Data Submitted (UTC 11): 10/27/2023 6:00:00 AM
First name: Rocky
Last name: Smith
Organization:
Title:
Comments: Dear Forest Service,

Attached is the cover letter for our Objection II, and Objection II itself, addressing problems with the designation of species of conservation concern on the GMUG. Our other objection (Objection I, addressing the remaining issues), will be submitted separately.

References used in the various sections of each objection will be submitted separately.

Please acknowledge receipt of this objection and cover letter via a response to this e-mail ASAP.

Thanks,

Rocky Smith

OBJECTION II [ndash] SPECIES OF CONSERVATION CONCERN

USDA Forest Service, Rocky Mountain Region

Attn: Reviewing Officer, C/O Director of Strategic Planning 2nd floor

1617 Cole Blvd., Building 17

Lakewood, CO 80401

Via electronic submission form: http://www.fs.usda.gov/goto/gmug/forestplan_objections

or

https://cara.fs2c.usda.gov/Public//CommentInput?Project=51806

October 27, 2023

Dear Forest Service,

Pursuant to 36 CFR 219.50, Subpart B, the parties listed below object to the proposed approval of the revised forest plan for the Grand Meda-Uncompaghre-Gunnison (GMUG) National Forest. The responsible official is GMUG Forest Supervisor Chad Stewart.

The parties listed below have all participated previously in the process for revising the GMUG Forest Plan, and have submitted or endorsed comments submitted by various parties, including the comprehensive comments on the draft Plan and DEIS dated November 24, 2021 submitted on behalf of numerous conservation organizations (hereafter [ldquo]Coalition comments[rdquo]). More detailed identification of where objection issues were previously addressed is noted in more detail for each section in the attached document, Arguments in Support of Objection I. Deadline for submission of objections is October 30, therefore, this objection is timely.

This objection addresses issues with non-designation of species of conservation concern. GMUG Plan. A separate objection, addressing other issues on the GMG, will be submitted separately.

Rocky Smith shall be the lead objector, per 36 CFR 219.54(c)(3).

Sincerely,

Rocky Smith, lead objector

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OBJECTION II [ndash] NON-DESIGNATIONS OF NUMEROUS SPECIES OF CONSERVATION CONCERN

TABLE OF CONTENTS

I. THE SPECIES OF CONSERVATION CONCERN IDENTIFICATION PROCESS IS BADLY FLAWED

A. THERE CAN STILL BE SUBSTANTIAL CONCERN FOR SPECIES THAT DON[rsquo]T STRICTLY MEET ALL CRITERIA

The Regional Forester[rsquo]s protocol for identifying SCC violates the National Forest Management Act ([ldquo]NFMA[rdquo]). NFMA imposes a substantive duty that requires the Forest Service, as it develops and revises plans, to [ldquo]provide for the diversity of plant and animal communities[rdquo] in all units of the National Forest System. 16 U.S.C. [sect] 1604(g)(3)(B). The 2012 Planning Rule directs the Forest Service to [ldquo]provide the ecological conditions to both maintain the diversity of plant and animal communities and support the persistence of most native species in the plan area.[rdquo] 36 C.F.R. [sect] 219.9. The SCC identification process used for the GMUG is not consistent with the Forest Service[rsquo]s planning directives, fails to use and document best available scientific information ([ldquo]BASI[rdquo]), and results in excluding imperiled species that warrant inclusion on the SCC list.

We addressed this issue in our draft plan and DEIS comments in the appendix of HCCA et al. 2021 (Coalition comments), starting at 310. We reemphasize our key points below.

Under the 2012 Planning Rule, a species of conservation concern [ldquo]is a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species' capability to persist over the long-term in the plan area.[rdquo] 36 C.F.R. [sect] 219.9(c). The Forest Service is required to [ldquo]maintain a viable population of each species of conservation concern within the plan area." Id. at [sect] 219.9(b)(1).

The regional forester has discretion in determining the species of conservation concern ([ldquo]SCC[rdquo]) for a national forest; however, such determinations are made under the authority of the National Forest Management Act ([ldquo]NFMA[rdquo]). Id. at 219.(1)(a). The Administrative Procedure Act ([ldquo]APA[rdquo]) provides the authority for court review of decisions under NFMA. Pit River Tribe v. U.S. Forest Serv., 469 F.3d 768, 778 (9th Cir. 2006). Under the APA, a court reviewing a SCC determination may set aside the decision if it is [ldquo]arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.[rdquo] 5 U.S.C. [sect] 706(2)(A). A court will strike down a determination as arbitrary and capricious if the regional forester relied on factors Congress did not intend it to consider, entirely failed to consider an important aspect of the problem, or offered an explanation that runs counter to the evidence before the agency. Wyoming v. U.S. Dep't of Agric., 661 F.3d 1209, 1227 (10th Cir. 2011).

The Forest Service[rsquo]s Land Management Planning Handbook offers direction for regional foresters on determining species of conservation concern. The handbook notes that the criteria for identifying species of conservation concern are also the criteria for identifying potential species of conservation concern. FSH 1909.12.52c. The criteria for determining SCC are:

1. The species is native to, and known to occur in, the plan area; and
2. The best available scientific information about the species indicates substantial concern about the species[rsquo] capability to persist over the long term in the plan area.

Id. The two criteria, naturally, match the 2012 Planning Rule[rsquo]s SCC definition. The handbook further directs that species in the following categories should be considered as potential SCC:

a. Species with status ranks of G/T3 or S1 or S2 on the NatureServe ranking system.

b. Species listed as threatened or endangered by relevant States, federally recognized Tribes, or Alaska Native Corporations.

c. Species identified by Federal, State, federally recognized Tribes, or Alaska Native Corporations as a high priority for conservation.

d. Species identified as species of conservation concern in adjoining National Forest System plan areas (including plan areas across regional boundaries).

e. Species that have been petitioned for Federal listing and for which a positive [ldquo]90-day finding[rdquo] has been made.

f. Species for which the best available scientific information indicates there is local conservation concern about the species' capability to persist over the long-term in the plan area due to:

  (1) Significant threats, caused by stressors on and off the plan area, to populations or the ecological conditions they depend upon (habitat). These threats include climate change.

  (2) Declining trends in populations or habitat in the plan area.

  (3) Restricted ranges (with corresponding narrow endemics, disjunct populations, or species at the edge of their range).

  (4) Low population numbers or restricted ecological conditions (habitat) within the plan area.

Id. at 12.52d.

In determining SCC for the GMUG Forest Plan revision, the regional forester decided that substantial concern about a species' capability to persist over the long-term in the GMUG plan area is warranted only if, at the time of plan development, the best scientific information indicates that the species has either:

1. A NatureServe Ranking of G/T 1 or 2 for which there is no evidence that the known threats to that species do not operate on the planning unit; or
2. A species does not have a NatureServe Ranking of G/T 1 or 2 but all four of the indicators of conservation concern are demonstrated for that species. Those indicators of conservation concern are:

1. Indicator 1. Significant threats, caused by stressors on and off the plan area, to populations or the ecological conditions they depend upon (habitat). These threats include climate change.
2. Indicator 2. Declining trends in populations or habitat in the plan area;
3. Indicator 3. Restricted ranges (with corresponding narrow endemics, disjunct populations, or species at the edge of their range);
4. Indicator 4. Low population numbers or restricted ecological conditions (habitat) within the plan area.

Regional Foresters Species of Conservation Concern Final List and Process Rationale.

The regional forester[rsquo]s four indicators of conservation concern are taken directly from the Forest Service[rsquo]s Land Management Planning Handbook. See FSH 1909.12.52d(3)(f). The handbook[rsquo]s listing of factors indicating local conservation concern about the species' capability to persist over the long-term in the plan area is neither conjunctive nor disjunctive.

In its entirety, the regional forester[rsquo]s rationale for requiring that all four indicators must be demonstrated for there to be substantial concern about a species' capability to persist over the long-term in the GMUG plan area is the following:

The term [ldquo]substantial[rdquo], meaning of considerable importance, is demonstrated in my process by all 4 indicators of conservation concern being met for a species. While species with fewer than 4 indicators might have conservation concern, that concern does not rise to the level of [ldquo]substantial.[rdquo]

Regional Forester[rsquo]s Species of Conservation Concern Final List and Process Rationale. The regional forester has not provided any explanation for why a species meeting fewer than four indicators cannot rise to the level of substantial concern about its capability to persist over the long-term.

B. THE REGIONAL FORESTER[rsquo]S SCC IDENTIFICATION PROCESS OF FILTERING OUT IMPERILED SPECIES THAT DON[rsquo]T MEET ALL FOUR INDICATORS LISTED IN FSH 1909.12.10.12.52.D.3.F IS ARBITRARY AND NOT BASED ON THE REQUIREMENT IN 36 C.F.R. [sect]219.3 TO USE AND DOCUMENT THE BEST AVAILABLE SCIENTIFIC INFORMATION.

The regional forester[rsquo]s requirement that all four indicators of local conservation concern be present for there to be substantial concern about a species[rsquo] capability to persist over the long-term is a misapplication of the directives and sets the bar for SCC designation inconsistently and illegitimately high given the 2012 Planning Rule[rsquo]s directive to [ldquo]provide for the diversity of plant and animal communities, within Forest Service authority and consistent with the inherent capability of the plan area.[rdquo] 36 C.F.R. [sect] 219.9. The Land Management Planning Handbook does not direct the Forest Service to prohibit SCC determinations for species that do not meet all four indicators, and the regional forester has not provided any meaningful rationale that shows there cannot or should not be substantial concern about a species[rsquo] capability to persist in the absence of even one of the four indicators. In fact, a species experiencing a subset of the four indicators can be vulnerable to extirpation in the plan area.

For example, a species could have a very low population[mdash]only a few individuals, for the purposes of this example--within the GMUG plan area and there could be a significant threat to that very low population[mdash]say an invasive predator that has only recently established itself on the GMUG--while at the same time the species[rsquo] population was not trending downward from its already low number, and its range was not restricted on the GMUG because the species is a habitat generalist. Nonetheless, under the regional forester[rsquo]s rationale for GMUG SCC determination, concern regarding this species[rsquo] capability to persist locally over the long-term would be, by definition, not substantial.

Another example is that for a number of species where population trend data is missing, it has been assumed that the species is OK. Accordingly, these species could decline to near-extirpation on the GMUG and the regional forester[rsquo]s approach would result in the agency seeing no need to protect them. This is illogical and not what is intended by either the 2012 Planning Rule or the direction in the Land Management Planning Handbook.

The regional forester[rsquo]s approach to determining SCC is arbitrary and leaves a substantial number of imperiled species vulnerable and without meaningful protections to ensure that activities on the GMUG would not contribute to these species[rsquo] needs for listing under the ESA. Under the ESA, a species need only meet [ldquo]one or more[rdquo] of five factors to be listed as threatened or endangered. The listing factors include threats (factors 1-3), [ldquo]inadequacy of existing regulatory mechanisms[rdquo] (factor 4), [ldquo]or[rdquo] [ldquo][rsquo][o]ther factors[rsquo] affecting the species continued existence[rdquo] (factor 5). 16 USC [sect] 1533(a)(1). It is thus harder for a species to qualify as a species of conservation concern per this regional forester[rsquo]s approach than it is for a species to qualify as threatened or endangered under the ESA.

The regional foresters[rsquo] approach leaves at least 23 forest/woodland species without adequate protections by excluding them as SCC[1]:

* Northern Goshawk
* Boreal owl
* Olive-side flycatcher
* Southern red-backed vole
* Hoary bat
* Pacific marten
* Reflected grapefern
* Mingan moonwart
* Northern oak fern
* Juniper titmouse
* Pinyon jay
* Lewis's woodpecker
* Grace[rsquo]s warbler
* Abert[rsquo]s squirrel
* Purple Martin
* Flammulated owl
* Townsend[rsquo]s big-eared bat (S2)
* Spotted bat (S2)
* Silver haired bat
* Snowshoe hare
* Little brown myotis
* Fringed myotis
* Dwarf shrew

Additionally, numerous species excluded from SCC identification have timber/logging identified as a known threat, including:

* Northern goshawk
* Grace[rsquo]s warbler
* Colorado River cutthroat trout
* Abert[rsquo]s squirrel
* Townsend[rsquo]s big-eared bat
* Silver haired bat
* Hoary bat
* Snowshoe hare
* Pacific marten
* Little brown myotis
* Fringed myotis

The exclusion of these species when, as discussed in objections submitted to the GMUG forest supervisor regarding the Forest Service[rsquo]s arbitrary decision as to lands found suitable for timber production, is inconsistent with the Forest Service[rsquo]s substantive mandates to use the best available science (36 CFR 219.3); include plan components that maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area (36 C.F.R. 219.19); ensure that commercial timber harvesting is not elevated over other values including wildlife conservation (36 CFR 219.9(a)); and that logging be carried out in a manner consistent with protection of soil, watershed, fish, wildlife, recreation, and aesthetic resources (36 CFR 219.11).

1. The [rdquo]four indicators test[rdquo] fails to use the best available scientific information on extinction risk.

Under the 2012 Planning Rule, the BASI must be used and sufficiently documented, for the Regional Forester to determine: 1) which species are [ldquo]known to occur in the plan area[rdquo] and 2) the species for which a substantial concern exists about their [ldquo]capability to persist over the long-term in the plan area.[rdquo] 36 C.F.R. [sect] 219.9(c).

We raised in our comments that the International Union for Conservation of Nature (IUCN) requires species meet just one of the five criteria it uses to identify species [ldquo]critically endangered,[rdquo] [ldquo]endangered,[rdquo] or [ldquo]vulnerable.[rdquo] These criteria from the IUCN Standards and Petitions Committee (2019) include:

A. Population size reduction (past, present and/or projected)

B. Geographic range size, and fragmentation, few locations, decline or fluctuations

C. Small and declining population size and fragmentation, fluctuations, or few subpopulations

D. Very small population or very restricted distribution

E. Quantitative analysis of extinction risk (e.g., Population Viability Analysis)

The IUCN (2019) Guidelines for Using the IUCN Red List Categories and Criteria, directs that,

To list a particular taxon in any of the categories of threat, only one of the criteria, A, B, C, D, or E needs to be met. [hellip] Only the criteria for the highest category of threat that the taxon qualifies for should be listed. For

example, if a taxon qualifies for criteria A, B, and C in the Vulnerable and Endangered category and only criterion A in the Critically Endangered category, then only the criterion A met in the Critically Endangered category should be listed (the highest category of threat). [emphasis added]

The IUCN guidelines go on to explain, [ldquo][l]isting under the highest category of threat (instead of, for instance, averaging extinction risk across the five criteria) ensures a more precautionary approach to making urgent decisions based on limited information.[rdquo] IUCN 2019 at 74. The criteria and protocol the IUCN uses for ranking imperiled species is based in substantial science. See Harris et al. 2011 ; Betts et al. 2019; Bland et al. 2019. It is illogical that the Region 2 SCC determination rules set a higher standard than both the U.S. Fish and Wildlife Service for the ESA and the IUCN for the Red List.

In our comments we demonstrated that imperiled species can lose viability if they meet just one of the indicators. There is a substantial body of literature on the risks that small, isolated and fragmented populations face (Gilpin and Soul[eacute] 1986; Lande 1987), including environmental and demographic stochasticity (Caswell 1989; Goodman 1987; Mode and Jacobson 1987; Lande 1993), Allee effects (Allee et al. 1949), extinction due to demographic fluctuation, environmental stochasticity, inbreeding and random drifts in gene frequencies (Charlesworth and Charlesworth 1987, Soule 1987), and reduced chance for recolonization after a population is extirpated (Wagner 2002). See also O[rsquo]Grady et al. (2003) on small populations and extinction risk. Brussard and Gilpin (1989) and Miller et al. (1996) reported on the critical role played by stochastic processes in the survival of small populations. Finn et al. (2023) explored the importance of population decline as an indicator of extinction risk as did Hayward et al. (2016), which is a Forest Service guidance document on identifying SCC.

2. The [ldquo]four indicators test[rdquo] is not consistent with the planning directives.

The directives demonstrate the Forest Service did not intend for the SCC identification policy to weed out species that don[rsquo]t meet all four section [ldquo]f[rdquo] indicators. For example, regarding indicator #3, the directives provide examples of SCC that do not have restricted ranges. One such species is the Cerulean warbler[mdash]a potential SCC in the Wayne National Forest in southern Ohio, and well within the core breeding range of the species. FSH 1909.12.20.23.13c.3.a. Similarly, the swift fox ranges throughout the short and mixed grass prairie of the Great Plains, and several national grasslands including the Comanche, Cimarron, Rita Blanca, and Kiowa are at the heart of the species[rsquo] range. See how the directives portray these examples below.

Examples of circumstances not within the authority of the Forest Service. The following are species-specific examples of when ecological conditions necessary for the long-term persistence of a species are outside the National Forest System lands and, therefore, outside Forest Service control for providing ecological conditions to maintain viable populations of each species of conservation concern within a plan area:

[See examples on the next page.]

 a. Forest clearing in South America. These South American forests provide important wintering areas for many Neotropical birds that nest in North America. The clearing of these forests for agricultural purposes adversely affects the wintering habitat and ecological conditions necessary for the continued survival of viable populations of the Cerulean warbler. Thus, impacts to habitat outside the National Forest System may adversely affect populations of species that migrate to and from a National Forest.

 b. Land use patterns on private lands intermixed with or adjacent to National Forest System lands. The continuing agricultural uses and urbanization that is occurring east of the Rocky Mountains is causing habitat fragmentation, which reduces available habitat and ecological conditions necessary for the viability of swift fox populations. Therefore, a reduction in viable populations of this species can occur as a result of land use development and patterns outside of National Forest System lands.

3. Threats to a species[rsquo] local population or habitat are sufficient to cause substantial concern about its capability to persist long-term in the planning area.

Species can fail to persist due to threats, even one threat, regardless of whether or not it meets indicator 3 or 4. The passenger pigeon[rsquo]s population numbered from 3-5 billion in the 1800s and ranged across the eastern half of the U.S. before it went extinct in 1914 due to 50 years of human exploitation for the bird[rsquo]s feathers. Under the ESA at Section 4(a), a species need only meet [ldquo]one or more[rdquo] of five factors to be listed as threatened or endangered. 16 USC 1533(a)(1). These are

(A) the present or threatened destruction, modification, or curtailment of its habitat or range;

(B) overutilization for commercial, recreational, scientific, or educational purposes;

(C) disease or predation;

(D) the inadequacy of existing regulatory mechanisms; or

(E) other natural or manmade factors affecting its continued existence.

These factors A, B, C, and E are based on threats to a species or habitat, and factor D addresses whether regulations are in place to eliminate or reduce threats.

4. The Regional Forester[rsquo]s conflation of species[rsquo] occurrence in the plan area with population size in the application of Indicator #4 is erroneous and does not comply with 36 CFR [sect] 219.3.

The HCCA et al. 2021 comments criticized the use of anecdotal information to make justifications for not identifying species as SCC. We focused on making abundance estimates from species[rsquo] observations and use the boreal owl and other species to make this point. We appreciate the Regional Forester has added additional context. III FEIS at 313, Appendix 3 states,

2. Anecdotal information [ndash] The information used by the Regional Forester to determine if a species meets the two criteria for a species to be identified as SCC is not anecdotal as the commenter asserts. The information used is not based on personal, non-professional observations (i.e., anecdotal), rather it is the scientific information available at the time of plan revision as required at FSH 1909.12.07. Data prepared by the Forest Service and other expert opinion (including that of Forest Service professionals) is a recognized source of scientific information at FSH 1909.12.07.13.

However, we have updated discussions of populations to provide context to the number of observations or records used to determine if a species meets the low population or restricted ecological conditions indicator. Clarifying information has also been provided in SCC tables, when available, when discussing the number of occurrences. The information which the Regional Forester used to determine if a species meets each indicator of conservation concern is documented in the species overview for each species (2018 GMUG Species Assessment (USDA Forest Service 2018) and updated overviews in the project record), and follows FS Handbook direction for the use of Best Available Scientific information to inform the land management planning process at FSH 1909.12.07.

The response to this comment noted our concerns that the Regional Forester used sightings of individual animals in the GMUG to make guesses about the abundance of species populations. Recording verifiable sightings of individuals of an imperiled species population and undertaking occurrence studies are important to assessing presence or absence from the plan area. However, the information the Regional Forester has provided for several species considered but not identified as SCC does not indicate that occurrence numbers were derived

from trend and abundance surveys. These numbers cannot be used to extrapolate population sizes. See the examples below that demonstrate the Regional Forester[rsquo]s flaw using this approach.

Northern goshawk. The GMUG[rsquo]s species[rsquo] overview notes northern goshawks have been sighted 214 times in the past 20 years. The number could represent 214 separate observations of the same individual, though we doubt this is the case. We aren[rsquo]t disputing the Forest Service[rsquo]s number of recorded sightings. Yet, 214 is not the species[rsquo] population size on the GMUG. We acknowledge that that these records come from the Forest Service[rsquo]s Natural Resources Information System, but they cannot be used to make inferences about population size unless the numbers came from an abundance study. The northern goshawk[rsquo]s habitat has been significantly changed by sudden aspen decline and spruce bark beetle, as well as timber harvesting and other types of vegetation management. The modeled habitat figure reported in Table 53 of Appendix 3, Volume 2 of the FEIS is from 18 years ago. The overview reported that no individuals have been spotted in the GMUG for seven years. These facts point to identifying the northern goshawk as an SCC.

Boreal owl. The same argument holds for the boreal owl. 347 occurrences recorded across a 20-year period do not indicate abundance, though the overview does provide some distribution information. The overviews were finalized over five years ago. The species[rsquo] habitat on the GMUG has changed significantly in a relatively short time period due to insects and disease. Boreal owls have not been seen on the forest since 2016[mdash]seven years ago.

Flammulated owl. The responses to comments (FEIS III at 315), [ldquo]Flammulated owl [ndash] listed as 157 observations. However, the map in the species overview shows that the observations are not repeats and are broadly scattered across the plan area. The indicators table (FEIS, Vol II, Appendix 3, table 53) has been updated to reflect this context.[rdquo] We see nothing in table 53 that provides helpful context. Moreover, the map referenced in the flammulated overview does not depict what the response quoted above says the map shows. This is the map from page 82 of the flammulated owl overview:

This map implies there have been perhaps four observations (2.5% of all observations) and a small bit of habitat outside the region of the Uncompahgre Plateau. The map provides no information about when these observations occurred or information about when the habitat was modeled. The map provides no support for the assertion in the Regional Forester[rsquo]s comment response.

All of the species in Table 53 of Appendix 3 in II FEIS that were not identified as SCC due, in part, to the use of sightings to make abundance inferences, should be reconsidered. This isn[rsquo]t science, much less best available science, regardless of whether a Forest Service scientist or other expert made the observations and how they were collected and recorded.

5. The Regional Forester acted arbitrarily in requiring that all four local conservation concern criteria be met to designate a species as a SCC for the GMUG Forest Plan revision while not requiring the same to designate a species as a SCC for the Rio Grande Forest Plan revision.

[ldquo]Within certain bounds, agencies have the power to adjust policies and rulings in light of experience.[rdquo] Cal. Trout v. F.E.R.C., 572 F.3d 1003, 1023-24 (9th Cir. 2009). However, when an agency establishes a general policy by which its exercise of discretion will be governed, an irrational departure from that policy may constitute action that must be overturned as arbitrary, capricious, [or] an abuse of discretion within the meaning of the [APA].[rdquo] INS v. Yueh[ndash]Shaio Yang, 519 U.S. 26, 32, 117 S.Ct. 350, 136 L.Ed.2d 288 (1996) (internal quotation marks omitted). When an agency departs from prior decisions, it must [ldquo]clearly set forth the ground for its departure from prior norms.[rdquo] W. States Petroleum Ass'n v. EPA, 87 F.3d 280, 284 (9th Cir. 1996). Failure to offer a sufficient explanation for differential treatment of rules or policy may be found arbitrary and capricious under the APA. Seeid. at 285.

In May 2020, the Forest Service completed the Rio Grande National Forest ([ldquo]RGNF[rdquo]) Plan revision. As part of the revision process, the Regional Forester for the Rocky Mountain Region determined SCC for the RGNF. For that determination, the Regional Forester relied on the same four criteria used to determine the GMUG SCC:

Species for which the best available scientific information indicates there is local conservation concern about the species' capability to persist over the long-term in the plan area due to:

(1) Significant threats, caused by stressors on and off the plan area, to populations or the ecological conditions they depend upon (habitat). These threats include climate change.

(2) Declining trends in populations or habitat in the plan area.

(3) Restricted ranges (with corresponding narrow endemics, disjunct populations, or species at the edge of their range).

(4) Low population numbers or restricted ecological conditions (habitat) within the plan area.

Rio Grande National Forest, Draft Assessment 5: Identifying and Assessing At-risk Species ([ldquo]RGNF Assessment[rdquo]) at 35.

The Regional Forester did not, however, require that a species meet all four local conservation concern criteria in

order to be designated as a RGNF SCC.[2] Rather, the Forester considered the four criteria to be disjunctive[mdash]meeting or attaining any subset of the criteria was sufficient for a species to be listed as a RGNF SCC.

In the rationale for the GMUG SCC determination, the Regional Forester did not explain why he had departed from the SCC determination process used three years earlier for the Rio Grande Forest Plan revision. See Regional Foresters Species of Conservation Concern Final List and Process Rationale. The Regional Forester[rsquo]s SCC designation process for the GMUG Plan revision is therefore arbitrary and capricious.

6. The Regional Forester failed to identify imperiled species that met criteria in FSH 1909.12.10.12.52.d as SCC.

As indicated above, the Regional Forester failed to consider imperiled species that could be included in three categories (b, c, and d) in FSH 1909.12.10.12.52.d of possible SCC. These three categories represent species for which other authoritative sources have determined that a concern exists about the species[rsquo] ability to persist, i.e., across the country, throughout a state, or in another national forest. Thus, in the case of the GMUG, the Regional Forester should have considered species in the following categories to be SCC: species listed as threatened or endangered by the state of Colorado and applicable Tribes; species determined to be of high conservation priority for the state of Colorado and applicable Tribes; and SCC in the Rio Grande National Forest (which revised its land management plan in 2020).

SUGGESTED IMPROVEMENTS

The Regional Forester must reconsider the determination that substantial concern about a species' capability to persist over the long-term in the GMUG plan area is present or warranted only when a species meets all four the indicators of conservation concern listed in the Forest Service[rsquo]s Land Management Planning Handbook. See FSH 1909.12.10.12.52.d.3.f. The Regional Forester must reconsider species that fall into the categories of FSH 1909.12.10.12.52.b.c&d. Science on extinction risk must inform SCC determinations.

REFERENCES

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II. THE REGIONAL FORESTER[rsquo]S SPECIES OF CONSERVATION CONCERN LIST EXCLUDES NUMEROUS DESERVING PLANT SPECIES

Colorado Native Plant Society addressed this issue in two previous comments, as are more fully described at the end of this section.

Summary of Issues: The Regional Forester Unjustifiably Denied Species of Conservation Concern Designation to Many Deserving Vascular Plant Species on the GMUG Forest.

a) The Regional Forester failed to list at least one endemic threatened plant found on the GMUG, the Grand Junction milkvetch (Astralagus linifolius), contrary to Forest Service Manual 2670.32(1) ([ldquo][a]ssist states in achieving their goals for conservation of endemic species[rdquo])

b) The Regional Forester recognizes that climate change is a threat to the viability of alpine plant species, but does not seem to recognize that climate change is occurring now, that it is ongoing, and that it will get worse in the future. Habitats, including wetlands, fens, and the alpine, are already being affected by climate change, and this will only continue to occur, as the climate dries and warms.

c) Contrary to Forest Service Manual 2670.44(5) ([ldquo]ensure that planning for those species common to two or more forests is coordinated among concerned units[rdquo]), the revised GMUG SCC list is inconsistent with SCC lists for neighboring forests, particularly the Rio Grande National Forest.

d) Contrary to Forest Service Manual 2670.44(2) ([ldquo][c]oordinate regional programs with states and other federal agencies...concerned with the management of[hellip]sensitive species.[rdquo]), the GMUG SCC list is also inconsistent with the Bureau of Land Management's [ldquo]Species of Special Concern[rdquo] lists for BLM Field Offices which immediately adjoin the GMUG.

ARGUMENTS

  A) The Regional Forester Unjustifiably Denied Species of Conservation Concern Designation to Many Deserving Vascular Plant Species on the GMUG Forest.

We greatly appreciate GMUG's acceptance of 10 of the plant species we had suggested be added to the list of Species of Conservation Concern (SCC). It is wonderful that the Regional Forester has recognized the importance of fens and fen species by making a number of those additions. Thank you.

We are confused, however, by the decision to reject other plant species from designation as SCC, as shown on the following Table 1. Given that the mandate of the Forest Service is to [ldquo]maintain viable populations of all native...plant species[rdquo] (Forest Service Manual 2670.22(2)) and to [ldquo][a]ssist states in achieving their goals for conservation of endemic species[rdquo] (Forest Service Manual 2670.32(1)), it was disappointing to see that several Colorado endemic plant species, found on the GMUG, have been excluded from the SCC.

In addition, Forest Service guidance is to [ldquo]ensure that planning for those species common to two or more forests is coordinated among concerned units.[rdquo] (Forest Service Manual 2670.44(5)). Yet, a number of plant species found on the Rio Grande National Forest SCC have been excluded from the GMUG SCC. The Regional Forester is expected to ensure consistency across forests.

It is also the Regional Forester's responsibility to [ldquo][c]oordinate regional programs with states and other federal agencies...concerned with the management of[hellip]sensitive species.[rdquo] (Forest Service Manual 2670.44(2)). The Bureau of Land Management, however, has listed several species rejected by GMUG on the agency's [ldquo]Species of Special Concern[rdquo] for Field Offices immediately adjoining GMUG, yet these species have been rejected. It is not clear why these inconsistencies have occurred in the GMUG plan.

Finally, the criteria for rejection of SCC often seem inconsistent with other statements made by GMUG and with the practices which resulted in the Rio Grande NF SCC list. Forest Service Handbook 1909.12.52d(1)(f) states the four criteria used to determine if there is 'substantial concern' for the continued viability of species on the plan area:

f. Species for which the best available scientific information indicates there is local conservation concern about the species' capability to persist over the long-term in the plan area due to:

(1) Significant threats, caused by stressors on and off the plan area, to populations or the ecological conditions they depend upon (habitat). These threats include climate change.

(2) Declining trends in populations or habitat in the plan area. [Emphasis added]

(3) Restricted ranges (with corresponding narrow endemics, disjunct populations, or species at the edge of their range).

(4) Low population numbers or restricted ecological conditions (habitat) within the plan area.

The Regional Forester explained his use of these criteria in the document entitled [ldquo]Enclosures - Species of Conservation Concern Final List and Process Rationale.pdf[rdquo]. There, he said: [ldquo]It is worth noting that three of the four indicators of conservation concern (Indicators 1, 2, and 4) are about populations or ecological conditions/habitat and a species can meet such an indicator with information about either the population or ecological conditions/habitat, it need not have both.[rdquo] (P. 5; emphasis original.)

The most common reason for rejecting a plant species from the SCC list is that Indicator 2 ([ldquo]Declining trends in populations or habitat in the plan area[rdquo] (emphasis added) had not been met because there was no population trend information available. To show a trend in any species, it is necessary to monitor it over a period of time. Unfortunately, the FS has not done that or contracted with others to do it, despite CoNPS' request

to do so in 2018. This makes populations trends impossible to document. So, the first part of Criterion 2 has often not been established due to lack of data.

Likewise, the second part of Criterion 2, [rsquo]declining trends in habitat', is rarely if ever invoked. On the one hand, the Forest has concluded that alpine plants are extremely or highly vulnerable to the threat of climate change.   But on the other hand, the Forest has also seemingly decided that the threat from climate change is not yet affecting habitats [ndash] that it is a future threat only because the GMUG Forest has not documented habitat decline. In fact, in the case of the Paradox moonwort, GMUG says that [ldquo]the habitat and population number seem stable in the plan area.[rdquo] (FEIS, Vol. 2, P. 3-69)

Other scientific observers have come to the different conclusion, however, that climate change is real, that it is not just a future threat, and that it is already affecting habitats now.

For example, the European Union has a project called PESETA IV which monitors the alpine in Europe. They say that:

The last five years (2015-2019) were the hottest years on record since 1850, when global average temperature started being tracked. It is currently estimated to be 1.1[deg]C above pre-industrial times (1850-1900) and 0.2[deg]C warmer than 2011-2015 (World Meteorological Organization, 2019). PESETA IV uses the period 1981-2010 as a reference, when global average temperature was already 0.8[deg]C higher on average compared to pre-industrial times[hellip].with 1.5[deg]C global warming the alpine tundra domain in the Pyrenees, Scandes

and Alps reduces in area by around 74%, 50% and 36% respectively (Figure 23)[hellip].Cold mountain habitats would decline, leading to local extinction of some alpine plant species. Warm-adapted species would increase at the expense of declining cold-adapted species.[3]

Closer to home, Dr. David Inouye of Rocky Mountain Biological Laboratory in a 2019 paper states:

Alpine environments are among the habitats most strongly affected by climate change, and consequently their unique plants and pollinators are faced with the challenge of adapting or going extinct. Changes in temperature and precipitation affect snowpack and snowmelt, resulting in changes in the growing season in this environment where plant growth and pollinator activity are constrained to the snow-free season, which can vary significantly

across the landscape if there is significant topographic complexity. As in other ecosystems, the resulting changes in phenology are not uniform among species, creating the potential for altered and new interspecific interactions. New plant and animal species are arriving as lower altitude species move up with warming temperatures, introducing new competitors and generating changes in plant[ndash]pollinator interactions.[4]

Dr. Inouye describes this not just as a future trend, but as something which is happening now. As the Grand Junction Daily Sentinel reported in 2019:

As a longtime summer researcher at the Rocky Mountain Biological Laboratory in the Gothic area outside Crested Butte in Gunnison County, David Inouye has watched the high-elevation study sites there change due to a warming climate...The area around the Gothic-area research has shown signs of warming, such as a longer growing season that is affecting plants and animals alike, Inouye said.

 (Dennis Webb, [ldquo]Western Slope Warming at Faster Pace than US[rdquo], Grand Junction Daily Sentinel, August 22, 2019, https://www.gjsentinel.com/news/western_colorado/western-slope-warming-at-faster-pace-than-us/article_3441b41a-c49d-11e9-8ac5-20677ce85d90.html)

The Daily Sentinel article went on to cite a Washington Post review of county-by-county US climate trends since 1895 which showed increases in long-term temperature averages since 1895 of:

¦ 4.5 degrees (Fahrenheit) in Grand County, Utah, home to the city of Moab;

¦ 4.3 degrees in Montrose and Rio Blanco counties;

¦ 4.2 degrees in Mesa and Ouray counties in Colorado and Uintah County in Utah;

¦ 3.9 degrees in Delta, San Miguel and Moffat counties.

(2[deg]C: Beyond the limit: Extreme climate change has arrived in America, Steven Mufson , Chris Mooney , Juliet Eilperin and John Muyskens, Washington Post, Aug. 13, 2019. https://www.washingtonpost.com/graphics/2019/national/climate-environment/climate-change-america/)

This year, a Western State Master's student summarized the current state of scientific knowledge in a study monitoring plants at Senator Beck Basin, in the GMUG near Red Mountain Pass[5]:

[ldquo]The southern Rocky Mountains support extensive alpine plant communities that have experienced some of the highest levels of recent warming recorded in the conterminous US. Decreased annual snowpack in this region over time has resulted in measurable changes to some plant species abundance and distribution (Gasarch & Seastedt, 2015; Saavedra et al., 2003). Additionally, shrub expansion has been recorded over time in alpine landscapes, also associated with warming temperatures (Formica et al., 2014). Warming may be compounded by enhanced dust deposits on alpine snow, resulting in earlier annual snowpack melt-out and triggering earlier phenotypic responses in alpine plant species (Fassnacht et al., 2022; Steltzer et al., 2009)[rdquo]

If we acknowledge the threat of future climate change but ignore the fact that climate change is already

happening and fail to protect at risk species by not designating them as SCC, we may contribute to the extinction of these species in Colorado. By the time the forest plan is revised again, it may be too late.

Other indications of habitat decline for which we have yet not found substantial data but expect that it is available with some further research, include the huge increase in human activity in the alpine in recent years, including hiking, camping, skiing, and horseback riding. Sheep grazing is also expected to have caused changes in plant communities. Alpine communities are extremely vulnerable to trampling, and take many years to recover from disturbances.

The current and ongoing decline in alpine habitat needs to be consistently recognized throughout the Plan [ndash] it is not now.

Another issue with the Plan is that many state-ranked S1 and S2 plant species are excluded from the GMUG SCC as not showing [ldquo]substantial concern for continued viability[rdquo] of the species in the plan area. The Colorado Natural Heritage Program, however, the state's foremost experts on the NatureServe rankings, has already concluded that continued viability is a concern for these species by ranking them S1 or S2.

S1 species are [ldquo][c]ritically imperiled because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation or extinction. Typically 5 or fewer occurrences or less than 1000 remaining individuals[rdquo], while S2 species are [ldquo][i]mperiled because of rarity or because of some factor(s) making it very vulnerable to extirpation or extinction. Typically 6 to 20 occurrences or between 1,000 and 3,000 remaining individuals.[rdquo] https://cnhp.colostate.edu/ourdata/help/heritage/ Accessed 910/6/23

With these small numbers of plants, the GMUG should have factored in the possibility of one-time events which could easily erase those species from the GMUG, as the Rio Grande National Forest did when compiling their SCC.

For example, here is the RGNF rationale for including Colorado larkspur on the Rio Grande SCC:

Rio Grande Revised Forest Plan at 178.

Note here that the population data for Colorado larkspur was some 25 years old and there is no population trend noted. Yet, the Regional Forester in this case accepted this species and others like it and noted that [ldquo]small and isolated populations are susceptible to genetic drift and stochastic events[rdquo] making them [ldquo]more susceptible to loss[rdquo]. This same rationale for potential stochastic losses of small populations should be

applied consistently in the GMUG plan, as well.

In the table below, we take a number of species which were denied designation as SCC and we indicate which of the problems noted above apply to the GMUG analysis of that plant species.

Table 1. Properties of Nine Plant Species Deemed Ineligible for Inclusion on GMUG [ldquo]Species of Conservation Concern[rdquo] List

Common Name	Scientific Name	S Rankings	Endemic?	Habitat	On Adjoining SCC?	Declining Trend in Habitat?	Reason for Denial
Grand Junction milkvetch	Astralagus linifolius	Not S ranked (G3)	Yes.	Rocky soil on dry hillsides.	Yes, Grand Junction FO, BLM	One occurrence, 500 individuals. [ldquo]Species is extremely endemic to the area around Grand Junction and a single population in the plan area threatened by physical disturbance. [ldquo]No known trend in population in plan area.[rdquo] [ldquo]...sources do[] not show a declining trend in habitat in the plan area.[rdquo]	[ldquo]Conservation concern does not rise to the level of substantial... Does not meet Indicator 2.[rdquo]
Leadville milkvetch	Astralagus molybdenus	Not S ranked	Yes.	Alpine.	On White River NF [ldquo]Species of Viability Concern[rdquo]	[ldquo]Two of the occurrences in the plan area are known to be stable, no other population trend data available for the plan area...Habitat is highly vulnerable to negative impacts from climate change and off-highway vehicles are a known.[rdquo]	[ldquo]Does not meet indicators 2 or 4.[rdquo]
Naturita milkvetch	Astralagus naturitensis	S3	No.	Pinon-juniper woodland.	SWAP Tier 2; Special Status Species on Grand Valley and Uncompahgre FO BLM List	[ldquo]Extremely vulnerable to climate change[rdquo] [ldquo]Trend in plan area is stable, but small.[rdquo][ldquo]The trend in population and habitat appears stable.[rdquo]	[ldquo]Does not meet Indicator 2.[rdquo]
Peculiar or Paradox moonwort	Botrychium paradoxum	S1	No.	Montane to subalpine grasslands.	USFS Region 2 Sensitive Species List.	20-25 plants in one occurrence. [ldquo]Extremely vulnerable to climate change within the plan area.[rdquo] [ldquo]...the habitat and population number seem stable in the plan area.[rdquo] GMUG fails to recognize that the one occurrence is at the top of a ski lift and vulnerable to trampling. NatureServe says of Protection Needs: [ldquo]Because of small population size, protect all EOs.[rdquo]	[ldquo]Does not meet Indicator 2.[rdquo]
Northern moonwort	Botrychium pinnatum	S2	No.	Forest meadows.	Rio Grande NF SCC	Three occurrences with small populations. [ldquo]Moderately vulnerable to climate change...no known trend in population in plan area.[rdquo]	[ldquo]Does not meet indicators 1, 2, or 3.[rdquo]
Least moonwort	Botrychium simplex	S2	No.	Wet/fens.	Rio Grande NF SCC	Three known occurrences, small habitat. [ldquo]Highly vulnerable to climate change...no known trend in population in plan area.[rdquo] [ldquo]...sources do[] not show a declining trend in habitat in the plan area.[rdquo]	[ldquo]Does not meet indicators 2 or 3.[rdquo]
Arctic braya	Braya glabella var. glabella	S1S2	No.	Alpine.	USFS Region 2 Sensitive Species List	5 occurrences. Disjunct. [ldquo]Restricted to alpine limestone/ dolomite.[rdquo] [ldquo]At-risk due to illegal off-trail OHV use and is extremely vulnerable to climate change. No known trend in population in plan area.[rdquo] [ldquo]...sources do[] not show a declining trend in habitat in the plan area.[rdquo]	[ldquo]Does not meet Indicator 2.[rdquo]
Lesser-panicled sedge	Carex diandra	S2	No.	Fens.	Rio Grande NF SCC, San Juan NF SCC, USFS Region 2 Sensitive Species List	[ldquo]Fens in the plan area are threatened by physical disturbance and those disturbances have resulted in a declining trend...moderately vulnerable to negative impacts from climate change.[rdquo]	[ldquo]Population in plan area is not endemic, disjunct, or at the edge of the range and does not represent a restricted range.[rdquo]FS says [ldquo]does not represent a restricted range[rdquo] but it is a fen-

obligate species, and fens are rare on GMUG.[ldquo]Does not meet Indicator 3.[rdquo]
Tundra buttercupRanunculus gelidus (aka grayii)S2No. Alpine.On White River NF [ldquo]Species of Viability Concern[rdquo]; USFS Region 2 Sensitive Species ListFour occurrences, 80 individuals. [ldquo]Rated as extremely vulnerable to climate change, and its alpine habitat is rated as highly vulnerable to climate change. No known trend in population in plan area.[rdquo] [ldquo]...sources do[] notshow a decliningtrend in habitat in the plan area.[rdquo][ldquo]Does not meet Indicator 2.[rdquo]

Thank you for your consideration of this objection. It is important for the Forest to preserve these small populations now because the effects of climate change will only grow more pronounced, further endangering their viability.

B) Recommendations:

CoNPS therefore respectfully recommends that the Forest Chief instruct the Region 2 Regional Forester to:

1) Clarify that

a) alpine habitat is currently showing a declining trend in the plan area;

b) endemics and S1/S2 species are by their very nature vulnerable to extinction;

c) consistency with other national forests' SCC lists and adjacent BLM Field Office Species of Special Concern is essential.

These three clarifications would require a reconsideration of the sustained viability of the species in Table 1 on the GMUG, and would lead to:

2) Include of all the species in Table 2 to the GMUG Species of Conservation Concern list.

7) Statement Demonstrating Link Between Formal Comments and Objection:

      a) Comment by Bayard Ewing for Colorado Native Plant Society on initial GMUG Scoping, June 1, 2018. Issues raised included:

  1) Scoping contains minimal content for and recognition of climate change as a 'Need for Change' (P. 2);

  2) Forest should perform or contract with others to perform more extensive efforts to document rare plant populations including a potential bio-blitz, with which we would assist (Pp. 5-6);

      b) Comment by Bayard Ewing for Colorado Native Plant Society on Draft FEIS, 11/18/2021, incorporating comments by Peggy Lyon and Gay Austin. Issues raised included:

  1) Need for more comprehensive inventory of populations of listed and candidate SCC species (P. 1);

  2) Requests that particular species of rare plants be designated as SCC (Pp. 1-3);

  3) Criticism of the criterion that declining population trend data is a required component for finding 'substantial concern of continued viability'. Declining trends in habitat in plan area, most notably the alpine, should be sufficient to meet Criterion 2 (Pp. 1-2)

  4) Failure to evaluate for consistency SCC lists on adjoining forests or those species designated by the State of Colorado through the State Wildlife Action Plan (SWAP) (P. 2).

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David W. Inouye, Effects of climate change on alpine plants and their pollinators, Ann. N.Y. Acad. Sci. (2019) 1[ndash]12, doi: 10.1111/nyas.14104

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III. BIGHORN SHEEP

Objectors addressed this issue in their DEIS comments starting on page 159 of the Coalition comments. We objectors incorporate those DEIS comments in full herein.

As an initial matter, and as noted above,[6] the Service[rsquo]s arbitrary and hyper exclusive application of only a single section of the Forest Service Handbook, 1909.12.52(d)(3)(f), has inappropriately resulted in the exclusion of many deserving species of conservation concern, including the Rocky Mountain and Desert bighorn sheep. The Forest Service[rsquo]s selection of species of conservation concern is guided first by the governing regulation, which states [ldquo][a] species of conservation concern is a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species[rsquo] capability to persist over the long-term in the plan area.[rdquo] 36 CFR 219.9(c) (emphasis added). And regarding the Rocky Mountain and Desert bighorn species, the best available science does indicate there is substantial concern regarding these species[rsquo] capability to persist over the long-term in the plan area.

The Rocky Mountain and Desert bighorn subspecies face a variety of threats, chief among them respiratory diseases transmitted from domestic sheep and goats.[7] Respiratory diseases cause not only individual mortality but also herd mortality events.[8] They also inhibit population growth,[9] population connectivity, and range expansion.[10] Further, Colorado Parks and Wildlife recognizes a number of additional threats including [ldquo]unregulated harvest, overgrazing, competition with other livestock, plant community succession and forestation of native ranges, and increasing human development of winter ranges[rdquo] which have all been identified as presently or historically contributing to bighorn sheep declines.[11] And finally, climate change is poised as its own threat and an additional exacerbating factor in a number of threats already listed.[12] Any one of these threats alone represent a substantial concern about these species[rsquo] capability to persist over the long-term in the plan area, and combined they demonstrated that the best available science undoubtedly supports the inclusion of Rocky Mountain and Desert bighorn sheep as species of conservation concern in the GMUG Forest Plan. The Forest Service[rsquo]s Handbook does not trump its regulatory mandates.

Further, even if the Forest Service[rsquo]s Handbook did govern the precise species of conservation concern selection criteria, the Service has ignored the remaining guidance in 1909.12.52(d)(3). Specifically, the Handbook directs the Forest Service to consider species identified by other Federal agencies and States. 1909.12.52(d)(3)(c). Both the Rocky Mountain and Desert bighorn subspecies are designated as Sensitive Species in Region 2.[13] Both are Colorado Parks and Wildlife Species of Greatest Conservation Need.[14] And Colorado Department of Natural Resources has formally requested that the GMUG include both bighorn

subspecies as SCC.[15] While it is clear from the Service[rsquo]s response to comments that it takes the position that this direction from its Handbook only dictates [ldquo]consideration,[rdquo] which it did, the clear intent of this Handbook direction is to produce consistent management and prioritization of certain species so as to maximize federal and state efforts at conservation, and thereby produce greater chances of successful conservation efforts.

The Handbook further directs the Service to consider species identified as species of conservation concern in adjoining National Forest System plan areas (including plan areas across regional boundaries). 1909.12.52(d)(3)(d). Rocky mountain bighorn sheep are a species of concern on the adjoining White River National Forest.[16] They are a species of conservation concern on the adjoining Rio Grande National Forest.[17] Importantly, as an illustration of the Service[rsquo]s arbitrary application of species of conservation concern criteria and the resultant unequal management species between Forests, the Rio Grande National Forest determined Rocky Mountain bighorn sheep qualified as a species of conservation concern based on their occurrence in the planning area, FSH 1909.12.52(d)(1), and only a single factor from 12.52(d)(3)(f)[mdash]a significant threat to the species ability to persist over the long-term. That significant threat is the [ldquo]pathogen transmission between domestic sheep and bighorn sheep, and subsequent disease outbreaks and population impacts.[rdquo][18] Here, despite the Service[rsquo]s admission that respiratory diseases present a substantial threat to Rocky Mountain and Desert bighorn sheep, the agency has nonetheless chosen an arbitrary higher bar to designate these species as species of conservation concern.

In response to comments, after reiterating its position that it need only [ldquo]consider[rdquo] species designated on adjoining National Forest System plan areas, the Service argues that [ldquo]the SCC process for the Rio Grande National Forest was conducted by a different Regional Forester[rdquo] and [ldquo]the responsibility [and discretion] to identify SCC is the Regional Forester[rsquo]s alone.[rdquo][19] Again, this disparity in the species[rsquo] treatment between Forest Service units only serves to undermine and even thwart Rocky Mountain bighorn recovery efforts on adjoining National Forest System units as well as on the GMUG. This simply cannot be the outcome intended by the Forest Service as a whole. The need for joint management and recovery initiatives is further underscored and particularly important because core habitat for two herds (RBS-21 & RBS-22) is shared between the two national forests and management consistency is vital to the long-term persistence of these herds.

Further, there is no indication in the Handbook that a species need meet all four of the criteria of 1909.12.52(d)(3)(f) in order to qualify as species of conservation concern. Again, the Rio Grande forest, which borders the GMUG, only applied one of the four factors to designate Rocky Mountain bighorn sheep as species of conservation concern. Requiring a species to meet all four factors of subsection (f) places a higher bar on species to qualify as a species of conservation concern than listing under the Endangered Species Act.[20]

Finally, even if all four criteria of 1909.12.52(d)(3)(f) must be met, which we strenuously argue they do not, both species easily meet this bar.

Rocky Mountain Bighorn Sheep

The Service maintains that Rocky Mountain bighorn sheep do not meet three of the four criteria: declining trends in populations or habitat (criterion 2), restricted ranges (criterion 3), and low population numbers or restricted ecological conditions (criterion 4). Each of these are taken in turn below.

We identified in comments that the Forest Service[rsquo]s analysis of population trends for the Rocky Mountain bighorn species was artificially short and discounted a much longer trend of population decline. In response to comments, the Service analyzed population trends over a slightly longer number of years but arrived at the same determination. III FEIS at 250-251. In doing this, the Service ignores that this data is both still an extremely limited duration and only exists because it is part of a much larger, intense restoration effort. By looking only at

the past twenty years in which these intense restoration efforts were occurring, the Service forgets that these restoration efforts must continue in order to protect the long-term persistence of this species, and those intense restoration efforts are undermined or even cut short by the Service[rsquo]s unwillingness to list this species as a species of conservation concern. Additionally, increased recreation pressure and past fire suppression efforts have led to a decline in habitat.[21] And, as previously discussed, climate change is posed to further degrade this species habitat.

The Service additionally ignores issues raised in comments regarding this species restricted range including that the lack of natural wildfire cycle has caused forests to become denser, making it more difficult for bighorn to navigate through them. Relatedly, tree downfall associated with recent forest disease epidemics additionally makes forests more difficult for bighorn to move through.[22] Bighorn sheep ranges are further constrained by domestic sheep allotments, as well as housing and recreational developments, and increasing vehicle traffic. These factors all contribute to a restricted range for this species.

Finally, this species does have a low population number, particularly compared to the population it could have if it occupied all of its identified suitable habitat. Specifically, the Rocky Mountain bighorn population on the GMUG is less than 1,500 individuals. However, if it were to occupy its entirety of the suitable habitat on the Forest, the population would be substantially higher, around 7,500 individuals. Accordingly, this species[rsquo] population is at 20% of what it would be if the species where to occupy its entire suitable habitat on the GMUG.

Desert Bighorn Sheep

The Service maintains that Desert bighorn sheep meet all but one of the 1909.12.52(d)(3)(f) criteria: declining trends in populations or habitat (criterion 2). The Desert bighorn population is incredibly small, numbering only approximately 165 individuals.[23] Yet, because the population has increased or maintained its numbers over the timeline the Service considered, the agency determined that the species does not meet criterion 2. As discussed above in the Rocky Mountain bighorn section, the Service makes the same mistake, forgetting that restoration efforts that have led to the increase or maintenance of the population must continue in order to protect the long-term persistence of this species, and those intense restoration efforts are undermined or even cut short by the Service[rsquo]s unwillingness to list this species as a species of conservation concern.

Requiring a declining trend in a species with an already incredibly low population is extraordinarily short-sighted. It is undisputed that this small population leaves the sheep vulnerable to large disease-related, all-age die-offs, or other compounding factors impacting survival.[24] Additionally, with the rationale applied by the Service here, any population that grew even moderately would not qualify for inclusion as a species of conservation concern no matter how small the population realistically was. This outcome is against the cautionary principles that underpin the species of conservation concern designation.

Specific Plan Components Related to Rocky Mountain and Desert Bighorn Sheep

FW-STND-SPEC-13

The Forest Service changed management approaches for FW-STND-SPEC-13 between its draft and final EIS. Specifically, the Service removed the accompanying management direction relying on the Western Association of Fish and Wildlife Agency[rsquo]s (WAFWA) Recommendations for Domestic Sheep and Goat Management in Wild Sheep Habitat. Instead, the FEIS management direction for this standard now incorporates only a handful of the specific recommendations from this document.

As an initial matter, we raised concerns in comments regarding the substance of the WAFWA Recommendations for Domestic Sheep and Goat Management in Wild Sheep Habitat. Specifically, we noted that, to the extent the recommendations are Best Management Practices (BMPs), courts have already determined that BMPs are

unsupported by best available science. See W. Watersheds Project v. BLM, No. 09-0507-E-BLW, 2009 U.S. Dist. LEXIS 98520, at *18 (D. Idaho Oct. 14, 2009); see also 36 CFR [sect] 219.3 (NFMA requires the Forest Service to [ldquo]use the best available scientific information to inform the planning process[rdquo] when revising a grassland or forest plan, Ecology Ctr., Inc. v. U.S. Forest Serv., 451 F.3d 1183, 1193 (10th Cir. 2006) ([ldquo][T]he [lsquo]best available science[rsquo] is not just whatever the Forest Service finds on the shelf.[rdquo]). Upon further examination, it is apparent that the WAFWA Recommendations are BMPs, and are thus unsupported by the best available science.

Second, even though the recommendations are BMPs, the Forest Service has elected to include only a handful of the WAFWA Recommendations, neglecting some of the strongest. The Service added standards to incorporate into annual operating instructions including a 24 hour notice requirement for any interaction between domestic sheep or goats and bighorn sheep as well as an on/off reporting requirement.[25] However, the Service declined to include many of the strongest recommendations including: 1) authorizing domestic sheep or goat grazing allotments, trailing routes, vegetation management, use as pack stock, or any other uses involving domestic sheep or goats should only be outside of occupied wild sheep range, 2) written agreements that address management, retrieval, and disposition of domestic sheep or goats occupying public lands where there is no permitted use, and 3) any count-on, count-off inventory of domestic sheep or goats must be required as a condition of operation with follow-up provisions to account for missing livestock. These are but a few examples of the Recommendations that would provide better protections for bighorn populations even if they are not supported by the best available science.

FW-GDL-SPEC-13.b

In comments, we urged the Service to not convert any cattle allotments to sheep allotments due to the potential for disease spread to bighorn sheep. We appreciate that the Service included FW-GDL-SPEC-13.b: [ldquo]To reduce the risk of interaction between domestic sheep or goats and bighorn sheep herds, grazing allotments within bighorn sheep core herd home range should not be converted from cattle to sheep, unless a risk assessment confirms that the risk of association between domestic [sic] bighorn sheep and domestic sheep would be lower or maintained at the same level.[rdquo] However, the final part of this guideline is troubling.

It is unclear how a risk assessment could confirm a lower or similar risk of contact when converting a cattle allotment to a sheep allotment. There is no risk of contact between bighorn sheep and cattle. Thus, converting from cattle to sheep always raises the risk of contact. The Forest Service should modify this guideline to read:

To reduce the risk of interaction between domestic sheep or goats and bighorn sheep herds, grazing allotments within bighorn sheep core herd home range should not be converted from cattle to sheep.

Finally, we reiterate that FW-GDL-SPEC-16 concerning travel route realignment to reduce habitat fragmentation and increase habitat security, should be a standard. The last part of this component, stating that such realignment can lead to an increase in route density on the edge of habitat, can be a guideline.

NEPA Compliance

There three aspects of NEPA compliance that remain outstanding: analysis of a reasonable range of alternatives, [ldquo]hard look,[rdquo] and cumulative impacts.

Reasonable range of alternatives

The Service has not analyzed a reasonable range of alternatives specific to standards, guidelines, and other Plan components that would better protect bighorns from the myriad of risks they face. Indeed, all action alternatives would apply the exact same revised plan components.[26] The Service was, however, presented with a number

of additional Plan components that were not addressed (discussed in a subsection below) and also present reasonable alternatives that would afford additional Plan protections to these vulnerable species.

The Service was also asked to analyze a full separation standard but rejected this, stating that the agency[rsquo]s national policy is provide [ldquo]effective separation, and this is reflected in the draft revised forest plan.[rdquo][27] Putting aside that the effectiveness of BMPs has been rejected by courts, the Service is still obligated to consider a reasonable range of alternatives. The range of alternatives here cannot be said to be reasonable when all alternatives are identical on this issue.

Further, the Forest Service[rsquo]s rationale for not considering a full separation standard is illogical. Full separation is [ldquo]effective separation,[rdquo] and the agency[rsquo]s refusal to consider this alternative amounts to an admission that only the minimum protective measures will be applied. This is particularly troubling considering that both the Rocky Mountain and Desert bighorn sheep populations are critically low, and the greatest threat to their continued survival is disease transmission from domestic sheep and goats. Thus, the Service should have considered full separation as a means to protect these species.

Hard Look

In the species[rsquo] overview in the DEIS, the Service states:

Disease Epizootics: In Colorado, the susceptibility of bighorn sheep to pathogens introduced by domestic sheep is regarded as the primary factor limiting bighorn sheep populations (George et al. 2009). Based on disease occurrence information from Colorado Parks and Wildlife, disease has been documented in 13 game management units with occupied range in or partially in the GMUG. Of those, die-offs are documented in eight of them. Die-offs affected all age-classes and were typically followed with low lamb recruitment. Disease morbidity (persistence in a herd) is documented in 11 game management units with occupied range in the GMUG. Morbidity is documented in four herds without die-offs, and in seven herds with die-offs.[28]

There are only 14 Rocky Mountain bighorn sheep game management units that overlap either entirely or partially with the GMUG; all but one have had documented die offs due to diseases introduced by domestic sheep.[29] In these 13 impacted bighorn sheep game management units, die-offs affecting all age-classes have occurred and resulted in low lamb recruitment.[30] Eleven of these 14 game management units, 79%, have disease morbidity, meaning the diseases introduced by domestic sheep continue to persist in the herd.[31] Of these 11, the morbidity had been documented in the four herds without resulting in die-offs, but seven herds have not been so lucky. Fifty-seven percent, 8 of the 14 herds in/partially in the GMUG of the Rocky Mountain bighorn sheep herds, are considered to be [ldquo]a minimal size of viability[rdquo] at 100 individuals or more.[32] It is imperative, for these species[rsquo] continued persistence that the Service[rsquo]s Plan contains substantively meaningful standards.

The Service states that FW-STND-SPEC-13 and FW-GDL-SPEC-14 would have a [ldquo]strong[rdquo] impact and [ldquo]would likely greatly reduce the risk of disease transmission from domestic animals to bighorn sheep.[rdquo][33] The FEIS states that [ldquo][c]ompared to the 1983 forest plan, these plan components[mdash]over time, as incorporated into individual allotments as they are renewed[mdash]would likely greatly reduce the risk of interaction between species and the associated risk of pathogen transmission from domestic animals to bighorn sheep.[rdquo][34] But there is no analysis that supports this perfunctory conclusion. The Service has not taken the necessary steps of identifying the best available science to support this conclusion and analyzing how the implementation of that science would result in the proclaimed strong protections for bighorn.[35]

Further, it is also not clear whether these proposed plan components differ from what is already occurring on the GMUG. The Service notes that it currently has an [ldquo]array of adaptive management flexibility for managers

to reduce risk somewhat[rdquo] but then fails to discuss what those current management actions are. This omission further illustrates the perfunctory nature of the Service[rsquo]s conclusion regarding the positive impacts of the proposed standards and guidelines. Without this baseline information (which is required for NEPA analysis and compliance) it is impossible to determine the efficacy of the proposed Plan components for bighorn sheep. The Service has failed to take a hard look this issue.

Cumulative Impacts

There is also no substantive analysis of cumulative impacts for these species.[36] The section that purports to cover cumulative effects merely discusses the need for coordination and consistency of management and the expected impacts from population growth on bighorn. The section on effects of the action alternative (presumably covering all three types of impacts) is similarly devoid of quantified or detailed analysis, instead providing general statements about why one plan would be more protective than others.[37] NEPA[rsquo]s hard look requires more than general statements about possible effects and risk. The agency[rsquo]s analysis must contain some quantified or detailed information and provide useful analysis of cumulative impacts, a level of analysis that is notably missing.

Suggested Improvements

* Include the Rocky Mountain and Desert bighorn sheep subspecies as Species of Conservation Concern in the revised Plan.
* Change FW-GDL-SPEC-13.b to: [ldquo]To reduce the risk of interaction between domestic sheep or goats and bighorn sheep herds, grazing allotments within bighorn sheep core herd home range shall not be converted from cattle to sheep.[rdquo] Make this component a standard.
* When implementing FW-STND-SPEC-13, use the best available scientific information regarding domestic sheep and goat management to maintain separation with bighorn sheep.
* Convert FW-GDL-SPEC-16 to a standard and change the first two sentences to: [ldquo]To create large contiguous habitat blocks and big game security areas, travel route re-alignment options shall be considered in association with pertinent project proposals. This standard applies to big game production areas, migration corridors, severe and critical winter range, and winter concentration areas as mapped by Colorado Parks and Wildlife.[rdquo]
* The final sentence of FW-GDL-SPEC-16 -- [ldquo]Re-alignment may increase route density on the edge of mapped habitats provided that habitat connectivity is maintained, and overall density is reduced in interior habitats.[rdquo] [mdash]may remain a guideline.
* Analyze a reasonable range of alternatives, including but not limited to an alternative for full separation.
* Take the NEPA required hard look at the bighorn sheep plan components, including the best available science they rely on, if any, and analyze of their efficacy.
* Disclose the current management actions the Service and permittees take to reduce the risk of contact between domestic sheep and goats and wild bighorn sheep and analysis how the plan components will improve upon the current risk management practices.
* Undertake a detailed analysis of the plan revision[rsquo]s impacts on Rocky Mountain and Desert bighorn sheep.

We also recommended a number of additional plan components that were not addressed in comment responses, and we thus reiterate them here:

* Desired Condition: Bighorn sheep habitats provide grass and forbs with high protein content, which is

maintained by natural disturbance juxtaposed near rugged escape cover. Bighorn sheep habitat reflects its historic distribution and connectivity. Habitat is composed of native vegetation, including upland shrublands, upland grasslands, riparian shrublands, and riparian woodlands. [Nez Perce-Clearwater National Forest Draft Land Management Plan]

* Standard: Do not authorize projects that will result in displacement of bighorn sheep during their reproductive period (generally April 15 to July 1). (Forestwide) [Rio Grande National Forest]

* Standard: Prohibit the use of recreational pack goats in wilderness areas to eliminate potential interactions between pack goats and bighorn sheep. (Forestwide) [Rio Grande National Forest, adapted]

* Standard: Maintain effective separation between domestic goats used for vegetation management and bighorn sheep to reduce the likelihood of contact between animal groups. (Forestwide) [Rio Grande National Forest]

* Standard: Conversions to domestic sheep or goats should not be allowed in areas adjacent to or inhabited by bighorn sheep. [Tonto National Forest Draft Land Management Plan, adapted]

* Standard: Allotments and other areas closed to permitted livestock grazing should remain closed. [Tonto National Forest Draft Land Management Plan, adapted]

* Guideline: When unauthorized livestock are found occupying National Forest lands, the owner should be promptly notified and be ordered to remove them and prevent them from re-entering National Forest lands. If the owner is unknown or uncooperative, impoundment procedures should be initiated. [Tonto National Forest Draft Land Management Plan]

[1] Find more detail about plant species that should receive SCC designation in section II of this pbjection.

[2] The RGNF Assessment does not explicitly state that meeting all four criteria is not necessary for SCC designation. However, the Assessment contains a table identifying SCC, with a column titled, [ldquo]Rationale for inclusion on species of conservation concern list[rdquo] and the rationales for various SCC designations make clear that meeting a subset of the local conservation concern criteria was sufficient for a species to be designated a RGNF SCC. See, for example, the inclusion rationales for Rio Grande cutthroat trout and Rocky Mountain bighorn sheep. RGNF Assessment, 36, 40. The final revised Rio Grande Land Management Plan provides additional rationale and individual assessments for each SCC species. Nothing in the final RGNF Plan or Record of Decision indicates that the Regional Forester modified her/his determination process from what was described in the RGNF Assessment.

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[5]   Caitlin Harvey, Alpine Plant Community Dynamics And Climate In The Senator Beck Basin, Colorado, Clark School Of Environment And Sustainability, Western Colorado University, 2023 (Https://Snowstudies.Org/Wp-Content/Uploads/2023/09/Alpine-Plant-Community-Dynamics-And-Climate-In-The-Senator-Beck-Basin-Colorado.Pdf Accessed 10/6/2023

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[13] Rocky Mountain Region Forest Service Manual, FSM 2600, Chapter 2670. December 18, 2018.

[14] Colorado Parks and Wildlife. 2015. State Wildlife Action Plan.

[15] Colorado Department of Natural Resources. 2018. Letter: Grand Mesa, Uncompahgre, and Gunnison National Forests [ndash] Preliminary Draft Revised Land Management Plan. May 22.

[16] White River Plan at EE-3

[17]See Rio Grande National Forest Plan at 175 (2020).

[18] Rio Grande National Forest Plan at 562.

[19] Response to comments at 249; FEIS, Volume III, at 327-28.

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[23] GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 2 at 199.

[24]See e.g. GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 2 at 107 (listing desert bighorn and other species with small and isolated populations and stating that: [ldquo]Small and isolated populations are susceptible to threats from genetic drift and stochastic events.[rdquo]), 146 (Table 76 listing desert bighorn as a species affected by genetic drift, stochastic events, and anthropogenic disturbances); 200 (acknowledging disease, herd size and loss of genetic diversity as risk factors).

[25] FW-STND-SPEC-13.a

[26]See e.g. GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 1 at 25; GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 2 at 119-120.

[27] GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 1 at 25.

[28] GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 1 at 200.

[29] GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 1 at 199-200.

[30] GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 1 at 200.

[31] GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 1 at 200.

[32] GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 1 at 200.

[33] GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 1 at 203.

[34] GMUG Nat[rsquo]l Forests Land Mgmt. Plan Final EIS Vol. 2 at 301.

[35]See e.g. GMUG Nat[rsquo]l Forests Land Mgmt. Plan Final EIS Vol. 2 at 301.

[36]See GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 1 at 207-08.

[37]See GMUG Nat[rsquo]l Forests Land Mgmt. Plan Draft EIS Vol. 1 at 208.