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Comments: Comment on the Grand Mesa, Uncompahgre, and Gunnison National Forests Draft Environmental Impact Statement

Comment on the Draft Environmental Impact Statement for the Land Management Plan Revision: Grand Mesa, Uncompahgre, and Gunnison National Forests

The U.S. Forest Service ("USFS") has published its Draft Land Use Plan and accompanying Draft Environmental Impact Statement ("DEIS") on the management of the Grand Mesa, Uncompahgre, and Gunnison National Forests ("GMUG") and has solicited public comments on its proposals. We submit the following comment to share our concerns with several of the proposals made under these drafts, with our particular focus on the habitat of the Canada lynx within the GMUG.

The USFS has provided 4 alternatives (three "action alternatives" and one "no action" alternative) for consideration, and this comment focuses mainly on the proposals of Alternative C. Alternative C makes aggressive changes to the vegetation management standards laid out by the Southern Rockies Lynx Amendment ("SRLA") and we believe that the bases for these changes fall short of the standard of "best available scientific evidence" that the USFS is mandated to meet.

In preparation of this comment, the documents we have reviewed include: (i) The 1999 Lynx Science Report 2 ("Science Report") [<https://www.fs.usda.gov/treearch/pubs/4546>]; (ii) The 2000 Press Release Accompanying the Decision to List the Canada Lynx as Threatened 3 [<https://www.fws.gov/mountain-prairie/pressrel/2000/00-08.htm>] ("Press Release"); (iii) The Lynx Management Direction 4 [https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5199575.pdf] ("Southern Rockies Lynx Amendment" or "SRLA") and its accompanying Record of Decision 5 [https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5357379.pdf] ("SRLA ROD"); (iv) The Lynx Conservation Assessment and Strategy 6 [https://www.fs.fed.us/biology/resources/pubs/wildlife/LCAS_revisedAugust2013.pdf] ("LCAS"); (v) The GMUG Draft Land Management Plan 7 [https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd939801.pdf] ; and (vi) The GMUG Draft Environmental Statement 8 [https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd939809.pdf] ("GMUG DEIS" or "DEIS"). Reference is made throughout this comment to the above materials as well as legal authority affecting each of the above.

I. The Canada lynx is a listed threatened species that relies on the snowshoe hare.

On March 21, 2000, the U.S. Fish and Wildlife Service ("FWS") issued a Press Release accompanying the decision to list the Canada Lynx as threatened under the Endangered Species Act. In this Press Release the FWS recognized that the threat to the Canada Lynx was, "the lack of guidance to conserve the species in current Federal land management plans." 9[U.S. Fish and Wildlife Service, News Release - Canada Lynx Listed as Threatened, March 21, 2000.] The FWS further explained that the lynx occurs predominantly in federal lands - especially in the West. As the only lynx in North America, the decision by the FWS to list the Canada Lynx as threatened reflected a guiding principle of ensuring the conservation of diverse wildlife species. This Press Release recognized the importance of the snowshoe hare to the long-term success of the Canada Lynx and said

that its decision came in light of a Science Report completed by the U.S. Forest Service .

The Science Report completed in 1999 was a scientific review of the ecology and conservation of the Canada Lynx population. 12 [Ruggiero, Leonard F.; Aubry, Keith B.; Buskirk, Steven W.; Koehler, Gary M.; Krebs, Charles J.; McKelvey, Kevin S.; Squires, John R. 1999. Ecology and conservation of lynx in the United States. Gen. Tech. Rep. RMRS-GTR-30. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.] While conceding that the habitat of the Canada Lynx is naturally fragmented, the Science Report argues that while, "some have argued that the negative effects of forest fragmentation are ameliorated in areas like the Rocky Mountains because of naturally patchy landscape, [this] contention is unlikely to be true given that, by definition, fragmentation disrupts the natural landscape pattern regardless of the scale of the undisturbed pattern." This argument suggests that any subsequent planning that further fragments the habitat of the Canada Lynx is against the goal of conservation. The Report goes on to identify four main concerns in fragmented habitat of the lynx, specifically saying that the reduction of patch size and area of suitable forest and the snowshoe hare habitat is a primary concern .

The DEIS places reliance on both the SRLA ROD and the LCAS 15[Interagency Lynx Biology Team. 2013. Canada Lynx Conservation Assessment and Strategy. 3rd edition. USDA Forest Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, and USDI National Park Service. Forest Service Publication R1-13-19, Missoula, MT. 128 pp. 9. ("LCAS")] in its assessment of the environmental impacts on the Canada Lynx. Accordingly, we have reviewed both the SRLA ROD 16 [Southern Rockies Lynx Management Direction, Record of Decision. 2008. USDA Forest Service, Rocky Mountain Region, Colorado Dept. of Natural Resources. pp. 6. ("SRLA ROD"); https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5357379.pdf]and LCAS as well as other sources for their scientific information regarding the potential effects on the Canada Lynx population. Both the LCAS and the SRLA ROD recognize the importance of the snowshoe hare as the primary prey of the lynx. The SRLA ROD specifically states that "Vegetation management can directly affect lynx habitat particularly by altering habitat for its primary prey, the Snowshoe Hare. The amount and quality of Snowshoe Hare habitat, especially winter habitat, directly affects lynx survival, reproduction, and population persistence." Similarly, the LCAS identifies timber and vegetation management as something that directly impacts the Canada Lynx by altering the snowshoe hare habitat. 18 [Interagency Lynx Biology Team. 2013. Canada Lynx Conservation Assessment and Strategy. 3rd edition. pp. 28.]

Like the 1999 Science Report and 2000 Decision, these documents are among the best available scientific information at the time and continue to highlight the importance of the snowshoe hare to the long-term survival of the Canada Lynx. The LCAS sheds some light on how vegetation standards affect the habitat of both the hare and the lynx. It states that, "the density of horizontal cover, snow conditions, and presence of boreal forest vegetation appear to be important attributes of Snowshoe Hare habitat," and since the snowshoe hare comprises between 35-97% of the Canada Lynx's diet any factors that drive the snowshoe hare out of a particular area can have deleterious effects on the Canada Lynx.

Both the Press Release and Science Report shed light on the decision to list the Canada Lynx as a threatened species under the Environmental Protection Act. Since both documents refer to the importance of the snowshoe hare habitat, the success of the snowshoe hare is crucially tied to the success of the Canada Lynx. As such, our discussion of the timber production and vegetation standards will focus on both the effects to the snowshoe hare and the Canada Lynx. Further, since both the Press Release and the Science Report recognize that the Canada Lynx has its strongest habitats in the Western Mountain States, the environmental concerns of habitat conservation are of utmost importance in National Forests in these states and should be weighed more heavily in a cost-benefit analysis.

II. Alternative C is not based on the best available scientific information and is therefore invalid.

Given the reliance the DEIS places on these documents in their analysis, the SRLA ROD and the LCAS need to

be considered in the planning process. Specifically, they need to be considered as sources of the best available scientific information in compliance with the 2012 Planning Rule. Under this scope, Alternative C should not be considered as a valid alternative in the DEIS.

In drafting an environmental impact statement, agencies are bound by certain legal restrictions, including the 2012 Planning Rule, Executive Order 12866, and the National Environmental Protection Act ("NEPA"). Each of these provisions prescribe certain standards under which the relevant agency is to conduct its review, including setting expectations regarding the type of scientific information to be used in the decision-making process. Because of its recommendations on vegetation management standards, Alternative C is in significant tension with each of these legal obligations.

A. The USFS acknowledges that the LCAS and SRLA represent the best available scientific information.

A critical analysis of the Alternatives requires compliance with legal doctrine. The particular issue with Alternative C is its failure to adequately consider the 'best available scientific information' as required by the 2012 Planning Rule. The LCAS itself recognizes that, "in response to the listing decision in 2000, the FWS and BLM entered into conservation agreements with the FWS. In these agreements, the agencies [themselves] acknowledged the LCAS as one of the sources of the best available scientific information to assist in conservation of the lynx." The LCAS goes on to explain that "new research has been conducted throughout the range of the lynx and the body of scientific literature has expanded substantially," and that "this revised LCAS provides an updated synthesis of the best available scientific information about lynx ecology and responses to management."

"A lynx biology team (Forest Service and Colorado Parks and Wildlife biologists/scientists) is currently applying lynx tracking data to update habitat mapping for the Southern Rockies. During this same period, we've experienced a widespread spruce bark beetle epidemic affecting lynx habitat conditions. Our analysis reflects our consideration of ongoing science of lynx conservation and management."

When the LCAS was revised, it clearly represented one of the main sources of the best available scientific information at that time, and both the FWS and BLM recognized such. The DEIS similarly calls out the LCAS as part of the best available scientific information in stating that, "collectively, the Science Report, the Lynx Conservation Assessment and Strategy, other relevant science, and locally specific information provide the best available scientific information." Since the DEIS similarly recognizes the LCAS as one of the main sources of the best available scientific information, it is required to consider the LCAS under the 2012 Planning Rule.

B. Alternative C is not in compliance with the 2012 Planning Rule, Executive Order 12866, or NEPA.

Alternative C is out of compliance with the legal requirements placed on Forest Service decision-making. Alternative C makes a number of changes to the SRLA's prescribed vegetation management standards. Alternative C would remove three SRLA standards and add one new standard. The three standards that Alternative C proposes to remove all continue to serve a critical conservation purpose, and their proposed removal conflicts with the Forest Service's legal obligations to consider the best available scientific information.

i. Alternative C is not in compliance with 2012 Planning Rule 219.3.

The 2012 Planning Rule clearly states that agencies are required to use, "the best available scientific information to inform the planning process." Since the LCAS is widely recognized as one of the main sources of the best available scientific information, the 2012 Planning Rule requires that the LCAS be considered in the planning process for the GMUG Draft Land Management Plan and accompanying DEIS. The fact that the LCAS was a key source for the SRLA, the GMUG Plan and DEIS must also give sufficient consideration to the recommendations and imposed standards present in the SRLA. Alternative C so clearly runs afoul of the SRLA (and the supporting LCAS) in its proposed vegetation management changes that it does not comply with the requirements of the

2012 Planning Rule - and it similarly runs afoul of Executive Order 12866.

The LCAS identifies timber area concerns and substantially forms the vegetation standards set forth in the SRLA. Alternative C drastically alters the vegetation standards set forth in the SRLA and does not offer sufficient counter-evidence to support changing those standards in the form of, "other relevant science [or] locally specific information." The DEIS itself concedes that "the best available information for this proposal includes publications listed in the Literature Cited sections of the assessment reports and in the References section of this draft environmental impact statement," and specifically references the SRLA Record of Decision ("SRLA ROD") and LCAS in its Literature Cited section.

The SRLA vegetation standards place undeniable reliance on the scientific adequacy of the LCAS, and the DEIS recognizes this reliance. It explains that the vegetation standards set forth in the SRLA, "restrict the amount of precommercial thinning and other vegetation treatments that could reduce existing Snowshoe Hare habitat," which is vital for the survival of the Canada Lynx. By its own admission, the DEIS recognizes that the LCAS and accompanying SRLA standards are reflective of the best available scientific information. For this reason, Alternative C needs further support (other relevant science or locally specific information) to alter the vegetation standards of the SRLA so drastically.

ii. Alternative C is not in compliance with 2012 Planning Rule 219.9.

The 2012 Planning Rule further requires contribution: (i) to the recovery of federally listed threatened and endangered species; (ii) to conserve proposed and candidate species; and (iii) to maintain a viable population of each species of conservation concern within the plan area. Since the Canada Lynx is a federally listed threatened species, it falls within the category "species of conservation concern" and the agency's responsible official has an affirmative duty to maintain the habitat of that species in the planning process. The Alternative C proposal to remove VEG Standard S2 ("VEG S2"), VEG Standard S5 ("VEG S5"), and VEG Standard S6 ("VEG S6"), discussed in further detail below, fails this affirmative duty to maintain lynx habitat and is therefore in further conflict with the 2012 Planning Rule.

iii. Alternative C is not in compliance with Executive Order 12866.

Like the 2012 Planning Rule, Executive Order 12866 similarly requires that an agency "base its decisions on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation." Again, failure to adequately consider the best available scientific information contained in the LCAS and the accompanying SRLA vegetation standards places Alternative C at odds with legal considerations. Alternative C clearly disregards the vegetation standards formulated in reliance on the scientific adequacy of the LCAS without offering sufficient counterevidence to support its proposals.

iv. Alternative C is not in compliance with NEPA.

Similar to the 2012 Planning Rule, NEPA requires that agencies utilize, "the integrated use of the natural and social sciences and the environmental design arts in planning and in decision-making." Again, lack of consideration given to the LCAS proves to be the critical error of Alternative C. Alternative C proposes removing VEG S2, changing the plan such that VEG S5 and VEG S6 will no longer apply, and adding VEG S7. The following section explores these changes in-depth, but Alternative C changes these standards to such an extent that it cannot be deemed to be reliant on, "the integrated use of natural and social sciences," or the "best available scientific information," required by NEPA and the 2012 Planning Rule.

v. The Forest Service should remove Alternative C from consideration.

The Forest Service should set aside Alternative C as a valid alternative for failure to comply with the 2012

Planning Rule, and for its failure to comply with Executive Order 12866 and NEPA. The crux of the problem is that Alternative C disregards the LCAS and accompanying SRLA vegetation standards which need to be considered as the Forest Service explicitly recognizes both documents as reflecting the best available scientific information. Without additional other relevant science or locally specific information, Alternative C does not have the requisite scientific backing to make such drastic modifications to the vegetation management standards.

C. Alternative C's removal of VEG S2 cannot be justified based on the best available scientific information.

The 2021 Draft Environmental Impact Statement proposes the removal of VEG S2 under Alternatives B and C. VEG S2's stated purpose is to ensure "that timber harvest not change more than 15 percent of lynx habitat within a decade to an unsuitable condition (i.e., stand initiation structural stage that is too short to provide winter snowshoe hare habitat). The purpose of this standard was to limit the rate of management-induced change in lynx habitat." VEG S2 also notes that "Salvage harvest within stands killed by insect epidemics, wildfire, etc. does not contribute to the 15 percent, unless the harvest treatment would cause the lynx habitat to change to an unsuitable condition."

When the removal of VEG S2 was initially proposed, "the U.S. Fish and Wildlife Service expressed concerns that dropping Standard VEG S2 could appreciably reduce the amount of lynx habitat in a short period of time and allow negative effects to accumulate." The SRLA ROD notes that VEG S2 "limits the rate of change within an LAU to ensure sufficient habitat is available to support lynx at any given point in time." The SRLA ROD ensured that Standard VEG S2 was retained in one of the analyzed alternatives. Not only was VEG S2 retained in an Alternative, that Alternative was itself the final selection in the SRLA ROD.

The GMUG DEIS claims that "the effect of removing VEG S2 is anticipated to be limited to reduced administrative burden," but later states that "For lynx, the potential effects could be that under alternative C, vegetation management activities may affect more lynx habitat than alternatives A, B, and D due to removing the Veg S2, S5, and S6 standards." If the removal of VEG S2 has the potential to adversely impact lynx habitat (as appears to be directly acknowledged in the DEIS), its removal requires greater justification than that of having the potential to reduce administrative burden.

The GMUG DEIS makes a circular argument when it states that one of the reasons that the removal of VEG S2 would have a minimal effect on the timber program is that "the timber program has been operating well below the Southern Rockies Lynx Amendment caps for Veg S2[hellip]" It is a weak argument to remove a cap because it has not been met. If anything, the fact that the cap has not been met is strong evidence of its efficacy, not of its uselessness.

The argument for the removal of S2 is even shakier thanks to the USFS's acknowledgement that VEG S2's removal would not have a notable impact on the timber program itself. In fact, both the 2021 GMUG DEIS and the SRLA ROD note that whether or not VEG S2 is implemented will "have a minimal effect on the timber program." Given that the USFS has concluded that the timber program will not be heavily impacted by the presence or removal of VEG S2, its recommendation that VEG S2 be removed is all the more perplexing.

The fact that VEG S2 was expressly included in the Alternative selected in the SRLA ROD also acts as a significant indicator of the importance of this Standard to the preservation of lynx habitat. If the SRLA felt it necessary to include VEG S2, the USFS must put on a stronger showing to justify its removal under GMUG Alternatives B and C. Given that the removal of VEG S2 has the potential to "appreciably reduce the amount of lynx habitat," VEG S2 was deliberately included in the SRLA, and VEG S2's removal would not meaningfully impact the proposed timber program, the USFS's removal of VEG S2 under Alternatives B and C does not appear rational when considered in light of the desired conditions involving lynx habitat preservation, nor does it

met the test of being based on the best available scientific information.

D. Alternative C's removal of VEG S6 and addition of VEG S7 cannot be adequately justified.

The DEIS proposes the removal of Standard VEG S6 ("VEG S6") as a component of Alternative C. The justifications put forward for this change are inadequate and contrary to the USFS's stated objective of lynx protection and conservation. The recommended removal of VEG S6 is also in conflict with the Forest Service's legal obligations under the 2012 Planning Rule, Executive Order 12866, and NEPA.

VEG S6 originated in the SLRA, which identified this Standard as "an important component of management to sustain lynx habitat." The lynx is "a highly specialized predator, adapted to prey on snowshoe hares." The snowshoe hare, an important prey source for the Canada lynx, prefers dense cover, and "mature multistory forests provide important winter snowshoe hare habitat that may support higher hare densities than younger regenerating stands."

The standards adopted under the SRLA "are applied only to vegetation management activities that have the potential to directly affect snowshoe hare prey and thus may impact lynx at the population level." Under VEG S6, "Vegetation management projects that reduce winter snowshoe hare habitat in multi-story mature or late successional conifer forests may occur only" in certain limited circumstances. Further underscoring the SRLA's understanding of the importance of snowshoe hare protection, the SRLA ROD noted that in the selected final Alternative, "the emphasis is on sustaining winter snowshoe hare habitat." With this information as a backdrop, Alternative C's recommendation that VEG S6 be removed and replaced with VEG S7 under deserves severe scrutiny.

The GMUG DEIS describes VEG S7 by stating that "VEG S7 adds a conservation benefit by limiting salvage harvest in high-quality lynx habitat where VEG S6 would no longer apply." The USFS notes that in recent years the spruce beetle epidemic has significantly altered forest conditions in many places, including lynx habitat. Beetle activity has resulted in forest conditions in some areas being converted from multi-storied (explicitly protected by VEG S6) to single-storied (not protected by VEG S6). The GMUG DEIS characterizes VEG S7 as particularly valuable in combination with VEG S6, as together they protect habitat that might otherwise not be covered. Put another way, the combination of VEG S6 and VEG S7 expands protection to lynx habitat that may now fall outside the scope of VEG S6.

Ensuring continued protection for habitat that was deemed worth defending under the SRLA is consistent with the stated aims of lynx conservation. However, saying that VEG S7 "limits" salvage in these areas only tells part of the story. Practically speaking, VEG S7 permits salvage in these areas. VEG S7 does not merely expand coverage to areas that have fallen outside the bounds of VEG S6; VEG S7 also allows for salvage activities within high-quality habitat. 58 [GMUG DEIS at 192, Table 89, note 1. As a matter of clarity, the GMUG DEIS uses the term "highly selected use areas" without precisely explaining what qualifies as such. The DEIS says that VEG S7 "is designed to limit harvest in high quality lynx habitat within identified lynx highly selected use areas." The DEIS later states that "VEG S7 allows for salvage harvest to occur in up to 7 percent of high-quality habitat." Is "high quality lynx habitat" a subset of "lynx highly selected use area"? Are these two terms synonymous? If not, what is the distinction? In these same passages, the DEIS also refers to VEG S7 as limiting harvest (unqualified) in one area and refers to VEG S7 as applying specifically to salvage harvest elsewhere. The Forest Service should clarify its use of these terms to avoid confusion and ensure that its recommendations are being made with due precision.] It may restrict the salvage activities in high-quality lynx habitat, but VEG S7 is also silent on other potential harvest activities.

Permitting salvage harvest in lynx habitat is no small intrusion. The Colorado Forest Restoration Institute at

Colorado State University has conducted a six-year monitoring term of the GMUG National Forest. A subset of this group, the Spruce Beetle Epidemic & Aspen Decline Management Response team, stated that this monitoring process resulted in a finding that "snowshoe hare (a prime prey source for the Canada lynx) abundance appears to be lowest in salvaged areas[hellip]" This group concluded that "It is important to continue to avoid salvage activities in high-quality Canada lynx habitat." This is not an isolated opinion. In a 2017 meta-analysis of the literature on the impacts of salvage logging, one research group found that "salvage logging is not consistent with the management objectives of protected areas. Substantial changes, such as the retention of dead wood in naturally disturbed forests, are needed to support biodiversity." 61 [Thorn et al., Impacts of salvage logging on biodiversity: A meta-analysis (2018, Journal of Applied Ecology, vol. 55) at 285.] The authors go on to state that "salvage logging should be excluded from protected areas."

VEG S7's provision allowing salvage in high-quality lynx habitat runs directly contrary to these findings. If the USFS's aim is truly to protect lynx habitat (as it is obligated to do under the SRLA), then VEG S7 should contain no provision permitting salvage in these areas. Permitting salvage and protecting habitat within the same Standard is not necessary; the USFS may merely propose a standard that includes the protective components of proposed VEG S7 and omits the language permitting salvage. These two ideas are in many ways directly opposed and should not be tied together under a Standard that is characterized as conservation focused.

As a practical concern, the Forest Service's interest in the addition of VEG S7 is perplexing given the amount of land at issue. The GMUG DEIS notes that VEG S7 is "designed to limit harvest in high quality lynx habitat within identified lynx highly selected use areas. Highly selected use areas mapped on the GMUG National Forest comprise about 10,600 acres on the Gunnison Ranger District south and southwest of the town of Lake City." If the area that would be subject to the proposed VEG S7 is so small, why is the USFS so intent on VEG S7's inclusion of the provision allowing for salvage harvest on up to 7% of this area? The Forest Service should provide additional detail on the rationale behind its recommendation of VEG S7 as it pertains to the salvage harvest portion of the Standard.

The removal of VEG S6 also cannot be adequately justified by the USFS's timber program. The GMUG DEIS states that the removal of VEG S6 would "have a minimal effect on the timber program." The very next sentence notes that the exclusion of VEG S6 under Alternative C "would have a beneficial effect on the timber program [hellip] as this is one Southern Rockies Lynx Amendment limit that the GMUG is coming closer to and may arrive at in the next decade, with about 2,300 acres left under the Veg S6 cap." Similar to the above discussion regarding the removal of VEG S2, justifying the removal of a Standard, even in part, by saying that it is close to being met is a tepid argument. The purpose of the cap is clearly to limit the timber program for conservation purposes. Removing caps on FS logging activity would obviously benefit the timber program. However, given that the GMUG DEIS admits that the removal of VEG S6 would have a minimal impact on the timber program, its removal is hardly backed up by an argument of necessity.

It appears that at best, the removal of VEG S6 and addition of VEG S7 will result in less covered area than would be present with both standards in place and a negligible improvement to the timber program. If VEG S7 is even partially intended to "patch up" new holes in the protection offered by VEG S6 as the Forest Service asserts, it is obvious that substituting VEG S6 with VEG S7 cannot achieve this. If VEG S7's purpose is to provide its own protections in isolation from VEG S6, the GMUG DEIS does not indicate a scientifically sound basis for why allowing salvage harvest in high quality lynx habitat is a necessary component of that standard.

The GMUG DEIS also states that the removal of VEG S6 "would result in a reduced administrative burden." This argument for removing VEG S6 is no more compelling than the identical argument for removing VEG S2. Positive side effects of the removal of a vegetation management standard should of course be considered. However, when this argument is taken in combination with the other shortcomings discussed in this section, the justifications for the removal of VEG S6 are often directly opposed to the USFS's ostensible goal of protecting lynx habitat with little to no resulting benefit to counterbalance the likely harms.

E. Alternative C's removal of VEG S5 cannot be adequately justified.

The removal of VEG S5 under proposed Alternative C will have foreseeable negative impacts on snowshoe hare habitat, placing further strain on lynx populations as a result. The Southern Rockies Lynx Amendment Record of Decision explicitly notes the negative effects that would result from a lack of the sort of protection offered by VEG S5, stating that "Standard VEG S5 applies to precommercial thinning, which is the predominant activity in young regenerating forests that has a direct effect in reducing winter snowshoe hare habitat."

The SRLA ROD noted that "No change in annual timber outputs is expected [as a result of VEG S5], although this standard may influence what material is harvested and where." The GMUG DEIS concurs with the SRLA, noting that the removal or implementation of VEG S5 "will have a minimal effect on the timber program." Given the consonance between the SRLA and the GMUG DEIS, there appears to be agreement that removal of VEG S5 cannot be justified by beneficial effects on the timber program. The GMUG DEIS offers no additional or alternative justifications for the removal of VEG S5, and as such, removal of this Standard serves no purpose other than to expose lynx habitat to more negative impacts.

F. Alternative D's inclusion of VEG S8 aligns with the Forest Service's legal obligations to make decisions based on the best available scientific information.

In contrast to the problematic proposal to substitute VEG S6 with VEG S7 under Alternative C, the proposal of VEG S8 under the GMUG DEIS clearly benefits lynx conservation, and is a strong argument in favor of the adoption of Alternative D.

As discussed above, one justification for the addition of VEG S7 in Alternative B is that VEG S7 helps protect lynx habitat that is no longer within the coverage of VEG S6 thanks to spruce beetle destruction of multi-story forest conditions. A core concern with VEG S7 is its permissive approach to salvage activity in high-quality lynx habitat. VEG S8 adequately addresses this concern by unequivocally prohibiting salvage activity of any kind within high-quality lynx habitat. The positive aspects of Alternative D extend even further, with the GMUG DEIS noting that "there is no planned salvage harvest under alternative D," and that "VEG S8 in Alternative D likewise applies to lynx habitat that no longer meets the VEG S6 definition, but restricts all harvest rather than just salvage."

The above discussion lays out several concerns with the damaging effects that salvage activities have on lynx habitat, and it is therefore no surprise that an Alternative precluding salvage activities altogether is a more appealing option. Additionally, Alternative D will apply all original Southern Rockies Lynx Amendment standards as well, another strong argument for the adoption of this Alternative. It is with good reason that the GMUG DEIS explicitly states that "Alternative D would have the greatest conservation benefit to lynx." Given that it represents a good faith effort to base a recommendation on the best available scientific information on lynx conservation, we recommend that the USFS adopt Alternative D.

III. The USFS's reliance on forthcoming habitat maps requires further elaboration.

In the GMUG DEIS, the Forest Service makes mention of "forthcoming" lynx habitat maps, and tacitly acknowledges that these maps are being used in the DEIS's alternatives analysis despite not being finalized or publicly available. The DEIS states that "Based on lynx habitat mapping currently being modeled for the Southern Rockies by the Interagency Lynx Biology Team, we identified lynx use areas in the GMUG based on best available science (Theobald and Shenk 2011) that are likely to align with the forthcoming habitat mapping. We use the lynx use areas as a proxy for high-quality habitat in this analysis of the action alternatives, reflecting our current best estimate on where we will focus lynx habitat management and conservation."

If the Forest Service wishes to base its recommendations for the land use plan on forthcoming maps, further detail on the process by which that recommendation is determined is required. The GMUG DEIS states that "All alternatives apply the Southern Rockies Lynx Amendment direction to the most currently available lynx habitat mapping." However, the DEIS also makes reference to forthcoming habitat maps that are discussed in no detail yet are still referred to as having an impact on the Forest Service's analysis of lynx habitat conservation.

If the Forest Service is basing recommendations on an "in progress" version of these forthcoming maps, surely that process would benefit from further elaboration within the DEIS or other related documents. How is the assertion that certain lynx use areas "are likely to align with the forthcoming habitat mapping" justified? What about the forthcoming maps leads to this decision? If the analysis here "reflects our consideration of ongoing science of lynx conservation and management," more information on that process would surely benefit the public's ability to appropriately evaluate the Alternatives that are being recommended.

Perhaps even more concerning, the GMUG DEIS states that "Forthcoming lynx habitat maps are anticipated prior to publication of the final environmental impact statement." If the Forest Service will be receiving updated maps that can materially impact the amount of land covered by the various VEG Standards, releasing recommendations prior to the receipt of that updated information seems to undercut the reliability of those proposals. The DEIS notes that "The high-probability lynx use area on the GMUG is approximately 10,600 acres. While this is a relatively small area, the area that Veg S7 applies to may be expanded once the modified lynx habitat map is finalized." VEG S7 includes a provision allowing for salvage harvest on a certain percentage of the area covered by VEG S7. If the area covered by VEG S7 expands, it necessarily follows that the acreage that is available for salvage harvest in high quality lynx habitat expands with it.

This is far from a minor impact, given that the amount of lynx habitat at issue is already so small. If there is a significant chance that the forthcoming lynx habitat maps can have this kind of impact on the proposed VEG Standards as applied, the Forest Service should provide the "in progress" information it is using to make its recommendations so that it can be evaluated. The Forest Service is under a legal obligation to use the "best available scientific information" in its decision-making, and it is heartening to know that there is more current mapping being done (especially given that the information that some of the information the DEIS refers to is from a decade ago). However, cabining the "forthcoming" data being used for analysis within the GMUG DEIS (data that won't even be available to the public until after the comment period has closed) is a concerning decision, and casts serious doubt on the reliability of the recommendations being made in the DEIS.

IV. Conclusion.

The GMUG Draft Environmental Impact Statement presents a number of areas of concern. Alternative C is in extreme tension with the legal obligations placed upon the Forest Service by the 2012 Planning Rule, Executive Order 12866, and the National Environmental Protection Act. The removal of VEG Standards S2, S5, S6, and the addition of VEG Standard S7 all present notable issues when considered in light of the Forest Service's obligation to make evaluations and recommendations based on the best available scientific information. VEG S2 provides critical habitat protection, and this protection is explicitly acknowledged in documents that the DEIS itself categorizes as the "best available scientific information." Removal of VEG S2 is contrary to this information, and Alternative C's inclusion of this recommendation cuts in favor of setting aside Alternative C.

VEG S6 presents a more complex scenario given that changing forest conditions have altered the forest area it covers. Supplementing VEG S6 with an additional Standard to help patch up the coverage that is being lost is easily justified. The removal of VEG S6 and its replacement with VEG S7, however, is not. VEG S7 is explicitly acknowledged to cover areas not covered by VEG S6, so when considered in isolation, VEG S7 is not a replacement for VEG S6. For similar reasons, Alternative C's removal of VEG S5 cannot be justified based on the best available scientific information. Alternative D acknowledges some of the shortcomings present in the altered forest conditions and the application of VEG S6, and as such can be considered to be based much more firmly

on the best scientific information available to the Forest Service.

For the foregoing reasons, we urge the Forest Service to set aside Alternative C, to adopt Alternative D, and to provide the public with more detail on its recommendations by providing in-progress versions of the forthcoming updated lynx habitat maps. 79 [Failing that, we encourage the Forest Service to elaborate further on exactly how the forthcoming lynx use maps have influenced their recommendations and alternatives analysis.]

A revised and expanded version of this comment will be provided to the USFS via a late submission in early December 2021. This future expanded version will include analysis of the USFS's obligations under the Endangered Species Act and the tension between those obligations and the proposed Alternatives. This future expanded comment will be submitted with the understanding that the USFS may not be able to give it full consideration given its anticipated submission after the close of the comment period.

Submitted 11/25/2021

Submitted by J.B. and G.L., students at the University of Colorado Law School

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Comment on the Draft Environmental Impact Statement for the Land Management Plan Revision: Grand Mesa, Uncompahgre, and Gunnison National Forests

The U.S. Forest Service ("USFS") has published its Draft Land Use Plan and accompanying Draft Environmental Impact Statement ("DEIS") on the management of the Grand Mesa, Uncompahgre, and Gunnison National

Forests ("GMUG") and has solicited public comments on its proposals. We submit the following comment to share our concerns with several of the proposals made under these drafts, with our particular focus on the habitat of the Canada lynx within the GMUG.

The USFS has provided 4 alternatives (three "action alternatives" and one "no action" alternative) for consideration, and this comment focuses mainly on the proposals of Alternative C. Alternative C makes aggressive changes to the vegetation management standards laid out by the Southern Rockies Lynx Amendment ("SRLA") and we believe that the bases for these changes fall short of the standard of "best available scientific evidence" that the USFS is mandated to meet.

In preparation of this comment, the documents we have reviewed include: (i) The 1999 Lynx Science Report ("Science Report"); (ii) The 2000 Press Release Accompanying the Decision to List the Canada Lynx as Threatened ("Press Release"); (iii) The Lynx Management Direction ("Southern Rockies Lynx Amendment" or "SRLA") and its accompanying Record of Decision ("SRLA ROD"); (iv) The Lynx Conservation Assessment and Strategy ("LCAS"); (v) The GMUG Draft Land Management Plan ; and (vi) The GMUG Draft Environmental Statement ("GMUG DEIS" or "DEIS"). Reference is made throughout this comment to the above materials as well as legal authority affecting each of the above.

I. The Canada lynx is a listed threatened species that relies on the snowshoe hare.

On March 21, 2000, the U.S. Fish and Wildlife Service ("FWS") issued a Press Release accompanying the decision to list the Canada Lynx as threatened under the Endangered Species Act. In this Press Release the FWS recognized that the threat to the Canada Lynx was, "the lack of guidance to conserve the species in current Federal land management plans." The FWS further explained that the lynx occurs predominantly in federal lands - especially in the West. As the only lynx in North America, the decision by the FWS to list the Canada Lynx as threatened reflected a guiding principle of ensuring the conservation of diverse wildlife species. This Press Release recognized the importance of the snowshoe hare to the long-term success of the Canada Lynx and said that its decision came in light of a Science Report completed by the U.S. Forest Service .

The Science Report completed in 1999 was a scientific review of the ecology and conservation of the Canada Lynx population. While conceding that the habitat of the Canada Lynx is naturally fragmented, the Science Report argues that while, "some have argued that the negative effects of forest fragmentation are ameliorated in areas like the Rocky Mountains because of naturally patchy landscape, [this] contention is unlikely to be true given that, by definition, fragmentation disrupts the natural landscape pattern regardless of the scale of the undisturbed pattern." This argument suggests that any subsequent planning that further fragments the habitat of the Canada Lynx is against the goal of conservation. The Report goes on to identify four main concerns in fragmented habitat of the lynx, specifically saying that the reduction of patch size and area of suitable forest and the snowshoe hare habitat is a primary concern .

The DEIS places reliance on both the SRLA ROD and the LCAS in its assessment of the environmental impacts on the Canada Lynx. Accordingly, we have reviewed both the SRLA ROD and LCAS as well as other sources for their scientific information regarding the potential effects on the Canada Lynx population. Both the LCAS and the SRLA ROD recognize the importance of the snowshoe hare as the primary prey of the lynx. The SRLA ROD specifically states that "Vegetation management can directly affect lynx habitat particularly by altering habitat for its primary prey, the Snowshoe Hare. The amount and quality of Snowshoe Hare habitat, especially winter habitat, directly affects lynx survival, reproduction, and population persistence." Similarly, the LCAS identifies timber and vegetation management as something that directly impacts the Canada Lynx by altering the snowshoe hare habitat.

Like the 1999 Science Report and 2000 Decision, these documents are among the best available scientific information at the time and continue to highlight the importance of the snowshoe hare to the long-term survival of

the Canada Lynx. The LCAS sheds some light on how vegetation standards affect the habitat of both the hare and the lynx. It states that, "the density of horizontal cover, snow conditions, and presence of boreal forest vegetation appear to be important attributes of Snowshoe Hare habitat," and since the snowshoe hare comprises between 35-97% of the Canada Lynx's diet any factors that drive the snowshoe hare out of a particular area can have deleterious effects on the Canada Lynx.

Both the Press Release and Science Report shed light on the decision to list the Canada Lynx as a threatened species under the Environmental Protection Act. Since both documents refer to the importance of the snowshoe hare habitat, the success of the snowshoe hare is crucially tied to the success of the Canada Lynx. As such, our discussion of the timber production and vegetation standards will focus on both the effects to the snowshoe hare and the Canada Lynx. Further, since both the Press Release and the Science Report recognize that the Canada Lynx has its strongest habitats in the Western Mountain States, the environmental concerns of habitat conservation are of utmost importance in National Forests in these states and should be weighed more heavily in a cost-benefit analysis.

II. Alternative C is not based on the best available scientific information and is therefore invalid.

Given the reliance the DEIS places on these documents in their analysis, the SRLA ROD and the LCAS need to be considered in the planning process. Specifically, they need to be considered as sources of the best available scientific information in compliance with the 2012 Planning Rule. Under this scope, Alternative C should not be considered as a valid alternative in the DEIS.

In drafting an environmental impact statement, agencies are bound by certain legal restrictions, including the 2012 Planning Rule, Executive Order 12866, and the National Environmental Protection Act ("NEPA"). Each of these provisions prescribe certain standards under which the relevant agency is to conduct its review, including setting expectations regarding the type of scientific information to be used in the decision-making process. Because of its recommendations on vegetation management standards, Alternative C is in significant tension with each of these legal obligations.

A. The USFS acknowledges that the LCAS and SRLA represent the best available scientific information.

A critical analysis of the Alternatives requires compliance with legal doctrine. The particular issue with Alternative C is its failure to adequately consider the 'best available scientific information' as required by the 2012 Planning Rule. The LCAS itself recognizes that, "in response to the listing decision in 2000, the FWS and BLM entered into conservation agreements with the FWS. In these agreements, the agencies [themselves] acknowledged the LCAS as one of the sources of the best available scientific information to assist in conservation of the lynx." The LCAS goes on to explain that "new research has been conducted throughout the range of the lynx and the body of scientific literature has expanded substantially," and that "this revised LCAS provides an updated synthesis of the best available scientific information about lynx ecology and responses to management."

"A lynx biology team (Forest Service and Colorado Parks and Wildlife biologists/scientists) is currently applying lynx tracking data to update habitat mapping for the Southern Rockies. During this same period, we've experienced a widespread spruce bark beetle epidemic affecting lynx habitat conditions. Our analysis reflects our consideration of ongoing science of lynx conservation and management."

When the LCAS was revised, it clearly represented one of the main sources of the best available scientific information at that time, and both the FWS and BLM recognized such. The DEIS similarly calls out the LCAS as part of the best available scientific information in stating that, "collectively, the Science Report, the Lynx Conservation Assessment and Strategy, other relevant science, and locally specific information provide the best available scientific information." Since the DEIS similarly recognizes the LCAS as one of the main sources of the best available scientific information, it is required to consider the LCAS under the 2012 Planning Rule.

B. Alternative C is not in compliance with the 2012 Planning Rule, Executive Order 12866, or NEPA.

Alternative C is out of compliance with the legal requirements placed on Forest Service decision-making. Alternative C makes a number of changes to the SRLA's prescribed vegetation management standards. Alternative C would remove three SRLA standards and add one new standard. The three standards that Alternative C proposes to remove all continue to serve a critical conservation purpose, and their proposed removal conflicts with the Forest Service's legal obligations to consider the best available scientific information.

i. Alternative C is not in compliance with 2012 Planning Rule 219.3.

The 2012 Planning Rule clearly states that agencies are required to use, "the best available scientific information to inform the planning process." Since the LCAS is widely recognized as one of the main sources of the best available scientific information, the 2012 Planning Rule requires that the LCAS be considered in the planning process for the GMUG Draft Land Management Plan and accompanying DEIS. The fact that the LCAS was a key source for the SRLA, the GMUG Plan and DEIS must also give sufficient consideration to the recommendations and imposed standards present in the SRLA. Alternative C so clearly runs afoul of the SRLA (and the supporting LCAS) in its proposed vegetation management changes that it does not comply with the requirements of the 2012 Planning Rule - and it similarly runs afoul of Executive Order 12866.

The LCAS identifies timber area concerns and substantially forms the vegetation standards set forth in the SRLA. Alternative C drastically alters the vegetation standards set forth in the SRLA and does not offer sufficient counter-evidence to support changing those standards in the form of, "other relevant science [or] locally specific information." The DEIS itself concedes that "the best available information for this proposal includes publications listed in the Literature Cited sections of the assessment reports and in the References section of this draft environmental impact statement," and specifically references the SRLA Record of Decision ("SRLA ROD") and LCAS in its Literature Cited section.

The SRLA vegetation standards place undeniable reliance on the scientific adequacy of the LCAS, and the DEIS recognizes this reliance. It explains that the vegetation standards set forth in the SRLA, "restrict the amount of precommercial thinning and other vegetation treatments that could reduce existing Snowshoe Hare habitat," which is vital for the survival of the Canada Lynx. By its own admission, the DEIS recognizes that the LCAS and accompanying SRLA standards are reflective of the best available scientific information. For this reason, Alternative C needs further support (other relevant science or locally specific information) to alter the vegetation standards of the SRLA so drastically.

ii. Alternative C is not in compliance with 2012 Planning Rule 219.9.

The 2012 Planning Rule further requires contribution: (i) to the recovery of federally listed threatened and endangered species; (ii) to conserve proposed and candidate species; and (iii) to maintain a viable population of each species of conservation concern within the plan area. Since the Canada Lynx is a federally listed threatened species, it falls within the category "species of conservation concern" and the agency's responsible official has an affirmative duty to maintain the habitat of that species in the planning process. The Alternative C proposal to remove VEG Standard S2 ("VEG S2"), VEG Standard S5 ("VEG S5"), and VEG Standard S6 ("VEG S6"), discussed in further detail below, fails this affirmative duty to maintain lynx habitat and is therefore in further conflict with the 2012 Planning Rule.

iii. Alternative C is not in compliance with Executive Order 12866.

Like the 2012 Planning Rule, Executive Order 12866 similarly requires that an agency "base its decisions on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and

consequences of, the intended regulation." Again, failure to adequately consider the best available scientific information contained in the LCAS and the accompanying SRLA vegetation standards places Alternative C at odds with legal considerations. Alternative C clearly disregards the vegetation standards formulated in reliance on the scientific adequacy of the LCAS without offering sufficient counterevidence to support its proposals.

iv. Alternative C is not in compliance with NEPA.

Similar to the 2012 Planning Rule, NEPA requires that agencies utilize, "the integrated use of the natural and social sciences and the environmental design arts in planning and in decision-making." Again, lack of consideration given to the LCAS proves to be the critical error of Alternative C. Alternative C proposes removing VEG S2, changing the plan such that VEG S5 and VEG S6 will no longer apply, and adding VEG S7. The following section explores these changes in-depth, but Alternative C changes these standards to such an extent that it cannot be deemed to be reliant on, "the integrated use of natural and social sciences," or the "best available scientific information," required by NEPA and the 2012 Planning Rule.

v. The Forest Service should remove Alternative C from consideration.

The Forest Service should set aside Alternative C as a valid alternative for failure to comply with the 2012 Planning Rule, and for its failure to comply with Executive Order 12866 and NEPA. The crux of the problem is that Alternative C disregards the LCAS and accompanying SRLA vegetation standards which need to be considered as the Forest Service explicitly recognizes both documents as reflecting the best available scientific information. Without additional other relevant science or locally specific information, Alternative C does not have the requisite scientific backing to make such drastic modifications to the vegetation management standards.

C. Alternative C's removal of VEG S2 cannot be justified based on the best available scientific information.

The 2021 Draft Environmental Impact Statement proposes the removal of VEG S2 under Alternatives B and C. VEG S2's stated purpose is to ensure "that timber harvest not change more than 15 percent of lynx habitat within a decade to an unsuitable condition (i.e., stand initiation structural stage that is too short to provide winter snowshoe hare habitat). The purpose of this standard was to limit the rate of management-induced change in lynx habitat." VEG S2 also notes that "Salvage harvest within stands killed by insect epidemics, wildfire, etc. does not contribute to the 15 percent, unless the harvest treatment would cause the lynx habitat to change to an unsuitable condition."

When the removal of VEG S2 was initially proposed, "the U.S. Fish and Wildlife Service expressed concerns that dropping Standard VEG S2 could appreciably reduce the amount of lynx habitat in a short period of time and allow negative effects to accumulate." The SRLA ROD notes that VEG S2 "limits the rate of change within an LAU to ensure sufficient habitat is available to support lynx at any given point in time." The SRLA ROD ensured that Standard VEG S2 was retained in one of the analyzed alternatives. Not only was VEG S2 retained in an Alternative, that Alternative was itself the final selection in the SRLA ROD.

The GMUG DEIS claims that "the effect of removing VEG S2 is anticipated to be limited to reduced administrative burden," but later states that "For lynx, the potential effects could be that under alternative C, vegetation management activities may affect more lynx habitat than alternatives A, B, and D due to removing the Veg S2, S5, and S6 standards." If the removal of VEG S2 has the potential to adversely impact lynx habitat (as appears to be directly acknowledged in the DEIS), its removal requires greater justification than that of having the potential to reduce administrative burden.

The GMUG DEIS makes a circular argument when it states that one of the reasons that the removal of VEG S2

would have a minimal effect on the timber program is that "the timber program has been operating well below the Southern Rockies Lynx Amendment caps for Veg S2[hellip]" It is a weak argument to remove a cap because it has not been met. If anything, the fact that the cap has not been met is strong evidence of its efficacy, not of its uselessness.

The argument for the removal of S2 is even shakier thanks to the USFS's acknowledgement that VEG S2's removal would not have a notable impact on the timber program itself. In fact, both the 2021 GMUG DEIS and the SRLA ROD note that whether or not VEG S2 is implemented will "have a minimal effect on the timber program." Given that the USFS has concluded that the timber program will not be heavily impacted by the presence or removal of VEG S2, its recommendation that VEG S2 be removed is all the more perplexing.

The fact that VEG S2 was expressly included in the Alternative selected in the SRLA ROD also acts as a significant indicator of the importance of this Standard to the preservation of lynx habitat. If the SRLA felt it necessary to include VEG S2, the USFS must put on a stronger showing to justify its removal under GMUG Alternatives B and C. Given that the removal of VEG S2 has the potential to "appreciably reduce the amount of lynx habitat," VEG S2 was deliberately included in the SRLA, and VEG S2's removal would not meaningfully impact the proposed timber program, the USFS's removal of VEG S2 under Alternatives B and C does not appear rational when considered in light of the desired conditions involving lynx habitat preservation, nor does it meet the test of being based on the best available scientific information.

D. Alternative C's removal of VEG S6 and addition of VEG S7 cannot be adequately justified.

The DEIS proposes the removal of Standard VEG S6 ("VEG S6") as a component of Alternative C. The justifications put forward for this change are inadequate and contrary to the USFS's stated objective of lynx protection and conservation. The recommended removal of VEG S6 is also in conflict with the Forest Service's legal obligations under the 2012 Planning Rule, Executive Order 12866, and NEPA.

VEG S6 originated in the SLRA, which identified this Standard as "an important component of management to sustain lynx habitat." The lynx is "a highly specialized predator, adapted to prey on snowshoe hares." The snowshoe hare, an important prey source for the Canada lynx, prefers dense cover, and "mature multistory forests provide important winter snowshoe hare habitat that may support higher hare densities than younger regenerating stands."

The standards adopted under the SRLA "are applied only to vegetation management activities that have the potential to directly affect snowshoe hare prey and thus may impact lynx at the population level." Under VEG S6, "Vegetation management projects that reduce winter snowshoe hare habitat in multi-story mature or late successional conifer forests may occur only" in certain limited circumstances. Further underscoring the SRLA's understanding of the importance of snowshoe hare protection, the SRLA ROD noted that in the selected final Alternative, "the emphasis is on sustaining winter snowshoe hare habitat." With this information as a backdrop, Alternative C's recommendation that VEG S6 be removed and replaced with VEG S7 under deserves severe scrutiny.

The GMUG DEIS describes VEG S7 by stating that "VEG S7 adds a conservation benefit by limiting salvage harvest in high-quality lynx habitat where VEG S6 would no longer apply." The USFS notes that in recent years the spruce beetle epidemic has significantly altered forest conditions in many places, including lynx habitat. Beetle activity has resulted in forest conditions in some areas being converted from multi-storied (explicitly protected by VEG S6) to single-storied (not protected by VEG S6). The GMUG DEIS characterizes VEG S7 as particularly valuable in combination with VEG S6, as together they protect habitat that might otherwise not be covered. Put another way, the combination of VEG S6 and VEG S7 expands protection to lynx habitat that may

now fall outside the scope of VEG S6.

Ensuring continued protection for habitat that was deemed worth defending under the SRLA is consistent with the stated aims of lynx conservation. However, saying that VEG S7 "limits" salvage in these areas only tells part of the story. Practically speaking, VEG S7 permits salvage in these areas. VEG S7 does not merely expand coverage to areas that have fallen outside the bounds of VEG S6; VEG S7 also allows for salvage activities within high-quality habitat. It may restrict the salvage activities in high-quality lynx habitat, but VEG S7 is also silent on other potential harvest activities.

Permitting salvage harvest in lynx habitat is no small intrusion. The Colorado Forest Restoration Institute at Colorado State University has conducted a six-year monitoring term of the GMUG National Forest. A subset of this group, the Spruce Beetle Epidemic & Aspen Decline Management Response team, stated that this monitoring process resulted in a finding that "snowshoe hare (a prime prey source for the Canada lynx) abundance appears to be lowest in salvaged areas[...]" This group concluded that "It is important to continue to avoid salvage activities in high-quality Canada lynx habitat." This is not an isolated opinion. In a 2017 meta-analysis of the literature on the impacts of salvage logging, one research group found that "salvage logging is not consistent with the management objectives of protected areas. Substantial changes, such as the retention of dead wood in naturally disturbed forests, are needed to support biodiversity." The authors go on to state that "salvage logging should be excluded from protected areas."

VEG S7's provision allowing salvage in high-quality lynx habitat runs directly contrary to these findings. If the USFS's aim is truly to protect lynx habitat (as it is obligated to do under the SRLA), then VEG S7 should contain no provision permitting salvage in these areas. Permitting salvage and protecting habitat within the same Standard is not necessary; the USFS may merely propose a standard that includes the protective components of proposed VEG S7 and omits the language permitting salvage. These two ideas are in many ways directly opposed and should not be tied together under a Standard that is characterized as conservation focused.

As a practical concern, the Forest Service's interest in the addition of VEG S7 is perplexing given the amount of land at issue. The GMUG DEIS notes that VEG S7 is "designed to limit harvest in high quality lynx habitat within identified lynx highly selected use areas. Highly selected use areas mapped on the GMUG National Forest comprise about 10,600 acres on the Gunnison Ranger District south and southwest of the town of Lake City." If the area that would be subject to the proposed VEG S7 is so small, why is the USFS so intent on VEG S7's inclusion of the provision allowing for salvage harvest on up to 7% of this area? The Forest Service should provide additional detail on the rationale behind its recommendation of VEG S7 as it pertains to the salvage harvest portion of the Standard.

The removal of VEG S6 also cannot be adequately justified by the USFS's timber program. The GMUG DEIS states that the removal of VEG S6 would "have a minimal effect on the timber program." The very next sentence notes that the exclusion of VEG S6 under Alternative C "would have a beneficial effect on the timber program [...] as this is one Southern Rockies Lynx Amendment limit that the GMUG is coming closer to and may arrive at in the next decade, with about 2,300 acres left under the Veg S6 cap." Similar to the above discussion regarding the removal of VEG S2, justifying the removal of a Standard, even in part, by saying that it is close to being met is a tepid argument. The purpose of the cap is clearly to limit the timber program for conservation purposes. Removing caps on FS logging activity would obviously benefit the timber program. However, given that the GMUG DEIS admits that the removal of VEG S6 would have a minimal impact on the timber program, its removal is hardly backed up by an argument of necessity.

It appears that at best, the removal of VEG S6 and addition of VEG S7 will result in less covered area than would be present with both standards in place and a negligible improvement to the timber program. If VEG S7 is even partially intended to "patch up" new holes in the protection offered by VEG S6 as the Forest Service asserts, it is obvious that substituting VEG S6 with VEG S7 cannot achieve this. If VEG S7's purpose is to provide its own

protections in isolation from VEG S6, the GMUG DEIS does not indicate a scientifically sound basis for why allowing salvage harvest in high quality lynx habitat is a necessary component of that standard.

The GMUG DEIS also states that the removal of VEG S6 "would result in a reduced administrative burden." This argument for removing VEG S6 is no more compelling than the identical argument for removing VEG S2. Positive side effects of the removal of a vegetation management standard should of course be considered. However, when this argument is taken in combination with the other shortcomings discussed in this section, the justifications for the removal of VEG S6 are often directly opposed to the USFS's ostensible goal of protecting lynx habitat with little to no resulting benefit to counterbalance the likely harms.

E. Alternative C's removal of VEG S5 cannot be adequately justified.

The removal of VEG S5 under proposed Alternative C will have foreseeable negative impacts on snowshoe hare habitat, placing further strain on lynx populations as a result. The Southern Rockies Lynx Amendment Record of Decision explicitly notes the negative effects that would result from a lack of the sort of protection offered by VEG S5, stating that "Standard VEG S5 applies to precommercial thinning, which is the predominant activity in young regenerating forests that has a direct effect in reducing winter snowshoe hare habitat."

The SRLA ROD noted that "No change in annual timber outputs is expected [as a result of VEG S5], although this standard may influence what material is harvested and where." The GMUG DEIS concurs with the SRLA, noting that the removal or implementation of VEG S5 "will have a minimal effect on the timber program." Given the consonance between the SRLA and the GMUG DEIS, there appears to be agreement that removal of VEG S5 cannot be justified by beneficial effects on the timber program. The GMUG DEIS offers no additional or alternative justifications for the removal of VEG S5, and as such, removal of this Standard serves no purpose other than to expose lynx habitat to more negative impacts.

F. Alternative D's inclusion of VEG S8 aligns with the Forest Service's legal obligations to make decisions based on the best available scientific information.

In contrast to the problematic proposal to substitute VEG S6 with VEG S7 under Alternative C, the proposal of VEG S8 under the GMUG DEIS clearly benefits lynx conservation, and is a strong argument in favor of the adoption of Alternative D.

As discussed above, one justification for the addition of VEG S7 in Alternative B is that VEG S7 helps protect lynx habitat that is no longer within the coverage of VEG S6 thanks to spruce beetle destruction of multi-story forest conditions. A core concern with VEG S7 is its permissive approach to salvage activity in high-quality lynx habitat. VEG S8 adequately addresses this concern by unequivocally prohibiting salvage activity of any kind within high-quality lynx habitat. The positive aspects of Alternative D extend even further, with the GMUG DEIS noting that "there is no planned salvage harvest under alternative D," and that "VEG S8 in Alternative D likewise applies to lynx habitat that no longer meets the VEG S6 definition, but restricts all harvest rather than just salvage."

The above discussion lays out several concerns with the damaging effects that salvage activities have on lynx habitat, and it is therefore no surprise that an Alternative precluding salvage activities altogether is a more appealing option. Additionally, Alternative D will apply all original Southern Rockies Lynx Amendment standards as well, another strong argument for the adoption of this Alternative. It is with good reason that the GMUG DEIS explicitly states that "Alternative D would have the greatest conservation benefit to lynx." Given that it represents a good faith effort to base a recommendation on the best available scientific information on lynx conservation, we recommend that the USFS adopt Alternative D.

III. The USFS's reliance on forthcoming habitat maps requires further elaboration.

In the GMUG DEIS, the Forest Service makes mention of "forthcoming" lynx habitat maps, and tacitly acknowledges that these maps are being used in the DEIS's alternatives analysis despite not being finalized or publicly available. The DEIS states that "Based on lynx habitat mapping currently being modeled for the Southern Rockies by the Interagency Lynx Biology Team, we identified lynx use areas in the GMUG based on best available science (Theobald and Shenk 2011) that are likely to align with the forthcoming habitat mapping. We use the lynx use areas as a proxy for high-quality habitat in this analysis of the action alternatives, reflecting our current best estimate on where we will focus lynx habitat management and conservation."

If the Forest Service wishes to base its recommendations for the land use plan on forthcoming maps, further detail on the process by which that recommendation is determined is required. The GMUG DEIS states that "All alternatives apply the Southern Rockies Lynx Amendment direction to the most currently available lynx habitat mapping." However, the DEIS also makes reference to forthcoming habitat maps that are discussed in no detail yet are still referred to as having an impact on the Forest Service's analysis of lynx habitat conservation.

If the Forest Service is basing recommendations on an "in progress" version of these forthcoming maps, surely that process would benefit from further elaboration within the DEIS or other related documents. How is the assertion that certain lynx use areas "are likely to align with the forthcoming habitat mapping" justified? What about the forthcoming maps leads to this decision? If the analysis here "reflects our consideration of ongoing science of lynx conservation and management," more information on that process would surely benefit the public's ability to appropriately evaluate the Alternatives that are being recommended.

Perhaps even more concerning, the GMUG DEIS states that "Forthcoming lynx habitat maps are anticipated prior to publication of the final environmental impact statement." If the Forest Service will be receiving updated maps that can materially impact the amount of land covered by the various VEG Standards, releasing recommendations prior to the receipt of that updated information seems to undercut the reliability of those proposals. The DEIS notes that "The high-probability lynx use area on the GMUG is approximately 10,600 acres. While this is a relatively small area, the area that Veg S7 applies to may be expanded once the modified lynx habitat map is finalized." VEG S7 includes a provision allowing for salvage harvest on a certain percentage of the area covered by VEG S7. If the area covered by VEG S7 expands, it necessarily follows that the acreage that is available for salvage harvest in high quality lynx habitat expands with it.

This is far from a minor impact, given that the amount of lynx habitat at issue is already so small. If there is a significant chance that the forthcoming lynx habitat maps can have this kind of impact on the proposed VEG Standards as applied, the Forest Service should provide the "in progress" information it is using to make its recommendations so that it can be evaluated. The Forest Service is under a legal obligation to use the "best available scientific information" in its decision-making, and it is heartening to know that there is more current mapping being done (especially given that the information that some of the information the DEIS refers to is from a decade ago). However, cabining the "forthcoming" data being used for analysis within the GMUG DEIS (data that won't even be available to the public until after the comment period has closed) is a concerning decision, and casts serious doubt on the reliability of the recommendations being made in the DEIS.

IV. Conclusion.

The GMUG Draft Environmental Impact Statement presents a number of areas of concern. Alternative C is in extreme tension with the legal obligations placed upon the Forest Service by the 2012 Planning Rule, Executive Order 12866, and the National Environmental Protection Act. The removal of VEG Standards S2, S5, S6, and the addition of VEG Standard S7 all present notable issues when considered in light of the Forest Service's obligation to make evaluations and recommendations based on the best available scientific information. VEG S2 provides critical habitat protection, and this protection is explicitly acknowledged in documents that the DEIS itself categorizes as the "best available scientific information." Removal of VEG S2 is contrary to this information, and

Alternative C's inclusion of this recommendation cuts in favor of setting aside Alternative C.

VEG S6 presents a more complex scenario given that changing forest conditions have altered the forest area it covers. Supplementing VEG S6 with an additional Standard to help patch up the coverage that is being lost is easily justified. The removal of VEG S6 and its replacement with VEG S7, however, is not. VEG S7 is explicitly acknowledged to cover areas not covered by VEG S6, so when considered in isolation, VEG S7 is not a replacement for VEG S6. For similar reasons, Alternative C's removal of VEG S5 cannot be justified based on the best available scientific information. Alternative D acknowledges some of the shortcomings present in the altered forest conditions and the application of VEG S6, and as such can be considered to be based much more firmly on the best scientific information available to the Forest Service.

For the foregoing reasons, we urge the Forest Service to set aside Alternative C, to adopt Alternative D, and to provide the public with more detail on its recommendations by providing in-progress versions of the forthcoming updated lynx habitat maps.

A revised and expanded version of this comment will be provided to the USFS via a late submission in early December 2021. This future expanded version will include analysis of the USFS's obligations under the Endangered Species Act and the tension between those obligations and the proposed Alternatives. This future expanded comment will be submitted with the understanding that the USFS may not be able to give it full consideration given its anticipated submission after the close of the comment period.