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Submitted to the "project" comment page at: https://cara.ecosystem-management.org/Public//CommentInput?Project=57302 and also emailed to: matthew.anderson3@usda.gov and jeffreyshearer@usda.gov.

Mr. Anderson:

The following are comments submitted by Friends of the Bitterroot, WildEarth Guardians and Alliance for the Wild Rockies on the Forest Service's December 18, 2019 Scoping Letter regarding the need for a programmatic amendment for elk habitat objectives under the 1987 Forest Plan for the Bitterroot National Forest (BNF).

The Scoping Letter says the Forest Service (FS) is "evaluating the need" for the aforementioned forest plan amendment, yet it doesn't make a solid case for doing so. It implies the FS believes an amendment is needed because "more recent scientific literature" somehow contradicts science upon which the Forest Plan is based.

Paradoxically, the FS is saying there is a need to weaken elk habitat protections in order to benefit elk. Since the science is clear that achieving the current elk habitat standards would only help big game species—not harm them— we propose the FS instead pursue an alternative that leaves the subject elk habitat standards in place, while instituting other standards and guidelines to address the other elk habitat issues the Scoping Letter mentions. Those include "forage abundance, distribution, availability, and quality; distance from open roads during hunting seasons; and hunting pressure" as well as the results, vaguely, of "several research projects on elk distribution and seasonal movements" by Montana Fish Wildlife and Parks.

Roads and other access management issues are major topics of this amendment proposal. In adopting an appropriate amendment as we describe above, the process would also be a timely opportunity for the FS to bring the BNF into compliance with the Travel Management Regulations at 36 CFR 212, Subpart A. Subpart A directs each national forest to conduct "a science-based roads analysis," generally referred to as the "travel analysis process." The Forest Service Washington Office, through a series of directive memoranda, instructed forests to use the Subpart A process to "maintain an appropriately sized and environmentally sustainable road system that is responsive to ecological, economic, and social concerns."

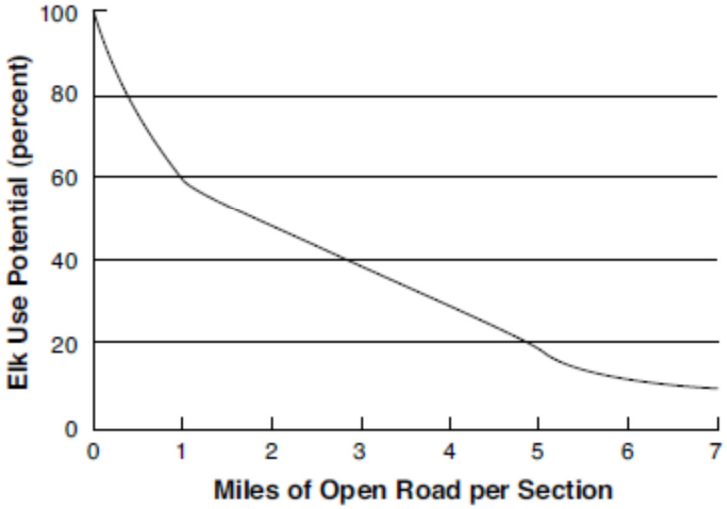
The BNF's forestwide Travel Analysis Report (9/24/2015) doesn't fully comply with Subpart A. The BNF didn't invoke the NEPA process for public involvement, didn't identify the forestwide

minimum road system, failed to identify all unneeded roads for decommissioning, and omitted a fiscal analysis regarding the BNFs ability to maintain its road system.

Removing road density standards would inevitably further dilute what are already inadequate funds for road maintenance and other related upkeep. Therefore the FS must analyze impacts on fisheries from higher sediment yields and increased risk of events such as the 2017 road failure that damaged Willow Creek in the Gold Butterfly project area.

We don't agree with the BNF that the science considered in the Forest Plan is now obsolete. Lyon et al, 1985 recognize the importance of thermal cover. Christensen et al. (1993), a Region One publication on elk habitat effectiveness, emphasize "maintenance of security, landscape management of coniferous cover, and monitoring elk use…" Meeting a minimum of 70% elk use potential translates to about 0.75 miles/sq. mi. in key habitats, as shown in their graph:

5. Levels of habitat effectiveness:



Also, "management of winter range to improve thermal cover and prevent harassment may be as important as anything done to change forage quantity or quality." (*Id.*)

Black et al. (1976) provide definitions of elk cover, including "Thermal cover is defined as a stand of coniferous trees 12 m (40 ft) or more tall, with average crown exceeding 70 percent. Such stands were most heavily used for thermal cover by radio-collared elk on a summer range study area in eastern Oregon (R.J. Pedersen, Oregon Department of Fish and Wildlife—personal communication)." Black et al. (1976) also state:

> Optimum size for thermal cover on summer and spring-fall range is 12 to 24 ha (30 to 60 acres). Areas less than 12 ha (30 acres) are below the size required to provide necessary internal stand conditions and to accommodate the herd behavior of elk.
>
> …Cover requirements on winter ranges must be considered separately and more carefully. Animals distributed over thousands of square miles in spring, summer and fall are forced by increasing snow depths at higher elevations to concentrate into much restricted, lower-

> elevation areas in mid- to late-winter. Winter range, because of its scarcity and intensity of use, is more sensitive to land management decisions.

Regarding Black et al. (1976) conclusions, Thomas et al., 1988a state, “We concur. New research on elk use of habitat on summer and winter ranges has become available, however (Leckenby 1984). Land-use planning requirements indicate that a model of elk winter-range habitat effectiveness is required.”

Thomas et al., 1988a also state:

> Thomas and others (1979, p. 104-127) defined two types of cover: thermal and hiding. Thermal cover was "any stand of coniferous trees 12 meters (40 ft) or more tall, with an average canopy closure exceeding 70 percent" (p. 114). Disproportionate use of such cover by elk was thought to be related to thermoregulation. Whether such thermoregulatory activity occurs or is significant has been argued (Geist 1982, Peek and others 1982). In the context of the model presented here, arguing about why elk show preference for such stands is pointless. They do exhibit a preference (Leckenby 1984; see Thomas 1979 for a review). As this habitat model is based on expressed preferences of elk, we continue to use that criterion as a tested habitat attribute. We cannot demonstrate that the observed preference is an expression of need, but we predict energy exchange advantages of such cover to elk (Parker and Robbins 1984). We consider it prudent to assume that preferred kinds of cover provide an advantage to the elk over nonpreferred or less preferred options.

Lyon et al, 1985 also discuss the adverse impacts of roads and clearcuts on elk, including in the Sapphire Mountains.

The science is clear that motorized access via trail, road, or oversnow adversely impact elk habitat. Servheen, et al., 1997 provide scientific management recommendations while noting that motorized trails reduce habitat effectiveness and increase elk vulnerability.

Ranglack, et al. 2017 is an investigation of habitat selection during archery and rifle hunting seasons.

Having stable or increasing numbers of elk on hunting districts isn’t the same as maintaining hunter opportunity. Reduced elk habitat effectiveness on national forests in Montana already causes elk to take refuge on private land, where they are less available for hunters. Nor do agricultural operations necessarily want to assume the costs of feeding elk.

During this amendment proposal process, the FS should also be considering the best scientific information on other big game species, including mule deer, whitetail deer, bighorn sheep, moose, and black bear—and how the proposed relaxing of Forest Plan Standards would likely adversely affect them. The FS is well aware that changing the elk habitat standards significantly affects other wildlife: “(T)he Forest Plan manages wildlife security based on elk habitat effectiveness.” (Biological Assessment (BA) for the BNF’s Gold Butterfly project.)

Given recent occurrences of grizzly bears attempting to occupy their historical habitat on the BNF, into the Selway-Bitterroot Ecosystem Recovery Zone, the FS is obligated to consider how

relaxing security and road density standards would adversely affect this Threatened species. The Gold Butterfly BA indicates grizzly bear habitat overlaps significantly with land potentially affected by the proposed amendment: "Elk winter range constitutes approximately 10,203 acres or 18.5% of the grizzly bear action area." And as the FS's BA for the Darby Lumber Lands 2 project states, "The EHE standard results in areas of secure habitat for a range of species including grizzly bears."

Evaluation of best available science strongly suggest more—not less—protective standards are needed in order to comply with the Endangered Species Act. True recovery of the Threatened grizzly bear population can only be achieved by enhancing the connectivity between the Selway-Bitterroot Ecosystem Recovery Zone and Northern Continental Divide Ecosystem Recovery Zone. This recovery would be impeded by the proposed amendment.

Schwartz et al. (2010) note that control of open road densities between core areas is necessary to lessen grizzly bear mortality risk as bears cross roaded landscapes between the more secure areas.

The best Plan direction for grizzly bears the FS has adopted to date was established into the Flathead Forest Plan via Amendment 19.[1] It established open and total motorized route density standards and minimum security core standards, based in part upon scientific information concerning security from roads and road density requirements for grizzly bears (Mace and Manley, 1993 and Mace et al., 1996). Also see McLellan, et al., 1988.

Since noxious weeds are an issue especially affecting the roaded landscapes on the BNF, the FS must consider how weed populations and trends are affecting the elk forage the FS claims will be improved by the proposed amendment.

The FS must also analyze the cumulative impacts of recreational activities on elk. Winter is an especially critical season for elk, and stress from avoiding motorized activities takes its toll.

The Forest Plan standards mentioned in the Scoping Letter, which the FS apparently dislikes, are only invoked during project-level National Environmental Policy Act (NEPA) processes. NEPA requires the FS to *always* consider best available science during the NEPA process, so it's unclear why a plan amendment is needed to manage consistently with new science.

What is abundantly clear, however, are the purposes the BNF used to justify repeated project level amendments of the forest plan to allow deviation from those forestwide standards. An example from a recent case, the Gold Butterfly project FEIS states: "In order to meet the standards, the mileage of roads needed to be closed would limit forest management access and conflict with other Forest Plan management objectives to provide roaded, dispersed recreation." Also, to "adapt to changes that have occurred on the landscape in support of Forest Plan and project goals and objectives."

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[1] Although that Forest Plan has been revised and the Amendment 19 direction dropped and/or weakened, both Alliance for the Wild Rockies and WildEarth Guardians have objected to the Flathead NF's revised forest plan and filed notice of intent to sue on this issue.

Despite the vague rationale the FS used to state its intentions in that FEIS, from its context it is quite clear the agency wanted to conduct more logging than would be allowed if the FS complied with the Standards. Such a conclusion is more than justified when one evaluates the several other "project-specific" amendments the BNF has implemented to circumvent elk habitat standards.

The lack of transparency in the Scoping Letter suggests the FS also wants to avoid evaluating—in this Amendment NEPA process—the veracity of those "other Forest Plan management objectives" and "project goals and objectives" relating to the forest vegetation imbalances the BNF always alleges in order to greenwash its industrial timber production agenda.

It seems the FS wants the amendment analysis to be very narrow in scope to avoid conducting an Environmental Impact Statement. But a balance between elk habitat security, hunter opportunity, motorized access, and countless other connected ecological issues must carefully be crafted. The amendment proposal is far too complex and controversial to analyze in a rushed Environmental Assessment and Finding of No Significant Impact.

Part of the FS's problem here is weighing best available science. Recognizing this, Ruggiero, 2007 (a scientist from the research branch of the FS) identifies a fundamental need to demonstrate the proper use of scientific information, in order to overcome doubts over decisionmaking integrity. Ruggiero, 2007 and Sullivan et al., 2006 comment on scientific integrity and agency use and misuse of science.

Fortunately, there are well-known and well-documented USDA and Forest Service methodologies for conducting a rigorous and healthy debate about science in order to solve the problem. The documents, "USDA-Objectivity of Regulatory Information" and "USDA-Objectivity of Scientific Research Information" are instructional on this topic, both stating:

> If agency-sponsored peer review is employed to help satisfy the objectivity standard, the review process should meet the general criteria for competent and credible peer review recommended by OMB. OMB recommends that (a) peer reviewers be selected primarily on the basis of necessary technical expertise, (b) peer reviewers be expected to disclose to agencies prior technical/policy positions they may have taken on issues at hand, (c) peer reviewers be expected to disclose to agencies their sources of personal and institutional funding (private or public sector), and (d) peer reviews be conducted in an open and rigorous manner.

A **Science Consistency Review** for the proposed forest plan amendment (and ultimately, the revised forest plan), is very much warranted. (See Guldin et al., 2003, 2003b). The FS prepared Guldin et al. (2003) which:

> ...outlines a process called the science consistency review, which can be used to evaluate the use of scientific information in land management decisions. Developed with specific reference to land management decisions in the U.S. Department of Agriculture Forest Service, the process involves assembling a team of reviewers under a review administrator to constructively criticize draft analysis and decision documents. Reviews are then forwarded to the responsible official, whose team of technical experts may revise the draft documents in response to reviewer concerns. The process is designed to proceed iteratively

until reviewers are satisfied that key elements are **consistent with available scientific information.**

Guldin et al., 2003 suggest the review answer the following four questions:

1. Has applicable and available scientific information been considered?
2. Is the scientific information interpreted reasonably and accurately?
3. Are the uncertainties associated with the scientific information acknowledged and documented?
4. Have the relevant management consequences, including risks and uncertainties, been identified and documented?

We are aware of several examples of the FS management branch initiating such a peer review process for evaluating the use of science during programmatic planning. During development of the current planning rule, an independent scientific review team conducted a "Science Review of the United States Forest Service Draft Environmental Impact Statement for National Forest System Land Management" (Hayes, et al., 2011). The reviewers considered the following three questions:

1. Does the information accurately reflect the current peer-reviewed scientific literature and understanding? If not, what is missing or incorrectly presented?
2. Based on the current peer-reviewed scientific literature and understanding: does the documentation on environmental effects adequately respond to levels of uncertainty and limitations? If not, please describe what is missing or incorrect, and how the documentation can be improved.
3. What, if any, differing viewpoints should be included that are not mentioned in the DEIS regarding the effects of alternatives on climate change, restoration and resilience, watershed and water protection, diversity of plants and animal communities, sustainable use of public lands to support vibrant communities, forest threats, and monitoring.

Nie and Schembra, 2014 recommend that the agency solicit independent feedback on it use of science:

> The 1997 (Tongass National Forest) Plan was written using an innovative process whereby scientists within the Pacific Northwest Research Station (an independent research arm of the USFS) were assembled into risk assessment panels "to assist decisionmakers in interpreting and understanding the available technical information and to predict levels of risk for wildlife and fish, old growth ecosystems, and local socioeconomic conditions resulting from different management approaches." In this case, "science consistency checks" were used as a type of audit to ensure that the policy and management branch writing the Tongass Plan could not misrepresent or selectively use information in ways not supported by the best available science. The process, at the very least, facilitated the consideration of best available science when writing the Tongass Plan, even if parts of the Tongass Plan were based on factors going beyond science.

Also, in response to an appeal of its 1997 forest plan revision the Black Hills National Forest was directed by the FS Washington Office to re-evaluate their Revised Forest Plan for its ability to meet diversity and viability requirements set in existing laws, and correct any deficiencies. FS biologists "interviewed accredited scientific experts to obtain information on Region 2 sensitive

species for use during the Phase I Amendment" in order to remedy deficiencies in their revised forest plan. (USDA Forest Service 2000b.) Similarly, the Boise National Forest consulted with an independent scientist to review portions of their "Wildlife Conservation Strategy"[2] proposed to amend its revised forest plan. And a Science Consistency Review was undertaken by the FS in the process of designing the Sierra Nevada Forest Plan Amendments[3].

Darimont, et al., 2018 advocate for transparency in the context of government conclusions about wildlife populations:

> Increased scrutiny could pressure governments to present wildlife data and policies crafted by incorporating key components of science: transparent methods, reliable estimates (and their associated uncertainties), and intelligible decisions emerging from both of them. Minimally, **if it is accepted that governments may always draw on politics, new oversight by scientists would allow clearer demarcation between where the population data begin and end in policy formation** (Creel et al. 2016*b*; Mitchell et al. 2016). Undeniably, social dimensions of management (i.e., impacts on livelihoods and human–wildlife conflict) will remain important. (Emphasis added.)

In a news release accompanying the release of that paper, the lead author states:

> In a post-truth world, **qualified scientists at arm's length now have the opportunity and responsibility to scrutinize government wildlife policies and the data underlying them.** Such scrutiny could support transparent, adaptive, and ultimately trustworthy policy that could be generated and defended by governments. (Emphasis added.)

The Committee of Scientists (1999) advised the FS as the agency initiated revision of the original 1982 Planning Rule:

> To ensure the development of scientifically credible conservation strategies, the Committee recommends a process that includes (1) scientific involvement in the selection of focal species, in the development of measures of species viability and ecological integrity, and in the definition of key elements of conservation strategies; (2) independent scientific review of proposed conservation strategies before plans are published; (3) scientific involvement in designing monitoring protocols and adaptive management; and (4) a national scientific committee to advise the Chief of the Forest Service on scientific issues in assessment and planning.

We fail to see how the FS could amend the BNF forest plan, *not* conduct an independent peer review such as the Science Consistency Review, and still comply with the 2012 Planning Rule.

In conclusion, please keep our organizations on the list to receive all communications concerning this proposed forest plan amendment. It is our intention that the planning team review and include in the planning record the literature and other documents we've cited herein, which appear in the list below. Some on the list are not cited in the above comments, nevertheless we believe they also should be reviewed and included in the planning record.

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[2] https://www.fs.usda.gov/project/?project=24607

[3] https://www.fs.usda.gov/detail/r5/landmanagement/planning/?cid=STELPRDB5349922

Sincerely,

/s/

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