Data Submitted (UTC 11): 12/21/2018 7:00:00 AM
First name: Vera
Last name: Smith
Organization: The Wilderness Society
Title:
Comments: Supplemental scoping letter

Dear Brittany,

With luck, you are already enjoying your winter holiday break and this email will find you upon your return. I am attaching, as promised, a supplemental scoping letter that addresses biodiversity specifically. This transmits the information that we presented to you and other staff on November 29, 2018. Please note that I am not transmitting the appendices with this email (very large) and instead have sent through US Post a copy of this letter along with two thumb drives, one for each appendix. If you do not receive that package in the next few weeks or you have difficulty accessing the files on the thumb drives, please email me and I will resend as a cd.

Thank you very much. Happy holidays from all of us! Vera (on behalf of Lauren, Aaron, Matt and Alison)

Vera Smith

National Forest Planning and Policy Director

The Wilderness Society | The Wilderness Society Action Fund

303-650-5942

Dear GMUG Planning team,

Thank you for meeting with us on November 29, 2018 and providing us the opportunity to share our data and analyses related to biodiversity planning on the GMUG National Forest. With this letter, we are following up on that discussion by submitting into the planning record for the GMUG plan revision these analyses and our findings. This information supplements similar information submitted in letters by The Wilderness Society et al dated January 17, 2017, Defenders of Wildlife et al dated June 1, 2018 and The Wilderness Society and High Country Conservation Advocates dated June 1, 2018. We respectfully request that this information be incorporated into the analysis of planning alternatives in the draft environmental impact statement and used to inform the development of the revised plan.

As we discussed, by our observation in the forest planning context, it is common in the analysis of the effects of potential conservation designations (e.g., recommended wilderness, special interest areas) for the discussion to emphasize the activities that conservation designations would preclude or constrain and provide much less attention to the ecological and social benefits of the potential designations. With this submission, therefore, we are providing you scientifically rigorous methods and analyses for evaluating ecological effects of conservation designations under likely alternative scenarios. The scenarios range from no action to recommending for wilderness all polygons identified as having wilderness character in the draft wilderness evaluation report, and include an alternative that designates areas proposed by two different citizen coalitions (ours and that of the Gunnison Public Lands Initiative). The two ecological factors that we evaluated are 1) the amount of GMUG ecosystems that are currently protected as Wilderness and could be protected under the alternative scenarios,

and

2) at-risk species richness and occurrence, and the potential to protect at a high level crucial areas for at-risk species and overall biodiversity under the alternative scenarios.

Ecosystem Representation

We submitted detailed information on ecosystem representation in our scoping comments (submitted by The Wilderness Society et al. on January 17, 2017). In that analysis, we looked at the amount of GMUG ecosystems that had at least 20% of their acreage in high levels of protection in wilderness areas and the contribution that each Colorado Roadless Area (CRA) could make to ecosystem conservation if CRAs were recommended for Wilderness or otherwise protected at a high level (for instance, as a Research Natural Area, special interest area, or some other type of administrative designation with

strong conservation prescriptions). We considered this contribution at both the forest and the federal levels. See Appendix 1 of our January 17, 2017 letter.

With this supplemental letter, we are submitting an updated analysis that uses draft wilderness

evaluation polygons (as defined in the GMUG's draft wilderness evaluation report) instead of the CRAs. In addition, we take the analysis an extra step by evaluating the effect to ecosystem representation (and by extension the GMUG's ability to fulfil its diversity mandate at 36 C.F.R. [sect]219.9) under various alternative scenarios. Specifically, we evaluated the representation of ecosystems on the GMUG within the National Wilderness Preservation System (NWPS) to understand which ecosystems have 20% or more of their acres in a high level of conservation protection and which ecosystems could be elevated to that 20% threshold through protection of wilderness evaluation polygons. The scientific rationale for the 20% threshold and the importance of protecting all ecosystems to this threshold is discussed in Dietz et al. (2015). The scientific rationale, the policy mandate, the methods, and results of our ecosystem representation analysis is presented in Appendix 1 of this letter.

As presented in our in-person meeting, the results of our supplemental analysis showed that the GMUG National Forest hosts numerous ecosystem types that are poorly represented in the NWPS both regionally and nationally. Underrepresented ecosystems (i.e., < 20% representation) cover over 50% of the GMUG National Forest, on both federal and forest levels of representation. Out of the 60 ecosystems on the GMUG, 31 are underrepresented on the forest level (~1,800,000 acres), and 30 show inadequate representation on the federal level (~1,700,000 acres). Ecosystems in the most severe category of underrepresentation (i.e., < 5% representation) comprise over 14% of the forest on both federal and forest levels of representation. Ecosystems in this category compose over 700,000 acres on the forest level and over 430,000 on the federal level.

However, the low representation of ecosystems in the NWPS can be remedied by allocating places with wilderness character to protective management designations in the revised plan, thereby better

enabling the Forest Service to comply with the planning regulation's ecological integrity and diversity provisions. The draft wilderness evaluation polygons are composed of high proportions of underrepresented ecosystems. Over 949,000 acres of the polygons are comprised of underrepresented ecosystems at the forest level, with 900,000 acres of underrepresented ecosystems present on the federal level.

If all the GMUG's wilderness evaluation polygons were recommended for Wilderness, 27 of 31 underrepresented ecosystems on the GMUG would be lifted into adequate representation at the forest level. If polygons ranked as having moderate and high wilderness character were added, 26 ecosystems would fall into adequate representation, leaving only 5 underrepresented ecosystems on the forest level. Adding areas displaying high wilderness character would elevate 10 underrepresented ecosystems on the forest, leaving 21 other ecosystems inadequately represented.

Placing the proposed conservation areas in the Citizens and GPLI Proposals into highly protective management schemes would elevate 25 of the GMUG's ecosystems into representation greater than 20%, leaving only 6 underrepresented ecosystems on the forest. In total, underrepresented ecosystems span over 560,000 acres of the combined GPLI and Citizen Recommended Areas, with 174,000 acres falling into the lowest category of representation. Over 177,000 acres of these combined Recommended Areas were evaluated as possessing High Wilderness Character by the GMUG, with over 740,000 showing High or Moderate Wilderness Character.

Figure 1 summarizes the effect to ecosystem representation, one measure of biodiversity, under various protection scenarios.

Figure 1. Effect of ecosystem representation at the forest level under various management scenarios.

Action Number of under-represented ecosystems lifted into adequate (20% or greater) representation (out of 31 under-represented ecosystems) Number of ecosystems protected at 20% level or greater (out of 60 ecosystems) Effect to most severely (<5%) under- represented ecosystems

Protect all wilderness evaluation polygons 27 56 14 of the 19 most severely under- represented ecosystems protected at 20% level or

greater

Protect wilderness evaluation polygons ranked as high or moderate 26 55 14 of the 19 most severely under-represented ecosystems protected at 20% level or

greater

Protect wilderness evaluation polygons ranked as high 10 39 1 of the 19 most severely under- represented ecosystems protected at 20% level or

greater

Protect GPLI plus Citizen Proposed areas 25 54 14 of the 19 most severely under- represented ecosystems protected at 20% level or

greater

No action - maintain status quo 0. About 1,800,000 acres in under-represented ecosystems remain

unprotected 29 No change. 709,000 acres remain in severe under-

representation

At-Risk Species Richness and Occurrence

We evaluated at risk species richness and occurrence in relationship to the draft wilderness evaluation polygons. Protecting wilderness quality lands plays an important function in sustaining ecological integrity and maintaining and promoting biodiversity (Klein et al. 2009). This approach to biodiversity conservation is based on years of scientific research on systematic conservation planning (Margules and Pressey 2000; Noon et al. 2009), reserve design (Carroll et al. 2010), protected area strategies (Loucks et al. 2003; Dickson et al. 2014), and identifying species-rich areas (Fleishman et al. 2006). Under the planning rule, the Forest Service must contribute to the recovery of federally threatened and endangered species, conserve species proposed or candidates for listing under the Endangered Species Act, and maintain the viability of species of conservation concern (SCC) (36 C.F.R. 219.9(b)(1)).

Designating wilderness and other areas where conservation is a priority is one mechanism for advancing these requirements.

The GMUG National Forest hosts several hundred common species and numerous at-risk and rare species. Threatened and endangered species associated with the forest include the Canada lynx, Gunnison sage-grouse, Uncompahgre fritillary butterfly, DeBeque phacelia, Colorado hookless cactus, and others. The forest is important to many species likely to warrant identification as SCC.

To create the attached maps (Appendix 2), we used data from the USGS National Gap Analysis Project (GAP) and the Colorado Natural Heritage Program (CNHP). The National Gap data represent the modelled spatial distribution of individual vertebrate species, based on environmental and land cover data (i.e. a species distribution model). In other words, areas of the landscape that are suitable for the specific species to occupy. The CNHP data represent the locations of surveyed occurrences of plant species on public land. We generalized the plant occurrence data to the subwatershed (HUC 12) level. If a plant occurrence was found anywhere in a subwatershed, our analysis identified the entire subwatershed as suitable for that plant species. In total we included 541 species expected to occur within the GMUG, 350 vertebrate species and 191 plant species. Richness was calculated by overlaying and summing all of these individual species models, so the value of any pixel on our maps represents the total number of species expected to occur there. This process helps identify species-rich areas on the forest in relation to potential wilderness and other designated areas.

We identified a subset of the 541-species included in the National Gap and CNHP datasets as "at-risk" species. These species included federally threatened, endangered, candidate, and proposed species and species that should likely qualify for SCC designation. To develop the list of species likely warranted for SCC identification, we used the criteria from the Forest Service's Land Management Planning Handbook 1909.12, Chapter 10 at 12.52.

Currently Designated Wilderness on the GMUG includes suitable habitat for 347 species from the National Gap and CNHP datasets, including 4 species which are not covered by polygons in other scenarios. For at risk species, designated wilderness includes suitable habitat for 116 species. The Draft wilderness evaluation polygons include suitable habitat for 440 species from the National Gap and CNHP datasets, including 97 which are not covered by currently designated wilderness. For at-risk species, the wilderness evaluation includes suitable habitat for 181 species, including 68 which are not covered by currently designated wilderness. Looking at just the Draft wilderness evaluation polygons ranked as high or moderate include suitable habitat for 436 species from the National Gap and CNHP datasets, including 94 which are not covered by currently designated

wilderness. For at-risk species, the wilderness evaluation includes suitable habitat for 177 species, including 65 which are not covered by currently designated wilderness. Note that the number of vertebrate species found in the high and moderate ranked draft wilderness evaluation polygons is the same as the number found in all wilderness evaluation polygons. The difference in the number of species is driven by the distribution of plant species. The Citizen Proposal plus GPLI polygons include suitable habitat for 428 species from the National Gap and CNHP datasets, including 86 which are not covered by currently designated wilderness. For at-risk species, the citizen proposal plus GPLI polygons include suitable habitat for 169 species, including 57 which are not covered by currently designated wilderness. Both the Draft Wilderness evaluation and the Citizen plus GPLI polygons represent an increase in suitable habitat.

Figure 2. Species richness represented under various management scenarios.

Action Number of species expected to occupy protected areas Net gain of species protected over no- action scenario Number of at-risk species expected to occupy protected areas Net gain of at-risk species protected over no-action scenario

Protect all wilderness

evaluation polygons 440 97 181 68

Protect wilderness evaluation polygons ranked as high or

moderate 436 94 177 65

Protect GPLI plus Citizen

Proposed areas 428 86 169 57

No action - maintain

status quo 347 na 116 na

(see original letter as tables are unformatted to text in this coding box) We thank you for considering this scientific information and respectfully request that you incorporate it into the environmental impact statement. If you have any questions, please do not hesitate to contact us.

With regards,

Multiple Signatories