 219.9(b)(1)) or 36 C.F.R. 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 (at 13-14):

- deep winter snows,*
- riparian areas dominated by dense willow, especially in the summer,

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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."

- 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 (at 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—mature forest—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. at 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. at 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 Final 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 C.F.R. 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. §§ 4332(2)(C)(i)–(v); 40 C.F.R. §§ 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 C.F.R. § 1500.1(b).

To summarize, the Final 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 Final 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 Final Plan at 25-26. We addressed the Draft Plan's version of VEG S7 (at 21-22) in comments. Smith et al. 2017 at 72-73.

The Final Plan (at 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.

Final 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—the Squires et al. study, or will others be used also?—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.

Final Plan at 26-27.

The proposal to have "Foresters and wildlife biologists determine the optimal landscape heterogeneity …" 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 Final Plan (at 36) must apply at the project scale not the planning unit area. See section X A.

> 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.

Final 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 (ibid.):

> 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.

Ibid.

The standard VEG S7 is worded this way:

> Proposed Final 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 Final 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—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 Final 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 Final 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,[23] would be via clearcut, not creating small openings that can be beneficial to lynx[24]. 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." Id. 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.

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

[24] 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. Again, see ibid.

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 <u>may provide a heightened role in sustaining lynx and snowshoe hare given the reduced availability of this habitat on the landscape</u>. 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 Final 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 proposed Final 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. §§ 4332(2)(C)(i)–(v); 40 C.F.R. §§ 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 C.F.R. § 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 C.F.R. 219.9(a)(1) and (b)(1).

B. THE PROPOSED FINAL PLAN FAILS TO PROVIDE NECESSARY SPECIES-SPECIFIC PLAN COMPONENTS TO PROTECT CANADA LYNX AGAINST THE THREAT OF RECREATION, IN VIOLATION OF 36 CFR 219.9(b)(1).

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 Final 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. Ibid. Overall, the 95 percent area covers 36.6 percent of all the RGNF's LAUs. Ibid.

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 final plan. The Response to Comments in FEIS II confirms that this proposed plan component was removed from the final plan, and furthers states that the direction is instead "prescribed in the Southern Rockies Lynx Amendment." FEIS 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 final plan at Appendix E (Final 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 final plan.

To summarize, the Final Plan is unlikely to meet Planning Rule requirements 36 CFR 219.9(a)(1) and 36 C.F.R. 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 Final Plan. Finally, the allowed OSV use would be detrimental to wintering lynx.

Failure to provide plan components that will ensure maintenance and recovery of lynx populations may also violate the Endangered Species Act. Plan components are "regulatory mechanisms" under ESA.

Suggested Improvement: Meeting Planning Rule requirements 36 C.F.R. 219.9(a)(1) and 36 C.F.R. 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 final 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.

C. 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…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 Final 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…along with a discussion of potential effects from implementation of the revised Forest Plan on the LAUs." *Id*. 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. §§ 4332(2)(C)(i)–(v); 40 C.F.R. §§ 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.

X. **THE FINAL PLAN DOES NOT PROVIDE THE ECOLOGICAL CONDITIONS OR SPECIES SPECIFIC PLAN COMPONENTS NECESSARY TO MAINTAIN VIABILITY FOR THREATENED OR ENDANGERED SPECIES OR SPECIES OF CONSERVATION CONCERN ASSOCIATED WITH FORESTED ECOSYSTEMS.**

A. THE FINAL PLAN DOES NOT MAINTAIN SUFFICIENT MINIMUM SNAG SIZES AND DENSITIES, BASED ON THE BEST AVAILABLE SCIENCE, AND THEREFORE FAILS TO PROVIDE ECOLOGICAL CONDITIONS NECESSARY FOR MAINTAINING THE VIABILITY OF SEVERAL SNAG-DEPENDENT SPECIES OF CONSERVATION CONCERN, IN VIOLATION OF 36 CFR. 219.3 AND 36 CFR 219.9.

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.

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

The Final 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. Final Plan at 36. Table 8 in the Final 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 Final Plan indicates that the snag recommendations in Table 8 are "based on an average basis across the *planning unit*." Final 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 Final 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[25] and provides no constraints on projects or activities, as required by 36 C.F.R. 219.7(e)(1)(iv).

The Final 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 as stated on page 157 of the Final Plan.[26] The American marten, boreal owl, and flammulated owl require a greater density of snags per acre and/or larger sized snags than the Final Plan recommends or requires, and the Final Plan appears to have no plan components to ensure these ecological conditions can be provided. The Final 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—all SCC. The Final Plan fails to meet requirements in 36 C.F.R. 219.9 for these species and possibly other at-risk snag-dependent species.

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.

B. THE FINAL PLAN USED 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 VIABILITY OF SCC THAT NEED LATE-SERAL FOREST, IN VIOLATION OF 36 CFR 219.9 REQUIREMENTS.

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

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:

[25] Indeed, this component, worded a little differently, was a desired condition in the draft plan, See Id. at 36-37.
[26] The species overview for at-risk fauna can be found at: https://www.fs.usda.gov/detail/riogrande/landmanagement/projects/?cid=fseprd534370.

> 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 C.F.R. 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 (Final 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 Final 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[27] 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…" 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.

Final 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:

> 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 Final Plan].

Smith et al. 2017 at 103. See also id. at 120, below:

> The DEIS (at 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

[27] There is nearly identical language in the FEIS at 108-110.

> 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 (at 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 (at 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 Final Plan, which in this case, is still reflective of the best available science. Without this, given timber harvest and salvage logging objectives in the Final 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.

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

C. THE FINAL ENVIRONMENTAL IMPACT STATEMENT DOES NOT ANALYZE THE PLAN'S EFFECTS ON AT-RISK SPECIES AND THE ECOLOGICAL CONDITIONS NECESSARY TO THEIR RECOVERY, CONSERVATION, OR VIABILITY, IN VIOLATION OF THE NATIONAL ENVIRONMENTAL POLICY ACT

A national forest or grassland management plan revision process must be integrated with the procedures outlined in the National Environmental Policy Act (NEPA), and an EIS must be prepared as part of the process. 36 C.F.R. 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—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 Final 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.

D. THE PLAN DOES NOT ADEQUATELY PROVIDE FOR THREATENED AND ENDANGERED SPECIES

1. The Plan fails to provide desired conditions that described the specific ecological conditions necessary to contribute to the recovery of threatened and endangered species that may be present on the Forest in violation of 36 CFR 219.9(a)(1)) and 36 CFR 219.9(b)(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.

Lynx, a threatened species, is addressed above in section IX.

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)

Final 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:

> … 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 C.F.R. 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 C.F.R. 219.7(e)(1)(i), The desired condition DC-TEPC-1 does not meet the requirements for desired conditions, and does not satisfy 36 C.F.R. 219.9(b)(1)) or 36 C.F.R. 219.9(a)(1)).

Suggested Improvement: Develop desired conditions for each species that may be present on the Forest that meet the requirements of 36 C.F.R. 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 C.F.R. 219.3.

2. The Rio Grande National Forest disregarded its duty to conserve the wolverine as required by 36 CFR 219.9(b)(1) and failed to provide the ecological conditions necessary to conserve wolverines as required by 36 CFR 219.9(a)(1).

We raised this issue in comments on the Draft Plan and DEIS. Smith et al. 2017 at 86.

The Biological Assessment (BA at 39, Table 3) states that for 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 Biological Assessment, stating, "Historic (<20 years) occurrences on Forest. Currently considered extirpated in CO." BA at 10, Table 1. So, the species may be present in the plan area.

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

3. The Plan fails to provide for ecological conditions and species-specific plan components necessary to contribute to the recovery of Gunnison sage-grouse, a federally threatened species, in violation of 36 C.F.R. 219.9(a)(1) and 36 C.F.R. 219.9(b)(1).

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

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.

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" (pg. 225).
- Implement recommendations from rangewide strategy on "Noxious and Invasive Weeds" (pg. 232).
- Implement recommendations from rangewide strategy on "Recreational Activity" (pg. 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 (pg. 225), and "Oil & Gas and Mining" strategy (pg. 233).
- Implement recommendations from rangewide strategy on "Predation" (pg. 243).
- Conduct inventory of vacant/unknown habitat areas using inventory technique developed at a rangewide level ("Habitat Monitoring" strategy, pg. 220).
- Search for new or unknown existing leks utilizing survey methodology developed at rangewide level ("Habitat Monitoring" strategy, pg. 220).
- Map Gunnison sage-grouse seasonal habitats in a GIS as defined per "Habitat Monitoring" rangewide strategy, Objective 1, Strategy #7 (see pg. 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…". 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 C.F.R. 219.9(a)(2)(i).

Suggested 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/1km^2 (.6 mi/.6 mi^2) 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.

4. The Plan fails to provide the ecological conditions and species-specific plan components necessary to contribute to the recovery of the Uncompahgre fritillary butterfly, a federally endangered species, in violation of 36 CFR 219.9(a)(1) and 36 CFR 219.9(b)(1).

The Draft Plan included plan components specific to the Uncompahgre fritillary butterfly (UFB), and therefore, we did not raise this issue in our Draft Plan and DEIS comments. The Plan includes no plan components specific to the species.

The BA at 49-50 purports that there are few human uses of the forest that threaten UFB colonies. However, the BA at 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."

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 Final Plan (see id. at 28); there was no S-TEPC-4 in the Draft Plan (see id. at 24). 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

> 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)

Id. at 18.

The BA (p. 49) states, "… high-alpine monitoring of grazing allotments needs to occur to determine if this desired condition is occurring or not," … "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 appear to be in reference to the deleted desired condition DC-SSC-4 from the Draft Plan. Either DC-SCC-4 was deleted in error in the Final 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 may be interpreted as being is based on a standard in the 1996 LRMP (1996 LRMP at III-28). However, livestock grazing is not considered ground disturbing under the LRMP (see below); it is not clear where this direction is coming from and under what authority. Regardless, the Final Plan did not retain the 1996 LRMP standard.

The Final 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)

Plan at 23.

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—all recovery actions assigned to the Forest Service in the 1994 Uncompahgre Fritillary Butterfly Recovery Plan.

The monitoring program offers the only real guidance in the Plan that is directly related to the UFB. There is one adaptive management 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." Plan at 92. Monitoring is only slated to occur at "6 and 10 years." Monitoring UFB occupancy and trends is not tiered to any plan components (see ibid.), so it triggers no management action that may be necessary to protect colonies and individuals.

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 states, "[i]f any new Uncompahgre fritillary butterfly populations are discovered, a "No Butterfly Collecting" regulation shall be imposed on the area." RGNF LRMP 1996 at III-28 It follows that "ground-disturbing activity" restrictions should apply to the habitat of newly discovered populations, not solely to collection restrictions. There are no plan components in the Final Plan that provide protection for UFB habitat or individual butterflies, and none that aim to help recover, expand, or initiate new colonies.

In the case of the Uncompahgre fritillary butterfly, the Plan does not comply with 36 C.F.R. 219.9(a)(1) and 36 C.F.R. 219.9(b)(1).

Suggested 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 livestock grazing.

E. THE PLAN DOES NOT PROVIDE FOR THE NEEDS OF SPECIES OF CONSERVATION CONCERN, AS REQUIRED BY THE PLANNING RULE.

1. The Plan failed to provide desired conditions that described the specific ecological conditions necessary to maintain the viability of species of conservation concern that occur on the Forest in violation of 36 CFR 219.9(a)(1)) and 36 CFR 219.9(b)(1)).

We did not raise this 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.

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)

Plan at 23. 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 C.F.R. 219.7(e)(1)(i)[28], and thus, cannot satisfy 36 C.F.R. 219.9(b)(1)) or 36 C.F.R. 219.9(a)(1)).

Suggested Improvement: Develop desired conditions for each species that may be present on the Forest that meet the requirements of 36 C.F.R. 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 C.F.R. 219.3

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

2. The final plan contains no plan components to provide the conditions necessary to support northern flicker cavities for scc that are secondary cavity users, in violation of 36 c.f.r. 219.9.

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

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.

3. The final plan does not provide the ecological conditions or species-specific conditions required for boreal owl viability as required by 36 c.f.r. 219.9.

The FEIS (at 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 Final 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 Final Plan (at 177) lists the following plan components as being associated with the boreal owl.

G-VEG-1 – focuses on snags. As we stated above, G-VEG-1 does not provide a sufficient management direction for projects.

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.

S-VEG-5 – regards clearcutting. 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 boreal owls, as it provides no plan direction or constraint to protect boreal owls from adverse effects of clearcutting.

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 Final 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 Final Plan fails to provide the plan components necessary to maintain boreal owl 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 boreal owl viability. The plan must also have species-specific components if necessary to ensure habitat needs are achieved and maintained. The Final 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.

4. The final plan does not provide the ecological conditions or species-specific conditions required for American marten viability, in violation of 36 c.f.r. 219.9.

The FEIS (at 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 Final 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 Final Plan (at 178) lists the following plan components as being associated with the American marten:

G-VEG-5 – regards late-seral or old forest conditions. This guideline does not give any indication of how it is to be applied on the ground. The structural stage targets in Table 6, the basis of this guideline, is based on a flawed analysis and is inadequate to ensure retention of late-successional forest.

S-TEPC-2 – is the additional standard VEG S7 related to salvage logging in lynx habitat. The RGNF is right to include lynx plan direction as applying to the American marten, because both species require spruce-fir habitat and require similar ecological conditions. We concluded VEG S7 was inadequate to protect lynx habitat from proposed salvage logging elsewhere in this objection.

In sum, the plan components required to provide ecological conditions necessary for the American marten are insufficient or non-existent. The Final 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 Final 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.

5. The final plan does not provide the ecological conditions or species-specific conditions required for olive-sided flycatcher viability, in violation of 36 c.f.r. 219.9.

No ecological conditions were listed in the FEIS or Final Plan for the olive-sided flycatcher. The is a serious plan deficiency. Table 23, "Crosswalk of species of conservation concern plan components," in the Final Plan (at 177) lists the following plan components as being associated with the olive-sided flycatcher:

G-VEG-1 – focuses on snags. As we stated above, G-VEG-1 does not provide a sufficient management direction for projects.

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.

S-VEG-5 – regards clearcutting. This plan standard 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 the olive-sided flycatcher. It provides no plan direction or constraint to protect this species from adverse effects of clearcutting.

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

6. The final plan does not provide the ecological conditions or species-specific conditions required for flammulated owl viability, in violation of 36 CFR. 219.9.

The FEIS (at 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 Final Plan (at 177) lists the following plan components as being associated with the flammulated owl:

G-VEG-1 – focuses on snags. As we stated above, G-VEG-1 does not provide sufficient management direction for projects.

G-VEG-4 – applies only to SCC plants. It does not apply to the flammulated owl.

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.

S-VEG-5 – regards clearcutting. This plan standard 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 flammulated owls. It provides no plan direction or constraint to protect flammulated owls from adverse effects of clearcutting.

In sum, the plan components required to provide ecological conditions necessary for flammulated owls are insufficient or non-existent. 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 Final 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 Final 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.

7. The final plan does not provide the ecological conditions or species-specific conditions required for northern goshawk viability as required by 36 CFR 219.9.

The FEIS (at 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 Final Plan (at 177) lists the following plan components as being associated with the northern goshawk.

G-VEG-1 – focuses on snags. As we stated above, G-VEG-1 does not provide a sufficient management direction for projects.

G-VEG-5 – regards late-seral or old forest conditions. This guideline does not give any indication of how it is to be applied on the ground. The structural stage targets in Table 6, the basis of this guideline, is based on a flawed analysis.

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.

S-VEG-5 – regards clearcutting. This plan standard kicks decisionmaking down the road to the project level, yet this needs to be planning level decision. The standard is likely in conflict with the ecosystem conditions required by northern goshawks. It provides no plan direction or constraint to protect boreal owls from adverse effects of clearcutting.

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 Final Plan did not include this guideline, and this is unacceptable. The deleted guideline stated, in part: "Protect inactive nests as needed…". This is important for goshawk, as this species is known to re-use nests. (Cite Reynolds et al or Kennedy?)

In sum, the plan components required to provide ecological conditions necessary for northern goshawks are insufficient or non-existent. Human disturbance buffers and timing restrictions to protect northern goshawk nests have been deleted. The Final 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 Final 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.

8. The final plan does not provide the ecological conditions or species-specific conditions required for fringed myotis viability, in violation of 36 c.f.r. 219.9.

The FEIS (at 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 Final Plan (at 178) lists the following plan components as being associated with the flammulated owl:

G-VEG-1 – focuses on snags. As we stated above, G-VEG-1 does not provide a sufficient management direction for projects.

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.

S-VEG-5 – regards clearcutting. This plan standard 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 the fringed myotis. It provides no plan direction or constraint to protect boreal owls from adverse effects of clearcutting.

The Final 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 or non-existent. The Final 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 Final 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.

9. The final plan does not provide the ecological conditions or species-specific conditions required for western bumblebee viability as required by 36 C.F.R. 219.9.

The FEIS (at 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 (at 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 Final Plan (at 177) lists the following plan component as being associated with the western bumblebee: G-SCC-1.

G-SCC-1 – applies to pesticide applications. 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. 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."
Plan components are not sufficient to protect western bumblebee habitat from livestock grazing impacts. Livestock can eat and trample nectaring plants as well as change vegetative composition from one with important forb diversity to another with a greater proportion of woody plants and annual grasses, including invasive cheatgrass.

In sum, the plan components required to provide ecological conditions necessary for western bumblebees are insufficient. The Final 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 (at 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 Final 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.

10. The final plan does not provide the ecological conditions or species-specific conditions required for Gunnison's prairie dog viability as required by 36 C.F.R. 219.9.

The FEIS (at 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 (at 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 (at 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 Final Plan (at 177) lists the following plan components as being associated with the Gunnison's prairie dog: G-TEPC-1 and G-SCC-3.

G-TEPC-1 – is in regard to minimizing effect to listed species from management actions. The Gunnison's prairie dog is not a listed species but an SCC, But still should be protected with standards and guidelines. However, 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-3 – seeks to "reduce habitat fragmentation and maintain structural conditions of sagebrush ecosystems." A key limitation of this guideline is that the desired condition for the sagebrush ecosystem (DC-SCC-1) 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 that could be mitigated by the guideline. We don't know from planning documents or supporting information, such as the Gunnison's prairie dog species overview, if 5 acres is a sufficient patch size. The guideline must specify how projects and activities should be constrained to prevent barriers between prairie dog colonies to facilitate genetic exchange.

In sum, the plan components required to provide ecological conditions necessary for Gunnison's prairie dogs are insufficient or non-existent. The Final 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 (at 3-4) for the ecological and other conditions necessary to maintain viability. The Final Plan requires a major revision to provide the conditions and protections necessary for Gunnison's prairie dog.

11. The final plan does not provide the ecological conditions or species-specific conditions required for white-veined arctic butterfly viability as required by 36 C.F.R. 219.9.

The FEIS did not list the ecological conditions necessary for white-veined arctic butterfly persistence. The RGNF's White-veined Arctic Butterfly Overview (at 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 …"

The FEIS identified climate change as the only threat to the species. FEIS at 558, Table 145. White-veined Arctic Butterfly Overview (at 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 Final Plan (at 177) lists the following plan components as being associated with the white-veined arctic butterfly: S-SCC-1 and G-SCC-4.

S-SCC-1 – relates to separating domestic sheep from bighorn sheep, and it's possible the Forest erred in citing this plan component in the crosswalk for the species. In any case, sheep should be restricted from the white-veined arctic butterfly's habitat to prevent eating and trampling of the "grasses, sedges, and rushes" the species depends on (see white-veined arctic butterfly species overview).

G-SCC-4 – seeks to "avoid road construction and other permanent ground-disturbing activities within 100 feet of … alpine bogs," a habitat feature required by the white-veined arctic butterfly. 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.

In sum, the plan components required to provide ecological conditions necessary for white-veined arctic butterflies are insufficient or non-existent. The Final 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.

12. The final plan does not provide the ecological conditions or species-specific conditions required for southern white-tailed ptarmigan viability as required by 36 C.F.R. 219.9.

The FEIS (at 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 (at 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 (at 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 Final Plan (at 177) lists the following plan component as being associated with the southern white-tailed ptarmigan: S-SCC-4.

G-SCC-4 – seeks to "avoid road construction and other permanent ground-disturbing activities within 100 feet of alpine fell and talus rock fields, and alpine bogs," which is part of the habitat composition for the ptarmigan. 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. Moreover, the guideline is not sufficiently protective of all the species' habitat types.

In sum, the plan components required to provide ecological conditions necessary for the southern white-tailed ptarmigan is insufficient or non-existent. The Final 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.

13. the final plan does not provide the ecological conditions or species-specific conditions required for Rio Grande chub viability as required by 36 C.F.R. 219.9.

The FEIS (at 265, Table 60; at 266, Table 61) lists the ecological conditions necessary for the Rio Grande chub as:

- presence of nonnative fish and amphibians
- coarse substrate (aquatic)

The Rio Grande Chub Overview (at 2) provides additional information about ecological conditions necessary for the species:

The Rio Grande chub is a versatile species able to inhabit both riverine and lacustrine habitats. It has been known to thrive at elevations up to 11,370 ft. (Zuckerman and Langlois 1990). It is usually found in pools with overhanging banks and brush, and is known to prefer cool, fast-flowing reaches with gravel or cobble substrate. Bestgen et al. (2003) found chubs at sites where cobble, gravel, sand and silt were the most common substrate types, and chubs were most often found at sites where sand was the dominant substrate and least often found at sites with cobble substrate (Rees et al. 2005).

The FEIS lists the threats to the Rio Grande chub as, "reduction of stream flows, increased sediment loads, and competition with and predation by nonnative fish." FEIS at 558, Table 145. The Rio Grande Chub Overview (at 3) concurs with the FEIS and also added water diversion projects, dams and reservoirs, habitat fragmentation, and livestock grazing as threats to this species.

Table 23, "Crosswalk of species of conservation concern plan components," in the Final Plan (at 177) lists the following plan components as being associated with the Rio Grande chub. We point out their benefits and limitations.

S-GDE-1 – reads "Do not authorize management actions that alter the hydrology of groundwater-dependent habitat features." Yet, there are no measurable desired conditions/characteristics for "groundwater-dependent habitat features." Therefore, there is no logical planning connection to the ecological conditions necessary for the persistence of the fish SCC.

G-GDE-1 – the guideline is aimed at maintaining "ecosystem diversity and function." However, there are no measurable desired conditions/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.

S-RMZ-1 – will not likely help the Rio Grande chub. This standard allows/encourages projects that have negative impacts to riparian areas and fish habitat for up to five years. 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 provides no logical connection to the ecological conditions necessary for the persistence of the fish SCC. The plan's Table 23 does not cite any desired conditions that provide ecological conditions for the viability of the SCC fish. Regardless, if this tiers to DC-RMZ-1, that component is flawed and does not provide certain needed conditions for SCC fish. It states for example that there must be "*sufficient* vegetative cover to provide bank stability, trap and retain sediment, regulate temperature, and contribute to floodplain function" (emphasis added).

G-RMZ-2 – This guideline may offer some value for the Rio Grande chub 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.

G-WA-1 – provides direction for "assuring that activities meet State of Colorado water quality standards." If the state water quality standards are needed to provide conditions necessary for the viability of SCC fish, they must be in the plan. At a minimum, they must be specifically referenced with a link to the applicable standards.

G-WA-2 – allows for short-term degradation of water resources, including lakes, streams, wetlands, and groundwater. However, it must be clear how the Forest will evaluate "long-term degradation" to these resources, and what will constitute degradation over what time period.

G-FISH-1 – involves habitat connectivity. 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 – involves habitat connectivity. 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 – addresses fisheries activity period maps. It is not clear how the guideline addresses the ecological conditions necessary for the viability of SCC fish.

G-MIN-1 – relates to mining activities and impacts to water quality. However, there are no means provided to determine "unacceptable impacts to water quality or fish habitat."

In sum, the plan components required to provide ecological conditions necessary for Rio Grande chubs are insufficient or non-existent. The Final Plan fails to provide the plan components necessary to maintain Rio Grande chub 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

Rio Grande chub viability. Consult the RGNF's Rio Grande chub species overview for ecological condition needed for recovery (at 3-4). The Final Plan requires a major revision to provide the conditions and protections necessary for the species and others, as discussed throughout this objection.

14. The final plan does not provide the ecological conditions or species-specific conditions required for Rio Grande cutthroat trout viability as required by 36 C.F.R. 219.9.

The FEIS (at 266, Table 61) lists the ecological conditions necessary for the Rio Grande cutthroat trout as:

- vegetation that overhangs water

The Rio Grande Cutthroat Trout Overview (at 3) added:

Rio Grande cutthroat trout are primarily found in clear cold streams but occasionally occur in lacustrine (lake or reservoir) habitats. They spawn as high water flows from snowmelt recede. Cutthroat trout are opportunistic feeders, eating both aquatic invertebrates and terrestrial insects that fall into the water. As they mature, fish become a larger part of the diet.

The FEIS summarized threats to the species below. FEIS (at 559, Table 145):

The Climate Change Vulnerability Assessment for the Colorado Bureau of Land Management described this species as having greatly increased vulnerability in its physiological, thermal, and hydrological niches due to potential changes in temperature and precipitation patterns. This species is wholly dependent upon human management to survive. Under current conditions, if management activities were to cease, the subspecies would be expected to resume a declining trend as a result of invasion of populations by nonnative salmonids, stochastic environmental events, whirling disease, and the demographic and genetic factors associated with small, isolated populations (Pritchard and Cowley 2006). Species is ranked by Colorado Parks and Wildlife as Species of Greatest Conservation Need Tier 1.

The Rio Grande Cutthroat Trout Overview (at 3-4) identified these additional threats:

- water diversions
- stream drying
- dams
- habitat degradation
- changes in hydrology
- hybridization with rainbow trout and other species of cutthroat trout
- competition with brown trout (Salmo trutta) and brook trout (Salvelinus fontinalis)
- climate change
- Grazing
- Logging
- road and trail construction

- mining
- water diversion

The Overview (at 4) provided and additional summary of threat dynamics:

Multiple studies have reported habitat degradation resulting from grazing pressure, decreases in trout abundance with grazing or increases in trout abundance with cessation of grazing. Timber harvest can similarly impact riparian vegetation and hence stream morphology, habitat conditions, and availability of food. Removal of timber adjacent to the stream also removes a source of large woody debris, which is important in structuring stream morphology, causing the retention of sediments and organic matter, and providing nutrient inputs. Road construction, improper road maintenance, and mining are also associated with changes in hydrologic and erosional processes and often cause increased deposition of fine sediment in streams; however, mining is primarily associated with chemical pollution of water bodies (Platts 1991, Knapp and Matthews 1996, Chamberlin et al. 1991, Wipfli 1997, Furniss et al. 1991, Eaglin and Hubert 1993, Nelson et al. 1991, all cited in Pritchard and Cowley 2006).

Table 23, "Crosswalk of species of conservation concern plan components," in the Final Plan (at 177) lists the following plan components as being associated with the Rio Grande cutthroat trout.

S-GDE-1 – reads "Do not authorize management actions that alter the hydrology of groundwater-dependent habitat features." Yet, there are no measurable desired conditions/characteristics for "groundwater-dependent habitat features." Therefore, there is no logical planning connection to the ecological conditions necessary for the persistence of the fish SCC.[29]

G-GDE-1 – the guideline is aimed at maintaining "ecosystem diversity and function." However, there are no measurable desired conditions/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.[30]

S-RMZ-1 – will not likely help the Rio Grande cutthroat trout. 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 for up to five years for each instance 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 – provides no logical connection to the ecological conditions necessary for the persistence of the fish SCC. The plan's Table 23 does not cite any desired conditions that provide ecological conditions for the viability of the SCC fish. Regardless, if this tiers to DC-

[29] Standards are "established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects…, 219.7(e)(1)(iii).
[30] "Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects," 219.7(e)(1)(iv).

RMZ-1, that component is flawed and does not provide certain conditions for SCC fish. It states for example that there must be "*sufficient* vegetative cover to provide bank stability, trap and retain sediment, regulate temperature, and contribute to floodplain function" (emphasis added).

G-RMZ-2 – This guideline may offer some value for the Rio Grande cutthroat trout 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.

G-WA-1 – provides direction for "assuring that activities meet State of Colorado water quality standards." 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 – allows for short-term degradation of water resources, including lakes, streams, wetlands, and groundwater. However, it must be clear how the Forest will evaluate "long-term degradation" to these resources.

G-FISH-1 – involves habitat connectivity. 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 – involves habitat connectivity. 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 – addresses fisheries activity period maps. It is not clear how the guideline addresses the ecological conditions necessary for the viability of SCC fish.

G-MIN-1 – relates to mining activities and impacts to water quality. However, there are no means provided to determine "unacceptable impacts to water quality or fish habitat."

In sum, the plan components required to provide ecological conditions necessary for Rio Grande cutthroat trout are insufficient or non-existent. The Final Plan fails to provide the plan components necessary to maintain the species' 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 Rio Grande cutthroat trout viability. There must be sufficient plan components to mitigate the manageable threats identified in the Rio Grande Cutthroat Trout Overview and maintain the necessary ecological conditions. The Final Plan requires a major revision to provide the conditions and protections necessary for the species.

15. The final plan does not provide the ecological conditions or species-specific conditions required for Rio Grande sucker viability as required by 36 C.F.R. 219.9.

The FEIS (at 265, Table 60; at 266, Table 61) lists the ecological conditions necessary for the Rio Grande sucker as:

- willow thickets and cottonwood galleries
- presence of nonnative fish and amphibians
- vegetation that overhangs water
- coarse substrate (aquatic)

The Rio Grande Sucker Overview (at 2) also included, "relatively low velocity stream margins for young" and "pools, riffles, and glides."

The FEIS summarizes the threats to the species. FEIS at 559, Table 145:

Competition with and predation by nonnative species are extensive threats to the health and persistence of Rio Grande sucker populations. Nonnative predators include northern pike and brown trout. The introduced white sucker tends to be well adapted to a variety of degraded environmental conditions, allowing it a competitive advantage on a spatial or temporal scale over the Rio Grande sucker. The larger white sucker competes with Rio Grande sucker for available food sources (periphyton and macroinvertebrates), and also has the ability to hybridize with Rio Grande sucker (Rees and Miller 2005).

The Rio Grande Sucker Overview (at 3) augmented the FEIS:

- Habitat loss and habitat degradation due to land and water use practices
- reduced stream flows and increased sediment loads
- barriers to fish passage such as dams and diversions
- modification of stream channels due to channelization, scouring, or sedimentation
- changes in temperature and flow regimes
- alterations to water chemistry related to pollution
- Land use practices that can impact stream channels include:
    - construction of roads through highly erodible soils
    - improper timber harvest practices
    - irrigation
    - overgrazing in riparian areas
- post-fire storm events washing sediment into streams
- Competition with and predation by non-native species

Table 23, "Crosswalk of species of conservation concern plan components," in the Final Plan (at 177) lists the following plan components as being associated with the Rio Grande sucker.

S-GDE-1 – reads "Do not authorize management actions that alter the hydrology of groundwater-dependent habitat features." Yet, there are no measurable desired conditions/characteristics for "groundwater-dependent habitat features." Therefore, there is no logical planning connection to the ecological conditions necessary for the persistence of the fish SCC.

G-GDE-1 – the guideline is aimed at maintaining "ecosystem diversity and function." However, there are no measurable desired conditions/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.

S-RMZ-1 – will not likely help the Rio Grande sucker. This standard allows/encourages projects that have negative impacts to riparian areas and fish habitat for up to five years each. 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 – provides no logical connection to the ecological conditions necessary for the persistence of the fish SCC. The plan's Table 23 does not cite any desired conditions that provide ecological conditions for the viability of the SCC fish. Regardless, if this tiers to DC-RMZ-1, that component is flawed and does not provide certain conditions for SCC fish. It states for example that there must be "*sufficient* vegetative cover to provide bank stability, trap and retain sediment, regulate temperature, and contribute to floodplain function" (emphasis added).

G-RMZ-2 – This guideline may offer some value for the Rio Grande sucker 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.

G-WA-1 – provides direction for "assuring that activities meet State of Colorado water quality standards." 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 – allows for short-term degradation of water resources, including lakes, streams, wetlands, and groundwater. However, it must be clear how the Forest will evaluate "long-term degradation" to these resources.

G-FISH-1 – involves habitat connectivity. 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 – involves habitat connectivity. 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 – addresses fisheries activity period maps. It is not clear how the guideline addresses the ecological conditions necessary for the viability of SCC fish.

G-MIN-1 – relates to mining activities and impacts to water quality. However, there are no means provided to determine "unacceptable impacts to water quality or fish habitat."

In sum, the plan components required to provide ecological conditions necessary for Rio Grande suckers are insufficient or non-existent. The Final Plan fails to provide the plan components necessary to maintain Rio Grande sucker 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 Rio Grande sucker viability. There must be sufficient plan components to mitigate the manageable threats identified in the Rio Grande Cutthroat Trout Overview and ensure the necessary ecological conditions will be attained, to the maximum extent possible. Consult the RGNF's Rio Grande sucker species overview for ecological condition needed for recovery (at 3-4). The Final Plan requires a major revision to provide the conditions and protections necessary for the species.

16. The final plan does not provide the ecological conditions or species-specific conditions required for boreal toad viability as required by 36 C.F.R. 219.9.

The FEIS (at 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 (at 3) added:

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

The FEIS (at 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 (at 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 Final Plan (at 177) lists the following plan components as being associated with the boreal toad.

S-GDE-1 – reads "Do not authorize management actions that alter the hydrology of groundwater-dependent habitat features." Yet, there are no measurable desired conditions/characteristics for "groundwater-dependent habitat features." Therefore, there is no logical planning connection to the ecological conditions necessary for the persistence of the boreal toad.

G-GDE-1 – the guideline is aimed at maintaining "ecosystem diversity and function." However, there are no measurable desired conditions/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 boreal toad.

S-RMZ-1 – will not likely help the boreal toad. This standard allows/encourages projects that have negative impacts to riparian areas and habitat lasting up to five years. The EIS must demonstrate that this sustained and repeated harm will maintain conditions for viable populations of boreal toads. Further, there is no documented connection to the ecological conditions necessary for the persistence of the boreal toad and there are no measurable conditions/key characteristics for composition, function, structure of riparian areas and "fish habitat," although it should be made clear that this standard also applies to other riparian dependent species including the boreal toad, rather than just to fish species.

G-RMZ-1 – provides no logical connection to the ecological conditions necessary for the persistence of the boreal toad. The plan's Table 23 does not cite any desired conditions that provide ecological conditions for the viability of the boreal toad. Regardless, if this tiers to DC-RMZ-1, that component is flawed and does not provide certain conditions for SCC fish. It states for example that there must be "*sufficient* vegetative cover to provide bank stability, trap and retain sediment, regulate temperature, and contribute to floodplain function" (emphasis added).

G-RMZ-2 – This guideline may offer some value for the river otter 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 boreal toad.

G-WA-1 – provides direction for "assuring that activities meet State of Colorado water quality standards." If the state water quality standards are needed to provide conditions necessary for the viability of the boreal toad, they must be in the plan.

G-WA-2 – allows for short-term degradation of water resources, including lakes, streams, wetlands, and groundwater. However, it must be clear how the Forest will evaluate "long-term degradation" of these resources.

G-FISH-1 – involves habitat connectivity for fish. Standards and guidelines more applicable to the boreal toad are needed to mitigate for habitat fragmentation.

G-FISH-2 – involves habitat connectivity for fish. Standards and guidelines more applicable to the boreal toad are needed to mitigate for habitat fragmentation.

G-FISH-3 – addresses fisheries activity period maps. It is not clear how the guideline addresses the ecological conditions necessary for the viability of the boreal toad.

G-MIN-1 – relates to mining activities and impacts to water quality. However, there are no means provided to determine "unacceptable impacts to water quality."

In sum, the plan components required to provide ecological conditions necessary for boreal toads are insufficient or non-existent. There is no description of the species' terrestrial habitat or standards or guidelines to mitigate threats to this habitat. The Final 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 Final Plan requires a major revision to provide the conditions and protections necessary for the species.

17. The final plan does not provide the ecological conditions or species-specific conditions required for river otter viability as required by 36 C.F.R. 219.9.

The FEIS (at 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 (at 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 Final Plan (at 177) lists the following plan components as being associated with the river otter.

S-GDE-1 – reads "Do not authorize management actions that alter the hydrology of groundwater-dependent habitat features." Yet, there are no measurable desired conditions/characteristics for "groundwater-dependent habitat features." Therefore, there is no logical planning connection to the ecological conditions necessary for the persistence of the river otter.

G-GDE-1 – the guideline is aimed at maintaining "ecosystem diversity and function." However, there are no measurable desired conditions/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 river otter.

S-RMZ-1 – will not likely help the river otter. This standard allows/encourages projects that have negative impacts to riparian areas and habitat for up to five years each The EIS must demonstrate that this sustained and repeated harm will maintain conditions for viable populations of the river otter. Further, there is no documented connection to the ecological conditions necessary for the persistence of the river otter and there are no measurable conditions/key characteristics for composition, function, structure of riparian areas and "fish habitat," although it should be clear that this standard also applied to other riparian dependent species including the river otter.

G-RMZ-1 – provides no logical connection to the ecological conditions necessary for the persistence of the river otter. The plan's Table 23 does not cite any desired conditions that provide ecological conditions for the viability of the river otter. Regardless, if this tiers to DC-RMZ-1, that component is flawed and does not provide certain conditions for SCC fish and other riparian species. It states for example that there must be "*sufficient* vegetative cover to provide bank stability, trap and retain sediment, regulate temperature, and contribute to floodplain function" (emphasis added), without defining what is sufficient for each species.

G-RMZ-2 – This guideline may offer some value for the river otter 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 river otter.

G-WA-1 – provides direction for "assuring that activities meet State of Colorado water quality standards." If the state water quality standards are needed to provide conditions necessary for the viability of the river otter, they must be in the plan.

G-WA-2 – allows for short-term degradation of water resources, including lakes, streams, wetlands, and groundwater. However, it must be clear how the Forest will evaluate "long-term degradation" to these resources.

G-FISH-1 – involves habitat connectivity for fish. Standards and guidelines more applicable to the river otter are needed to mitigate for habitat fragmentation.

G-FISH-2 – involves habitat connectivity for fish. Standards and guidelines more applicable to the river otter are needed to mitigate for habitat fragmentation.

G-FISH-3 – addresses fisheries activity period maps. It is not clear how the guideline addresses the ecological conditions necessary for the viability of river otter.

G-MIN-1 – relates to mining activities and impacts to water quality. However, there are no means provided to determine "unacceptable impacts to water quality."

In sum, the plan components required to provide ecological conditions necessary for river otters are insufficient or non-existent. The Final 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 (at 3-4). The Final Plan requires a major revision to provide the conditions and protections necessary for the species.

18. The final plan does not provide the ecological conditions or species-specific conditions required for hoary bat viability as required by 36 C.F.R. 219.9.

The FEIS does not list the ecological conditions necessary for the hoary bat. The RGNF's Hoary Bat Overview (at 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 (at 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 Final Plan that apply to the hoary bat. However, the Final 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 Final 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 (at 2). The Final Plan requires revision to provide the conditions and protections necessary for the species.

19. The final plan does not provide the ecological conditions or species-specific conditions required for Townsend's big-eared bat viability as required by 36 C.F.R. 219.9.

The FEIS (at 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 (at 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 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. … 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.

FEIS at 564, Table 145.

Townsend's Big-eared Bat Overview (at 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 Final Plan (at 178) lists the following plan components as being associated with the Townsend's big-eared bat.

G-SCC-5 – reads, "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)." To offer a true constraint, the guideline should "restrict human access to mines and caves." It is important to include a plan component to protect mines and caves for bats. However, such a plan component must 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 Townsend's big-eared bats are insufficient or non-existent. The Final 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 (at 2-3). The Final Plan requires a major revision to provide the conditions and protections necessary for the species.

20. The final plan does not provide the ecological conditions or species-specific conditions required for Brewer's sparrow viability as required by 36 C.F.R. 219.9.

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

- Sagebrush

The RGNF's Brewer's Sparrow Overview (at 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 (at 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 Final Plan (at 177) lists the following plan components as being associated with the Brewer's sparrow.

G-TEPC-1 is in regard to minimizing effect to listed species from management actions. The Brewer's sparrow is not a listed species but an SCC, which needs to be protected from management activities. However, even if it applied to SCC, G-TEPC-1 is too vague and broad to be meaningful. 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(1).

G-SCC-3 – seeks to "reduce habitat fragmentation and maintain structural conditions of sagebrush ecosystems." 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 and can be mitigated by the guideline. However, the patch size is consistent with the habitat requirements of the Brewer's sparrow.

In sum, the plan components required to provide ecological conditions necessary for Brewer's sparrows are insufficient or non-existent. The Final 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 Final Plan requires a major revision to provide the conditions and protections necessary for this and other species.

21. The final plan does not provide the ecological conditions or species-specific conditions required for northern pocket gopher viability as required by 36 C.F.R. 219.9.

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 (at 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 Final 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.

22. The final plan does not provide the ecological conditions or species-specific conditions required for plains pocket mouse viability as required by 36 C.F.R. 219.9.

The FEIS does not list the ecological conditions necessary for the plains pocket mouse. The RGNF's Plains Pocket Mouse Overview (at 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 Final Plan requires a major revision to provide the conditions and protections necessary for this and other species.

XI. **THE WILD AND SCENIC RIVER ELIGIBILITY EVALUATION IS INADEQUATE**

Objectors addressed the issue of wild, scenic, and recreational river eligibility in our Draft plan-EIS comment letter of December 23, 2017, beginning at p. 168.

Objection summary

We object to the inadequacy of analysis presented in Appendix B of the Rio Grande National Forest (RGNF) proposed final land management plan, and to corresponding errors and failures in

the conclusions presented in that appendix—*Wild, Scenic, and Recreational River Eligibility Determination Process,* (*Appendix B*).

This objection section parallels a formal wild & scenic rivers-specific objection submitted separately by *American Rivers, Southwest Region*.

Points of objection:

A) The wild & scenic eligibility analysis fails to consider important stream segments for eligibility

B) The wild & scenic analysis fails to provide detailed documentation of potential outstandingly remarkable values that were considered

C) The wild & scenic analysis fails to document the procedures and evaluations leading to the determination that no changed circumstances have occurred on streams considered in the RGNF 1996 inventory of potential rivers

D) The wild & scenic analysis fails to find eligibility for three stream segments that, according to that analysis, fully qualify as eligible

A. THE WILD & SCENIC ELIGIBILITY ANALYSIS (*APPENDIX B, P. 143 ET SEQ*) FAILS TO CONSIDER IMPORTANT STREAM SEGMENTS FOR ELIGIBILITY

Streams dropped from consideration

The eligibility analysis states that 34 stream segments (in addition to those eligible streams carried forward from the RGNF 1996 forest plan revision) were initially considered under the proposed plan, and that four of those stream segments were not evaluated because they "...were not in the U.S. Geological Survey National Hydrography Dataset..." (*Appendix B, p. 147*)

The elimination from consideration of those four stream segments is inconsistent with the Forest Service *Land Planning Handbook*, Chapter 80 *Wild and Scenic River Evaluation* (Handbook). The *Handbook* states, in part, that wild & scenic eligibility study, "...shall include all rivers named on a standard U.S. Geological Survey 7.5 minute USGS quadrangle map." (*Handbook, 82.2, p. 7*)

That is, the *Handbook* requires that the rivers inventory shall include—but is not necessarily limited to—rivers named on USGS quadrangle maps. The *Handbook* does not preclude the inclusion of other qualified streams.

Since the eligibility analysis fails to list the four stream segments dropped from consideration, it is not possible to determine whether those streams appear on USGS quadrangle maps or otherwise qualify for evaluation. This, in turn denies the opportunity for public review and comment on whether those streams should be evaluated.

Streams proposed in public comments, citing best available scientific information.

Beyond the 31 stream segments that were considered in the wild & scenic analysis, at least 59 additional stream segments were proposed in public comments for consideration. The RGNF

must consider relevant available information and data regarding those streams, as provided by citizen organizations, agency partners, and the public.

The streams proposed for consideration include 24 streams on which the *State of Colorado* holds instream flow-protective water rights, thus implying unique river-related values that warrant protection in the forest plan:

- Alamosa River headwaters
- Alder Creek
- Bear Creek
- Beaver Creek
- Cross Creek
- East Fork Pinos Creek
- Elk Creek
- El Rito Azul
- Embargo Creek
- John's Creek
- Lake Fork Conejos River
- Lost Mine Creek
- Middle Fork Conejos River
- Middle Fork Saguache Creek
- North Fork Conejos River
- North Fork Saguache Creek
- Pinos Creek
- Saguache Creek
- South Fork Camero Creek
- South Fork Saguache Creek
- Treasure Creek
- Wannamaker Creek
- West Alder Creek
- West Fork Pinos Creek

(*American Rivers comment letter, October 24, 2016*)

The streams proposed in comments for consideration also include fourteen streams in or along which unique natural values have been identified by *Colorado Natural Heritage Program* (CNHP). Streams thus identified include those listed in the CNHP *Fen Mapping in Rio Grande National Forest*:

Elk Creek watershed
- Elk Creek
- Rio Colorado
- South Elk Creek

Alamosa River Headwaters
- Bitter Creek
- Cascade Creek

- Cataract Creek
- Iron Creek
- Gold Creek
- Prospect Creek
- Treasure Creek

Ute Creek watershed
- East Ute Creek
- Middle Ute Creek
- West Ute Creek
- Ute Creek

(*American Rivers comment letter, October 24, 2016; Rocky Smith et al comment letter, December 23, 2017*)

Other streams identified include 21 listed in CNHP *Assessment of Wetland Condition on the Rio Grande National Forest*:

- Adams Fork
- Bear Creek
- Benito Creek
- Halfmoon Creek
- Machin Creek
- Mesa Creek
- Middle Fork (Conejos)
- North Fork (Conejos)
- Pole Creek
- Rio Grande above Rio Grande Reservoir

- Rito Azul
- Rito Hondo
- Headwaters Middle Fork Saguache Creek
- Headwaters South Fork Saguache Creek
- Spring Creek
- Twin Peaks Creek
- Wannamaker Creek
- West Fork Pole Creek
- Whale Creek
- Willow Creek

Additional streams that were identified are associated with the CNHP list *of Potential Conservation Areas*: Adams Fork of Conejos River, Baca Grande and Reserve, Conejos River at Platoro, Conejos River at Spectacle Lake, Conejos River Springs, El Rito Azul, Elephant Rocks, Great Sand Dunes, Pole Creek, Ra Jadero Canyons, Rio Grande at Pole Creek Mountain, Rito Hondo Creek, Saguache Creek, Sangre de Cristo Creek, Sangres Alluvial Fan, South Fork of the Conejos River and Hansen Creek, Upper Medano Creek, Upper Pole Creek, and Zapata Falls.

(*American Rivers comment letter, October 24, 2016; Rocky Smith et al comment letter, December 23, 2017*)

To determine if outstandingly remarkable values are present, RGNF is required to consider, among other factors, "...best available scientific information, and public participation" and information from "...other Federal, State, or local agencies..." (*Handbook, 82.73, p. 11*)

The RGNF proposed final plan's Appendix B "References Cited" does not include reference to any of the sources noted above.

Further, the accompanying *Final Environmental Impact Statement*'s (II FEIS) "Response to Comments" fails to reconcile the statement that "... this feature [fens] is uncommon in the Southern Rocky Mountains..." with the wild & scenic analysis's failure to consider the presence of fens an outstandingly remarkable value. The response does not document the evaluation leading to that conclusion. (*FEIS, WSRR-5, p. 233*) Since fens are considered an irreplaceable resource (see *USFS Region 2 fen policy, March 19, 2002*), their presence in a river corridor should be considered an outstandingly remarkable value.

The FEIS Response to Comments section does not address comments recommending consideration of streams on which the State of Colorado holds instream flow-protective water rights. (*FEIS, p. 230 et seq*)

The FEIS Response to Comments section does not address comments recommending RGNF evaluate for wild & eligibility streams associated with *Colorado Natural Heritage Program*'s *Assessment of Wetland Condition on the Rio Grande National Fores*t, or that RGNF should have considered the stream-related values noted in that document as part of best available science. (*FEIS, p. 230 et seq*)

The FEIS Response to Comments section does not address comments recommending that RGNF evaluate for wild & scenic eligibility streams associated with *Colorado Natural Heritage Program*'s *Potential Conservation Areas*, or that the RGNF should have considered the stream-related values noted in that document as part of best available science. (*FEIS, p. 230 et seq*)

Again, RGNF is required to consider, in evaluating potential outstandingly remarkable values, "...best available scientific information..." and is required to consider such information from, "...other Federal, State, or local agencies..." (*Handbook, 82.73, p. 12*)

> ***REMEDY –*** RGNF must expand wild & scenic eligibility analysis to include all the streams listed above, as well as any others submitted in public comments for consideration during the planning process, engaging the scientific information available from the sources cited above.
>
> *(Documented examples of potential outstandingly remarkable values, apparently not considered by RGNF, are provided below.)* *******

B. THE WILD & SCENIC ANALYSIS FAILS TO PROVIDE DETAILED DOCUMENTATION OF POTENTIAL OUTSTANDINGLY REMARKABLE VALUES THAT WERE CONSIDERED.

The wild & scenic eligibility analysis provides only a cursory chart (Table 19) with select categories of potential outstandingly remarkable values on 31 free-flowing streams considered in the analysis, noting only that particular streams do ("yes") or do not ("no") support specific value categories. (*Appendix B, p. 149 et seq*)

To be found wild & scenic-eligible, a stream need only a) be free-flowing and b) possess at least one rare, unique, or exemplary value owing to or essentially associated with the stream (outstandingly remarkable value). Without presenting data considered by RGNF, the proposed final eligibility determinations appear to be arbitrary or, at least, not transparent.

Neither that chart nor any accompanying narrative provides detail of what stream-specific species or features were reviewed, of how those values and features were evaluated to reach a determination, or of what scientific documents or field observations were used in that determination. The "References Cited" section of Appendix B lists only internal Forest Service correspondence and previous studies; that section includes no indication that additional, independent scientific resources were consulted.

This failure to employ—or, at least, failure to cite—additional scientific resources fails to comply with the *Land Planning Handbook*'s requirement that wild & scenic evaluations rely, in part, on "...best available science..." (*Handbook, 82.73, p. 12*)

In addition, the failure to cite additional scientific resources, or to otherwise document how the analysis of river-related values was undertaken denies the public an opportunity to review and comment on such references and scientific resources. This absence of information and opportunity to comment fails to comply with the *Forest Planning Handbook*'s requirement that wild & scenic evaluations rely, in part, on "...public participation..." (*Handbook, 82.73, p. 11*)

> ***REMEDY –*** RGNF must revise wild & scenic eligibility analysis to fully and transparently document scientific resources and field observations leading to determinations regarding potential outstandingly remarkable values associated with streams evaluated, and must submit that revised analysis and those resources and observations to additional public review and comment.
>
> *(Documented examples of potential outstandingly remarkable values, apparently not considered by RGNF, are provided below.)* *******

C. THE WILD & SCENIC ANALYSIS FAILS TO DOCUMENT THE PROCEDURES AND EVALUATIONS LEADING TO THE DETERMINATION THAT NO CHANGED CIRCUMSTANCES HAVE OCCURRED ON STREAMS CONSIDERED IN THE RGNF 1996 INVENTORY OF POTENTIAL RIVERS.

The wild & scenic eligibility analysis simply asserts that, "...the responsible official determined that no changed circumstances existed..." relative to streams evaluated during the 1996 forest plan revision. As a result, some 300 streams were not reconsidered for wild & scenic eligibility. (*Appendix B, p. 144*)

No documentation of that determination regarding potential changed circumstances is presented. This fails to comply with the Forest Service *Land Planning Handbook*'s detailed procedure for making such a determination—including consideration of "...changes that indicate a stronger presence of outstandingly remarkable values..."—or at least fails to document how the wild & scenic analysis does comply that that procedure. (*Handbook, 82.4, p. 8*)

Much of the information and data sources noted in Objection points 1 and 2 above (and in the related footnote listing examples of streams that appear to possess independently documented unique, rare, or exemplary natural values) has been documented since 1996. It is therefore important to clarify whether such new information was or was not considered by RGNF as potential changed circumstances and, if the new information was considered, how that consideration process occurred.

> ***REMEDY –*** RGNF must provide detailed documentation of procedures and evaluations leading to the determination that no changed circumstances exist regarding streams evaluated for wild & scenic eligibility as part of the 1996 forest plan revision, and RGNF must submit that documentation to public review and comment before making a final determination regarding potential changed circumstances.

D. THE WILD & SCENIC ANALYSIS FAILS TO FIND ELIGIBILITY FOR FOUR STREAM SEGMENTS THAT, ACCORDING TO THAT ANALYSIS, FULLY QUALIFY.

The wild & scenic eligibility analysis lists four streams as being free-flowing and possessing at least one outstandingly remarkable value, without determining those streams eligible. (*Appendix B, p. 149*)

Specifically, Table 19 in Appendix B notes that free-flowing stream Alpine Creek possesses outstandingly remarkable values for "historic and cultural values", that free-flowing stream Cottonwood Creek possesses outstandingly remarkable values for "fish", that free-flowing stream Pole Creek possesses outstandingly remarkable values for "historic and cultural values" and that free-flowing stream Cat Creek possesses outstandingly values for "fish".

Failure to find these three streams wild & scenic eligible does not comply with the straightforward, objective standards for eligibility noted in the *Wild and Scenic Rivers Act* of 1968 and in the Forest Service *Land Planning Handbook*.

The *Wild and Scenic Rivers Act* specifies that, "A wild, scenic or recreational river area eligible to be included in the system is a free-flowing stream and the related adjacent land area that possesses one or more of the values referred to in Section 1, subsection (b) of this Act." [outstandingly remarkable values] (*P.L. 99-590, Sec. 2(b)*)

Correspondingly, the *Land Planning Handbook* provides specific, concise criteria for eligible rivers, stating, "To be eligible for inclusion, a river must be free-flowing and, in combination with its adjacent land area, possess one or more outstandingly remarkable values." (*Handbook, 82.7, p. 9*)

> ***REMEDY –*** Alpine Creek, Cottonwood Creek, Pole Creek, and Cat Creek, as listed in Table 19, must be found wild & scenic eligible and be appropriately classified to reflect each respective stream's condition and to establish corresponding protective management under the forest plan.

*** Examples of documented stream-specific values** (per *Colorado Natural Heritage Program et al*)

Alpine Creek – bald eagle winter range; lynx denning and winter habitats; Potential Conservation Area (PCA) L4 higher biodiversity significance
Asiatic Creek – lynx denning and winter habitats
Bird Creek – lynx denning and winter habitats
Cat Creek – aquatic designated cutthroat trout habitat; bald eagle winter range; lynx denning and winter habitats
Coal Creek – lynx denning and winter habitats
Cottonwwood Creek – lynx denning and winter habitats; bald eagle winter range; PCA L4 higher biodiversity significance
Cropsy Creek – lynx denning and winter habitats
East Fork Navajo River – aquatic designated cutthroat trout habitat
Flagstaff Creek – lynx denning and winter habitats
Jarosa Creek – bald eagle winter range; Gunnison prairie dog colony active; lynx denning and winter habitats
La Jara Creek – aquatic designated cutthroat trout habitat; bald eagle winter concentration; bald eagle winter range; Gunnison prairie dog colony active; lynx denning and winter habitats
Little Red Creek – bald eagle winter range; lynx denning and winter habitats
Merkt Creek – Gunnison sage-grouse lek site buffer, overall range, production areas, winter range; lynx denning and winter habitats
Middle Fork Cotton Creek – lynx denning and winter habitats
Middle Fork North Crestone Creek – lynx denning and winter habitats
Middle Fork Pole Creek – lynx denning and winter habitats
Middle Zapata Creek – bald eagle winter range, winter forage; lynx denning and winter habitats
North Fork Cedar Creek – lynx denning and winter habitats
North Fork Pole Creek – lynx denning and winter habitats
North Fork South Zapata Creek – bald eagle winter forage, winter range; lynx denning and winter habitats
Osier Creek – aquatic designated cutthroat trout habitat; lynx denning and winter habitats
Peterson Creek – Gunnison prairie-dog colony active; Gunnison sage-grouse lek sites buffer, production areas, lynx denning and winter habitats

Pole Creek – lynx denning and winter habitats; bald eagle winter range; PCA L4 higher biodiversity significance
Rock Creek – Gunnison sage-grouse lek sites buffer, overall range, production areas; lynx denning and winter habitats
San Luis Creek – Gunnison sage-grouse overall range; lynx denning and winter habitats
Short Creek – lynx denning and winter habitats; aquatic designated cutthroat trout habitat; bald eagle winter range; PCA L4 higher biodiversity significance
South Fork Cedar Creek – lynx denning and winter habitats
South Spanish Creek – bald eagle winter range; PCA L4 higher biodiversity significance
Spanish Creek – aquatic designated cutthroat trout habitat; lynx denning and winter habitats; bald eagle winter concentration, winter forage, winter range; PCA L4 higher biodiversity significance

REFERENCES

State of Colorado, Instream Flow Program (See State Water Division 3 entries)
http://cwcb.state.co.us/technical-resources/instream-flow-water-rights-database/Pages/main.aspx

Colorado Natural Heritage Program, fen mapping data
https://cnhp.colostate.edu/ourservices/mapping/

Colorado Natural Heritage Program, Assessment of Wetland Condition on Rio Grande National Forest
https://cnhp.colostate.edu/cnhpblog/2012/12/20/new-report-assessment-of-wetland-condition-on-the-rio-grande-national-forest/

Colorado Natural Heritage Program, Potential Conservation Areas
https://cnhp.colostate.edu/ourdata/help/#PCA

XII. **THE FINAL PLAN DOES NOT ADEQUATELY ADDRESS MANAGEMENT OF OVER-THE-SNOW MOTORIZED VEHICLE USE**

Objectors addressed this issue in comments on the Draft Plan and DEIS. A coalition of objecting groups commented on this on pages 148-160 of comments submitted on December 23, 2017. The Quiet Use Coalition commented on this on page 5 and 6 of comments submitted December 29, 2017.

A Mgmt Appr in the Final Plan states "Over-the-snow motorized vehicle use is allowed unless specifically restricted." Final Plan at 55. A desired condition for MA 3 in the plan also states "Cross country (off trail) motorized travel is limited to over-the-snow use unless otherwise prohibited." Final Plan at 72.

This plan direction is inconsistent with the requirements of subpart C of the Travel Management Rule, which requires the Forest Service to designate a system of specifically delineated areas, roads, and trails for over snow vehicle (OSV) use, with all other use prohibited. 36 C.F.R. §§ 212.80(a), 212.81, 261.14. The Preamble to the 2015 Rule makes abundantly clear the intent of this regulatory requirement that national forest lands are closed to OSV use by default, unless specifically designated as open: "it would be clearer for the public and would enhance consistency in travel management planning and decision-making if the Responsible Official were required to designate a system of routes and areas where OSV use is prohibited unless allowed."[31]

To satisfy these legal requirements, the Forest Service must designate as open only those discrete, delineated areas that are appropriate for cross-country OSV use and minimize environmental damage and conflicts with other recreational uses. Open areas should have easily enforceable boundaries using topographic or geographic features such as ridgetops, highways, or watershed boundaries. All other areas that are not determined to be appropriate for open designation then must be closed (or limited to designated routes), thus moving the forest into a "closed unless designated open" management regime.

OSV language in the Final Plan is also inconsistent with plan and FEIS language that properly recognizes that motor vehicle use is constrained to a designated system. *See, e.g.*, Final Plan at 55 ("Motorized use is restricted on all areas not designated for motorized use on the Forest motor vehicle use map."); and FEIS at 296 ("Motorized vehicle use, including over-snow vehicle use, is currently limited to designated routes or areas outside wilderness.").

OSV language in the Final Plan regarding over-the-snow motorized vehicle use also contradicts previous language in the plan regarding motorized vehicle use. The Final Plan states "Motorized use is restricted on all areas not designated for motorized use on the Forest motor vehicle use map." Final Plan at 55. See also quote above from FEIS at 296.

This implies that all motorized use is restricted on all areas, unless they are designated as open for motorized use. But language in the Final Plan suggests the opposite for motorized over-snow vehicles: that this use is allowed on all areas, unless they are designated as closed to that use. Both 36 CFR 212.81 and 261.14 indicate that over-the-snow motorized vehicle use is to be specifically restricted to specific identified routes and areas, and not allowed everywhere unless specifically restricted as language in the current plan suggests.

[31] 80 Fed. Reg. 4500, 4507 (Jan. 28, 2015).

A restricted unless allowed policy for over-the-snow motorized vehicle use would be more consistent with the policy the USFS uses to manage non-over-the-snow motorized vehicle use.[32] Inconsistent management of motorized uses would confuse users and make education and enforcement more difficult.

Restricting over-the-snow motorized vehicle use unless specifically allowing it places more responsibility on users of these vehicles to determine where they can legally ride. A "closed unless open" policy changes the mindset of users, and encourages them to seek and reference maps and information that specifically identifies where they can legally operate over-the-snow motorized vehicles.[33] The realization and acknowledgement that motor vehicle use is not allowed everywhere helps ensure increased voluntary user compliance with regulations. Believing that routes and areas are closed unless open encourages users to proceed with caution and make educated travel decisions.

Additionally, the plan should clarify (with an objective in the revised Plan) that the Forest intends to initiate winter travel management planning within one year of the finalization of the land management plan.

Upon public notice, subpart C permits the Forest Service to grandfather in previous decisions made with public involvement that restrict OSV use to designated areas and routes. 36 C.F.R. § 212.81(b). Prior to grandfathering existing winter travel management decisions by adopting them on an OSV use map, however, the Forest Service must ensure that those decisions were subject to the executive order minimization criteria and other relevant legal requirements.
Most critically, previous decisions must have been subject to the minimization criteria, and the administrative records for the decisions must demonstrate that the agency applied the criteria when making any OSV area or route designations. If the previous decisions were not subject to the minimization criteria, the Forest Service may not adopt them on its OSV use map without a public process.

Similarly, the Forest Service may not adopt previous decisions that rely on an "open unless designated closed" policy or fail to designate discrete open areas. The Forest Service also must ensure that previous decisions are not outdated. Older decisions likely did not account for the increased speed, power, and other capabilities of current OSVs, which allow OSVs to travel further and faster into the backcountry and to access remote areas that were previously inaccessible. Older decisions also may not account for new scientific information on sensitive wildlife and other forest resources and how they are affected by OSV use. They may not account for current recreational use trends and increasing conflict between motorized and non-motorized

[32] Regulations for non-over-the-snow motorized vehicles at 36 CFR 212.50(a).
[33] See also Department of Agriculture. Forest Service. 2015. 36 CFR Parts 212 and 261 Use By Over-Snow Vehicles (Travel Management Rule). Federal Register. Vol. 80, No. 18 / Wednesday, January 28, 2015, at 4510.

winter backcountry users. And they may not account for the current and predicted impacts of climate change, which is, among other things, reducing and altering snowpack and increasing the vulnerability of wildlife and other resources to OSV-related impacts. Without this information, the Forest Service cannot demonstrate how those previous decisions minimize impacts based on current circumstances and science.

SUGGESTED IMPROVEMENT: Modify the statement on page 55 of the Final Plan to read "Over-the-snow motorized vehicle use is restricted except in designated areas or on designated roads or trails." Modify the statement on page 72 of the Final Plan to read "Cross country (off trail) motorized travel is limited to over-the-snow use in designated areas." Both of these statements, as revised, must be standards.

Additionally, as discussed in our December 2017 Draft Plan and DEIS comments, the Forest must:

- Develop a winter-specific ROS classifications and associated plan components;
- Include an objective that implementation-level winter travel planning will be completed within three years of forest plan approval;
- Include a standard setting a minimum snow depth of 18 inches for cross-country OSV travel and 12 inches for on-trail travel;
- Develop suitability determinations for OSV use based on terrain, snowpack, wildlife habitat, and other conditions that impact OSV travel, and provide a clear methodology and supporting rationale for the determination.
- Add an objective that unsuitable areas will be subject to appropriate closure orders within one year of plan approval;
- Include 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 forest will designate discrete open areas and trails within those areas that are located to minimize resource impacts and conflicts with other recreational uses.
- Add a standard that says: "Over-the-snow motorized vehicle use is prohibited off the designated system";
- The final plan and EIS should clarify that the RGNF will start winter travel management planning within one year of the finalization of the land management plan. The final plan should include this as an objective;
- Clarify that there are not designated OSV trails on the RGNF;
- Clarify that wheeled vehicles that travel over snow are not over-snow vehicles and are only allowed on the designated system displayed on a motor vehicle use map.

XIII. **THE FINAL PLAN MUST PROTECT THE SPRUCE HOLE/OSIER/TOLTEC AREA**

A. INTRODUCTION

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 (Proposed Final 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:

- Affirm the Forest's distinctive role and contribution to habitat connectivity within the broader landscape—the Upper Rio Grande region—consistent with 36 C.F.R. 219.2(b) and 36 C.F.R. 219.7(f)(1)(ii).
- 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 C.F.R. 219.8(a)(1) and 36 C.F.R. 219.9.
- Maintain or restore ecological connectivity in riparian areas, consistent with 36 C.F.R. 219.8(a)(3)(i)(E).
- Provide an opportunity for broader-scale monitoring strategies across the larger Upper Rio Grande region, consistent with 36 C.F.R. 219.12(a)(3) and 36 C.F.R. 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.

B. 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 C.F.R. 219.4)

Enabling effective, meaningful public participation is embodied in Planning Rule requirements in 36 C.F.R. 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).

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

C. 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.

II FEIS 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.

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

D. IN NOT DESIGNATING THE SPRUCE HOLE/OSIER/TOLTEC SPECIAL INTEREST AREA, THE RGNF 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.

E. 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?

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

F. 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.

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

G. THE FINAL ENVIRONMENTAL IMPACT STATEMENT FAILED 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 C.F.R. 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 C.F.R. 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.
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).

FEIS at 100.

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.

Suggested 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.

XIV. **THE PROPOSED WOLF CREEK PASS SPECIAL INTEREST AREA MUST BE EVALUATED IN AN ALTERNATIVE**

Objectors recommended establishment of a Wolf Creek Pass Special Interest Area as part of their scoping comments and conservation alternative, submitted on October 28, 2016. See p. 10 of the scoping comments, referencing Appendix 7 of the alternative.

Background:
A required element in forest planning is to determine whether to administratively designate additional areas to recognize and protect special values, features, and resources,[34] including those that "carry out the distinctive role and contributions of the plan area in the broader landscape or contribute to achieving desired conditions for the plan area." FSH 1909.12, chapter 20, section 24(1)(b). Designated areas may include areas defined in FSM 2372.05 such as botanical areas, zoological areas, recreation areas, as well as other types of areas that embody the culture, niche, unique characteristics, or ecological conditions of a specific forest or landscape.[35] Forests in the past have established a variety of designations, and, as the RGNF has done in the past, referred to them as speical interest areas.

[34] 36 C.F.R. §§ 219.7(c)(2)(vii). According to 219.19,a designated area is "[a]n area or feature identified and managed to maintain its unique special character or purpose….Examples of administratively designated areas are experimental forests, research natural areas, scenic byways, botanical areas, and significant caves.")
[35] The list of administrative designation categories provided in Exhibit 01 in FSH 1909.12, section 24 is not intended to be comprehensive, as explained in the response to comments in the final planning rule. *See* the Preamble to the Planning Rule, 77 Fed. Reg. 21245: "the Department clarified the definition of designated areas to explicitly show that the list of examples is not exhaustive…". Section 24 affirms this ("Exhibit 01 lists some types of designated areas that the Responsible Official may consider recommending for designation…." Emphasis added.)

Designated areas can play a critical role in ensuring ecological integrity and biological diversity as required in §219.8 and §219.9 of the 2012 planning rule. For example, the RGNF can establish designated areas that specifically protect rare or imperiled species, rare or imperiled ecosystem elements, wildland recovery areas, wetland complexes (including recharge zones), specific wildlife corridors, and other important ecological elements and processes. Individual designated areas, if designed with purpose, can contribute to the establishment of a larger mosiac of protected areas across the national forest that, in aggregate, contribute to achieving the rule's substantive ecological and diversity provisions.

Establishing designated areas is also an effective way to draw people to visit and learn about the national forests and its unique resources, thereby connecting people with nature, as addressed in 36 CFR §219.10(a)(10). This concept is reinforced in the Forest Service's Framework for Sustainable Recreation that emphasizes the important role that designated areas play in providing for recreation: "[The Forest Service] will evaluate other areas within the National Forest System that have outstanding recreational, scenic, historic, or other values of high attractiveness for designation and management as special areas."[36]

Wolf Creek Pass Special Interest Area:
Objectors recommended establishment of a Wolf Creek Pass Special Interest Area for the purpose of recognizing and highlighting its value as an important wildlife linkage zone. Objectors suggested SIA designation would help focus management attention on this crucial landscape for wildlife and landscape connectivity and emphasize the priority of juggling many competing human activities in order to preserve the viability of the linkage. The area was originally identified in the Southern Rockies Lynx Management Direction as a "lynx linkage area," which was defined as "areas of movement opportunity" that "can be maintained or lost by management activities."

The plan's Need for Change document, published in July 2017, states that the plan will "evaluate additional areas for special designation," (item C8) including those proposed by the public. By failing to respond affirmatively with an analysis of this proposed Wolf Creek Pass SIA, the plan does not address the stated needs for change or plan Revision Topic 1: Special Designations. It also does not fulfill the requirement under NEPA's implementing regulations that "agencies shall… rigorously explore and objectively evaluate all reasonable alternatives". 40 CFR 1502.14(a).

Instead, the plan simply defers analysis to the Southern Rockies Lynx Amendment (FEIS at 47) and fails to comprehensively evaluate the value designation as a SIA would bring to highlighting the significance of Wolf Creek Pass as a wildlife linkage in conjunction with the many complex

[36] USFS. Connecting People with America's Great Outdoors: A Framework for Sustainable Recreation. June 25, 2010. Sec. IV, p. 6.

human activities occurring within this critical zone, such as concentrated winter and summer recreation, timber management, and resort development, among many.

SUGGESTED IMPROVEMENT
Evaluate a Wolf Creek Pass Linkage Special Interest Area in at least one alternative, and describe the management direction that would be applied to such a designated area.

XV. **THE FINAL PLAN AND FEIS DO NOT ADEQUATELY CONSIDER THE IMPACTS OF CLIMATE CHANGE**

A. THE FEIS FAILS TO TAKE A HARD LOOK AT CLIMATE CHANGE IMPACTS RELATED TO THE RIO GRANDE NATIONAL FOREST'S LAND MANAGEMENT PLAN, AND FURTHER FAILS TO CONSIDER A REASONABLE RANGE OF ALTERNATIVES.

Objectors raised this issue at pages 131-144 of our December 23, 2017 comments on the draft plan and DEIS. II FEIS responds only superficially and dismissively to our detailed comments, and importantly, never addresses or responds to our comments on the deficiencies' in the Forest Service's FEIS analysis related to climate change impacts, both in terms of impacts from implementation of the revised Forest Plan, and how climate change impacts would affect the Rio Grande National Forest.

NEPA "is our basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). NEPA "'prescribes the necessary process' by which agencies must take a 'hard look at the environmental consequences of proposed actions utilizing public comment and the best available scientific information;' it 'does not mandate particular results.'" *Custer Cnty. Action Ass'n v. Garvey*, 256 F.3d 1024, 1034 (10th Cir. 2001) (quoting *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1171–72 (10th Cir. 1999)). While "[o]ther statutes may impose substantive environmental obligations on federal agencies … NEPA merely prohibits uninformed — rather than unwise — agency action." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989). However, "focusing the agency's attention on the environmental consequences of a proposed project … ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast …. Moreover, the strong precatory language of § 101 of [NEPA] and the requirement that agencies prepare detailed impact statements inevitably bring pressure to bear on agencies 'to respond to the needs of environmental quality.'" *Id*. (citing 115 Cong. Rec. 40425 (1969) (remarks of Sen. Muskie)).

NEPA's "procedural requirements are not merely formalities." *Dine Citizens Against Ruining our Env't v. Klein*, 747 F. Supp. 2d 1234, 1248 (D. Colo. 2010) ("*Dine CARE*"). "NEPA

procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 C.F.R. § 1500.1(b).

[B]y requiring agencies to take a 'hard look' at how the choices before them affect the environment, and then to place their data and conclusions before the public, NEPA relies upon democratic processes to ensure — as the first appellate court to construe the statute in detail put it — that the 'most intelligent, optimally beneficial decision will ultimately be made.'

Or. Natural Desert Ass'n v. Bureau of Land Mgmt., 625 F.3d 1092, 1099–1100 (9th Cir. 2010) (quoting *Calvert Cliffs Coordinating Comm., Inc. v. U.S. Atomic Energy Comm'n*, 449 F.2d 1109, 1114 (D.C. Cir. 1971) (citation omitted)). "NEPA places upon federal agencies the obligation to consider every significant aspect of the environmental impact of a proposed action. It also ensures that an agency will inform the public that it has considered environmental concerns in its decision-making process." *Citizens' Comm. to Save Our Canyons v. Krueger*, 513 F.3d 1169, 1177–78 (10th Cir. 2008) (internal quotation and citations omitted). "Public scrutiny [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b). "Ultimately, of course, it is not better documents but better decisions that count. NEPA's purpose is not to generate paperwork –– even excellent paperwork — but to foster excellent action." 40 C.F.R. § 1500.1(c).

Importantly, NEPA expressly calls on agencies to provide for intergenerational equity, stating that it is intended to "fulfill the responsibilities of each generation as trustee of the environment for succeeding generations." 42 U.S.C. 4331(b)(1). This is particularly significant here, given the long-lasting impacts of climate change, and the Rio Grande National Forest's long-lasting Land Management Plan, which will affect the entire planet–and the Rio Grande NF specifically–for many generations.

Here, the FEIS fails to take a hard look at climate change impacts related to the Rio Grande National Forest's Land Management Plan. Curiously, the FEIS Purpose and Need statement acknowledges that "management direction is…needed that addresses ecosystem integrity and diversity, including key ecosystem characteristics, *in light of changes in climate*." FEIS at 11 (emphasis added). The FEIS also identifies "climate change vulnerabilities" as a "need for change" topic. *Id*. at 12.

Despite the Forest's recognition of the need to consider, analyze, and develop plan components related to climate change impacts, the FEIS is notably deficient in terms of its analysis and consideration of the topic. For example, the entirety of Chapter 2, the section discussing the alternatives considered in detail by the Forest Service fails to include any discussion about climate change, or how any of the considered alternatives aim to address climate change impacts in any way on the Rio Grande NF. *See* I FEIS at 30-67.

Nor is any kind of legitimate effects analysis contained in I FEIS Chapter 3, the section analyzing the effects of the different alternatives. While climate change is discussed sporadically throughout Chapter 3, there are no sections devoted to climate change impacts the Forest is experiencing or may experience, nor how the revised Forest Plan is designed to address and mitigate those impacts. Nor is there any reasonable discussion of how the different plan components will address or mitigate climate change impacts, or reduce contributions to climate change from forest management activities.

SUGGESTED REMEDY: Prepare additional NEPA analysis on climate change impacts–both those being experienced by the Rio Grande National Forest and those potentially caused or exacerbated by implementation of the revised Forest Plan–that meaningfully explains how the revised plan addresses and mitigates climate change impacts. The Forest Service should provide this additional NEPA analysis for additional review and comment by the public before finalizing the revised Forest Plan.

B. THE RIO GRANDE NATIONAL FOREST'S LAND MANAGEMENT PLAN FAILS TO PROVIDE PLAN COMPONENTS TO ADDRESS CLIMATE CHANGE IMPACTS.

Objectors raised this issue at pages 131-144 of our December 23, 2017 comments on the draft plan and DEIS. The Forest Service superficially and dismissively responded to our comments in II FEIS at 16-19, but fails to actually respond to our comments.

The Forest Service Planning Handbooks explain that the Rio Grande NF must develop its plan components through a forward looking, future-based viewpoint. FSH 1909.12, § 23.11 ("In light of possible changes in species composition under the effects of climate change and with a focus on restoration, the Agency designs plan components to provide ecological conditions to sustain functional ecosystems based on a future viewpoint.").

Further, the Forest Service has repeatedly acknowledged and committed to using the lands it manages to address climate change impacts, and maximize the potential for carbon sequestration opportunities on National Forest lands. For example, the Forest Service Global Change Research Strategy states that forests "play an important role in reducing the buildup of greenhouse gases in the atmosphere by sequestering carbon." *The Forest Service Global Change Research Strategy*, 5, 2009-2019. In this same document, the Forest Service commits to identifying best management practices that will increase carbon sequestration while supporting ecosystem health. *Id*. The USFS National Roadmap for Responding to Climate Change also addresses the importance of climate change adaptation and mitigation in our nation's forests. It identifies several adaptive management strategies that USFS will use, including building resistance to climate-related stressors, increasing ecosystem resilience, and when necessary, facilitating large-scale ecological transitions. *USFS National Roadmap for Responding to Climate Change*, 19-20

(2010) [hereinafter *Roadmap*]. The Roadmap notes a connection between mitigation and adaptation, stating that healthy, resilient forest ecosystems are better able to store carbon. *Id.* at 21. Carbon sequestration is the primary mitigation strategy of USFS, which has committed to "[p]romoting the uptake of atmospheric carbon by forests and the storage of carbon." *Id*.

The Forest Service also developed a Climate Change Performance Scorecard that each National Forest must complete annually, including disclosing whether a National Forest has developed and synthesized information to assess carbon stocks and the influence of land management activities on changes in carbon stocks. The Forest Service dismissively responded to our comments related to the Climate Change Performance Scorecard by noting the Forest "will continue to implement and lead in many areas to reduce [its] environmental footprint" but that ultimately, "the Climate Change Performance Scorecard…[is] better addressed outside of forest planning." II FEIS at 17. This dismissive response ignores a crucial opportunity for the Forest Service to meaningfully use its power and status as a leading federal land management agency to address climate change impacts in southwestern and south-central Colorado. This missed opportunity is disappointing, but crucially, also illegal as it violates the 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. §§ 4332(2)(C)(i)–(v); 40 C.F.R. §§ 1502.14(a), 1502.16, 1508.7, 1508.8, 1508.14. There is simply no reason why the Forest Service could not disclose how it is doing related to the Climate Change Performance Scorecard, or use that data to develop and implement plan components as part of the revision process to address these issues. The forest plan and the accompanying EISs, which look at management over the entire Forest for the next 15 years, is an ideal place to assess performance, and plan for future performance.

The Forest Service also released a document with guidance for the Forest Service pertaining to implementing and completing the Climate Change Performance Scorecard, and notes:

To fulfill the Forest Service's obligation to present and future generations, our land stewardship mission must be strategically integrated with practices that reduce our resource consumption. Instituting a culture of sustainable consumption by integrating environmental footprint reduction principles into all our programs, practices, and policies will help us to reach our goals.

See Navigating the Climate Change Performance Scorecard at 42.

Despite the clear commitment on the Forest Service's part to address climate change impacts, and use Forest Service lands to attempt to address climate change, the RGNF refused to do so through the greatest opportunity it has at the local level to do so-the Forest Plan revision process.

Here, the Forest Service refused to develop or incorporate any climate change specific plan components that meaningfully seek to address climate change impacts.

And it is clear that the Forest Service's approach, as articulated in the response to comments in II FEIS, is that it does not want to tie its hands in the future, and instead asks the public to trust that it will respond appropriately to climate change impacts in the future. *See* II FEIS at 19 ("The plan provides for an adaptive framework that will be better suited to deal with changing future conditions, rather than hardwiring plan direction for one possible future scenario."). Review of the Final Land Management Plan makes clear that the Forest Service is not interested in addressing climate change through Forest Planning. No required plan component even includes the word "climate." And the Final Plan contains no mandatory requirements that would actually require the Rio Grande National Forest to increase the Forest's ecological resilience in the face of climate change. One management approach does anticipate adapting forest management approaches in the face of a changing climate; however, does so in the context of one of eight potential considerations, none of which are mandatory (or even plan components, as they are management approaches), and is in the context of providing forest products to the public. *See* Final Plan at 31.

Importantly, multiple potential climate-related issues, such as (but not limited to) anticipated temperature increases, anticipated wildfire risk, increased impacts on plants and wildlife, amongst others that the Forest should account for in its forest plan, are ignored. This, despite the Forest Service's own recognition that it anticipates a "4.5-degree Fahrenheit increase in maximum daily temperature by 2060," *See* II FEIS at 18.

The Rio Grande's Forest Plan fails to incorporate clear, enforceable plan components that address climate change adaptation. It is especially important to address climate impacts on plant and wildlife species, as well as large-scale impacts due to changes in temperature and increased wildfire risk. We recognize that some plan components in the Final Plan may be intended to increase ecological resilience and foster adaptation to climate change, even if they do not explicitly say so. However, we believe any such plan components should include direct references to climate adaptation and resilience to make it clear that desired conditions are intended to facilitate climate adaptation and resilience. There must also be objectives, standards and guidelines to assure that progress will be made toward meeting the desired conditions related to climate change. The failure to do so leaves too much to the discretion of future Forest Service land managers.

While true that the Forest Service did conduct a climate change workshop with researchers from the Forest Service's Rocky Mountain Research Station, the results of that process, and resulting plan components, seek to address only one small bucket of climate change impacts on groundwater-dependent ecosystems, and are unclear in terms of what they seek to achieve. In II

FEIS, the Forest Service explains that these three plan components, DC-GDE-1, S-GDE-1, and G-GDE-1, were the result of this process, and how the Forest Service decided to address climate change impacts on the Forest. *See* II FEIS 17-19. However, these plan components are unclear and include many undefined terms. For example, for DC-GDE-1, are the "Identified groundwater-dependent ecosystems" already identified, to be identified at a specific point in the future, or identified on an ongoing basis? For G-GDE-1, the phrase "ecological services" is used, but is this meant to be the same as the definition for "ecosystem services" as defined in the 2012 Planning Rule at 36 C.F.R. § 219.19?

In terms of the Forest's own contribution to greenhouse gas emissions, and therefore its contribution to climate change, the Forest actually removed plan components from the Draft Plan aimed at addressing these issues. For example, the Draft Plan contained a Desired Condition stating: "The ecological footprint is minimized to promote sustainable natural resource management and emit the lowest practicable greenhouse gas emissions." *See* Draft Plan at 46 (quoting DC-AIR-5).

Again, the Final Plan represents a lost opportunity for the Forest Service. We suggested several potential avenues to strengthen and expand these provisions aimed at making Rio Grande National Forest activities more sustainable, and reducing its contribution to climate change through greenhouse gas emissions reductions (*see* Draft Plan and DEIS Comments at 143-44), yet the Forest affirmatively removed even the weak proposed plan components from the Draft Plan. The Forest Service failed to provide any explanation as to why it decided to removed even its weak plan components aimed at addressing these issues. This is indicative of arbitrary and capricious decision-making.

SUGGESTED REMEDY: Direct the Rio Grande National Forest to develop binding plan components to address climate change impacts on the Rio Grande National Forest and to ensure carbon sequestration is considered and meaningfully enhanced through the implementation of the revised Land Management Plan.

XVI. **MECHANIZED USE MUST BE CONSISTENTLY RESTRICTED TO DESIGNATED ROUTES THROUGHOUT THE PLAN**

Objectors discussed and supported restricting mechanized travel to designated routes forest wide on pages 108, 159, 160-162 and 167 of comments submitted on December 23, 2017 regarding the draft plan and DEIS.

It is clear from the FEIS that mechanized travel is intended to be restricted to designated routes forest wide. The FEIS contains numerous statements confirming mechanized travel is only

suitable on designated routes for every alternative. This includes Alternative A (page 54), Alternative B (page 56), Alternative B modified/C (page 56) and Alternative D (page 56). Page 296 of the FEIS also states that mechanized use is restricted to designated routes outside of wilderness.

Language in the Final Plan, however, fails to consistently provide adequate direction to restrict mechanized use to designated routes forest wide in the management areas that allow mountain bike use.

The Final Plan commendably states as SUIT-MA 1.1a-5 that mechanized transport is not suitable in Management Area 1.1a – Recommended Wilderness (Plan on page 70. Mechanized travel is also prohibited MA 1 – Wilderness, and MA 4.2 – Special Designation – Research Natural Areas (a standard on page 74).

Since the FEIS limited mechanized use to designated routes in all areas, direction in the Final Plan regarding mechanized travel is oddly inconsistent for the other management areas.

The Final Plan does not mention anything about restricting mechanized travel to designated routes in Management Area 3 – Colorado Roadless Areas. The plan states on page 71 that mechanized use can occur in this management area, but does not specify where that use may occur. As a desired condition, the plan states on page 72 that trails provide opportunities for mountain bike riding, but nothing is included about restricting that riding to designated trails. Desired conditions include limiting motorized travel to designated routes, and allowing cross-country over-the-snow travel except where prohibited, but limits on mechanized travel are not mentioned. This MA incorporates the Colorado Roadless Rule (S-MA3-1), but the Rule is silent with regard to bicycle use.

Thus it is possible that unrestricted and unmanaged cross-country mechanized use could occur in Roadless Areas If it did, it would have a very high potential of negatively effecting roadless area characteristics, such undisturbed soil and vegetation, and naturally-appearing landscapes. It could also reduce the effectiveness of wildlife habitat and create safety problems with other non-motorized users, such as hikers and horse riders.

The Final Plan does not include any language about mechanized travel in Management Area 4.1 – Special Designation – Special Interest Areas.

For MA 4.21 – Special Designation – Scenic Byways and Scenic Railroads, the Plan states as a desired condition on page 75 that nonmotorized activities such as biking is to be focused on the available trails and roads. But there is no further management direction included to restrict mechanized travel such as bicycle use to designated routes, and “available trails and roads” is not

defined. It could thus include user-created trails and roads. Illegal road and trail creation is a significant and growing problem on Colorado's national forests.

Nothing is mentioned about where mechanized travel is allowed in Management Area 4.34 – Special Designation – Eligible and Suitable Wild, Scenic, and Recreational Rivers. Presumably, biking would be allowed in scenic and recreational river segments because the recreational opportunity spectrum for these areas id semi-primitive motorized. Plan at 78. However, there is no further direction on mechanized use for this MA. Unmanaged cross country mechanized travel has a high potential to negatively affect outstanding remarkable values for these river segments.

Management of mechanized travel is not addressed in the Final Plan for Management Area 4.8 – Ski-based Resorts. Biking does occur at many ski resorts in Colorado. Since revegetation of ski runs at high altitude can be difficult, there is the potential for cross-country mountain biking to decrease vegetation and increase soil erosion. The Plan should contain a standard or guideline limiting mechanized use to existing roads and trails unless site-specific analysis shows that biking in other areas will not reduce vegetation or cause soil erosion.

The Final Plan does state on page 81 that mechanized travel is suitable only on designated routes as a Management Approach for MA 5 – General Forest and Rangelands. While this commendably suggests that this form of travel may be restricted to designated routes on much of the forest, we have concerns that this is a Management Approach and not a Standard. Mgmt Apprs are not plan components, and are thus not enforceable.

Including specific direction to limit mechanized travel in Management Area 5, but failing to include similar direction for Management Areas 3, 4.1, 4.21, 4.34 and 4.8, suggests that mechanized travel will or could be managed differently in different management areas. This contradicts the FEIS, cited above, which states that, for all alternatives, mechanized travel is only suitable on designated routes on all forest lands.

SUGGESTED IMPROVEMENT: As a minimum, Management Area Specific Land Suitability for MAs 3, 4.1, 4.21, 4.34 and 4.8 must include statements that mechanized travel is only suitable on designated routes.

For all management areas in which mechanized travel is allowed, a standard that prohibits mechanized travel outside of designated routes is preferred. This should be a forest wide standard.

The use of the word "prohibit" provides more active direction for current and future management of this activity than merely passively suggesting that off-route mechanized travel is unsuitable on forest lands.

The White River National Forest restricted mechanized use to designated routes forest wide with a Plan standard that prohibits mechanized travel outside of designated travelways.[37] We strongly recommend that the Rio Grande National Forest include similar language in its forest plan.

LIST OF EXHIBITS (sent separately)

1. Gunnison Country Time article, July 4, 2019, concerning the ending of the GMUG National Forest's spruce salvage under its SBEADMR Project

2. Excerpts from objectors' scoping comments concerning needed plan components for a sustainable transportation system

3. 1995 map of oil and gas potential for the RGNF

[37] USDA Forest Service. 2002. White River National Forest Land and Resources Management Plan. Standards 3 and 4 on page 2-39.
Standard 3 "Designated or new travelways are open to appropriate motorized or mechanized use unless a documented decision shows that: Travelways are in areas closed to motorized or mechanized use; Travelways are not designated routes."
Standard 4 "On lands that are snow-free, prohibit motorized and mechanized travel outside of designated travelways."