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Comments:
Our comments from the Intermountain Forest Association are attached. We appreciate the opportunity to comment on the Draft Plan and DEIS.

This letter is in response to the request for comments from the Custer Gallatin National Forest (Forest) on the Draft Revised Forest Plan (Draft Plan). The Intermountain Forest Association (IFA) and its members appreciate the opportunity to comment on the Draft Plan and Draft Environmental Impact Statement.

The Forest has a history of providing raw material to forest products companies from the Black Hills, Montana, and surrounding areas. By supplying that raw material, the Forest moves towards sustainably meeting ecological goals and supports the health of local communities. IFA supports alternative E, although we believe it proposes an inadequate amount of forest management to meet the ecological needs of the various forest types found on the Forest or the desired conditions outlined in the Draft Plan.

Old Growth

Forests with old growth characteristics are described as areas of conservation need in the Draft Plan. Indeed, the Draft Plan has numerous standards and guidelines tied to old growth.

Unfortunately, the Draft Plan does very little to define old growth and what criteria are required to meet the definition. Within Appendix A, old growth is defined/described as:

In general, old growth stands are in the late stages of stand development and are distinguished by old trees and related structural attributes. These old growth stands are typically distinguished from earlier developmental stages by combinations of characteristics such as tree age, tree size, number of large old trees per acre, and stand density expressed as basal area). Specific values for these attributes vary by local ecological type and forest type. Other characteristics sometimes associated with old growth stands (canopy layers, snags, down wood,

etc.) are not part of the minimum criteria needed to meet the definition of an old growth stand because those other characteristics can vary greatly even in stands that are clearly old growth. The presence or absence of old growth within a project area is intended to be assessed at the stand level. In other words, the minimum old growth criteria presented in (Green et al. 2011)is intended be applied as a stand-level average.

Although there is a weblink for the publication cited, the link is not functioning, and a cursory search online did not readily locate the publication. That publication is relied upon and referenced throughout the discussion on old growth. Within the Draft Plan, old growth characteristics are never described with any detail to inform the reader without access to the referenced document.

It is impossible to adequately comment on old growth within the Draft Plan without the necessary information. Further, it is unclear if old growth definitions are amendable over time as the referenced document is updated [ndash] as indicated on p. 13 of Appendix A.

We recommend thoroughly describing and defining what characteristics constitute old growth within each forest type as it applies to the Forest Plan.

Areas that don[rsquo]t meet the definition of old growth are included within old growth discussions in the Draft Plan. Namely, the Draft Plan states:

[ldquo]Old growth habitat includes stands that meet the definitions for old growth forest, in addition to stands that may have some of the structural or other characteristics that provide habitat for wildlife species associated with old growth but do not fully meet the definitions for old growth.[rdquo]

This discussion further muddies the waters surrounding old growth and how it will be defined and interpreted in the Final Plan. It also seems to indicate that stands need not be old growth at all to be considered and managed as old growth and only need to have one or more characteristics. Some characteristics associated with old growth within the Draft Plan include but are not limited to: [ldquo]stand density expressed as basal area[rdquo], [ldquo]snags, down wood, etc.[rdquo], and [ldquo]tree size[rdquo]. Loose definitions and the lack of quantitative measures is extremely disconcerting.

We recommend clearly stating what defines old growth and excluding any other forest areas that do not clearly meet that definition from designation or management as old growth habitat.

Current and desired conditions for acreages of old growth on the Forest are described in table 13 (below) of the Draft Plan. In every forest type, current conditions are approaching the maximum values within the range for old growth desired conditions.

However, the in Appendix A, the Draft Plan includes the following language: [ldquo]When planning harvest, retain stands adjacent to existing old growth that would provide future old growth in the shortest time frame possible.[rdquo] There is little reason to emphasize setting

aside additional acres as potential old growth when the current conditions are more than achieving the desired conditions.

The Draft Plan and DEIS routinely discuss the dynamic nature of old growth and that actions may be necessary to reduce old growth in the short-term to provide for improved forest conditions in the long-term. Yet, FW-DC-VEGF 10 only provides direction for retaining current amounts of old growth or increasing. Missing from FW-DC-VEGF is any recognition that old growth could decrease and still meet desired conditions. All despite

current conditions well into the range of desired conditions. FW-DC-VEGF also runs contrary to the numerous instances in the Draft Plan where old-growth is recognized as being dynamic in nature.

We recommend removing references to retain additional acres as potential old growth and to modify FW-DC-VEGF 10 to allow for changes in amounts of old growth that would still meet the range of desired conditions.

Desired Conditions

In describing desired conditions for forested vegetation, the Draft Plan references the use of the SIMPLLE model as the primary method of informing what forest conditions should resemble. If the reader desires additional detail, the Draft Plan directs the reader to Appendix D for information on the SIMPLLE model. Appendix D does provide a brief

overview discussion and then points the reader to Appendix B of the DEIS for further information. However, there is no Appendix B when the DEIS is accessed from the plan revision website. In review of the SIMPLLE model, the Draft Plan mentions literature reviewed in the development and calibration of the model, but there are no in-text references that would tell the reader what information was used for that purpose. It is unclear if there is additional information that should be included or if some of the relied upon information has any caveats for use or interpretation. Without the missing information on the model, it is impossible to adequately comment on this portion of the Draft Plan. It also leaves many unanswered questions regarding the details of this model, the process, and outputs.

Further, the Draft Plan mentions [ldquo]adjustments[rdquo] to the model that were made based on local staff input. However, nowhere in the Draft Plan are these [ldquo]adjustments[rdquo] described or explained. Also lacking is any mention of how the [ldquo]adjustments[rdquo] affected model outputs. Again, we find it impossible to adequately comment on the SIMPLLE due to the absence of necessary information.

We recommend fully disclosing the details of the SIMPLLE model, information used to inform the model, any adjustments made to the model, and the results of those adjustments.

Draft Plan Timber Components

IFA recognizes that nearly 35 percent (1.06+ million acres) of the Forest is designated Wilderness, and an additional 848,000+ acres is set aside under the Roadless Rule. Because nearly 2/3 of the Forest is set aside under those land designations, plus additional restrictive designations, the ability of the Forest to manage and care for the land and produce timber products as part of that process is limited to a subset of forested acres. Nonetheless, there is a critical need for forest management on the acres where it is not otherwise prohibited, and forest products companies continue to look to the Forest for a supply of raw material for their businesses which support local communities.

First and foremost, we believe there is no legal basis for restricting the projected wood sale quantity and the projected timber sale quantity to current budgets as depicted on p. 80 of the Draft Plan. We recognize certain restrictions such as funding and staffing may, from time to time, impact the ability of the Forest to offer higher amounts of timber. However, it is unreasonable to artificially and pre-emptively limit the projected wood sale quantity in the Forest Plan. Further, it is in violation of NFMA, the MUSYA, and the Organic Act if the Forest should impose a limit on future timber production that is not tied to the capability of the land based solely or partly on projected budgets.
We recommend the Final Plan clearly articulate that any figures tied to budget are non- binding projections rather than restrictions on the ability to implement forest management activities.
The Draft Plan proposes an inadequate amount of forest management to meet the ecological needs of the various forest types, or to achieve the desired conditions outlined in the Draft Plan. FW-OBJ-TIM 03 proposes

to treat 5000 acres annually, through a variety of management activities that include mechanical and non-mechanical treatments. However, as displayed in tables 6 and 7 (below), there is a significant need for increased amounts of acres treated.

In the [ldquo]warm dry-pine savanna[rdquo] forest type, the current conditions are already double desired conditions relating to the maximum range for [ldquo]medium tree[rdquo] and is exceeding the maximum range for [ldquo]seedling and sapling[rdquo]. Compounding this, current conditions in [ldquo]warm dry-pine savanna[rdquo] exceed the maximum range of desired conditions for [ldquo]medium[rdquo] canopy cover.

Although we highly disagree with the desired conditions for [ldquo]large trees[rdquo] in this forest type (and the warm dry-montane), the most successful means of accomplishing that objective is through

forest management that removes a portion of the trees in favor of increased growth on the remaining trees while reducing the risk of loss to insects and wildfires. The Draft Plan and DEIS reiterate that concept in numerous places.

In the [ldquo]warm dry-montane[rdquo] forest type, current conditions well exceed the maximum ranges specified in the desired conditions for [ldquo]medium[rdquo] and [ldquo]small[rdquo] trees. Again, canopy cover is compounding this forest health issue as current conditions more than double the maximum range of desired conditions for [ldquo]high[rdquo] canopy cover. This same trend repeats for the [ldquo]cool moist[rdquo] and [ldquo]cold[rdquo] forest types as current conditions exceed the maximum ranges for desired conditions pertaining to various tree size classes and canopy closure. As written, FW-OBJ-TIM 03 is an arbitrary objective to meet desired conditions when it would take the Forest 120 years to apply management activities to the suited base, not including necessary follow-up treatments.
We recommend increasing Objective FW-OBJ-TIM 03 to treat 10,000 acres annually, recognizing it would still take more than 60 years for the Forest to treat the acres solely within the suited base, not including any areas outside the suited base where management is needed and not otherwise prohibited or necessary follow-up treatments.
Standards, Guidelines, and other direction

* Recognizing that more than 800,000 acres have burned in recent decades on the Forest, we question the need for direction relating to snag retention. This includes FW-GDL- TIM 02 and FW-GDL-VEGF 03 (retention of live trees to later die and become snags). Additionally, downed woody debris contributes to elevated fire hazard and fire behavior which negatively affects the ability of the Forest to meet desired conditions for suited lands that should be [ldquo]resistant to natural disturbances[rdquo]. We recommend removing direction for tree retention when discussing snags in the Plan and retention of snags on suited lands.
* The Draft Plan and DEIS highlight that more than 800,000 acres have burned in wildfires and proposes many more acres to burn under the Draft Plan. The DEIS also recognizes the importance of openings created through regeneration harvests with: [ldquo]In many cases, achieving the Desired Condition (for example resilience) will require the establishment of a new cohort of desirable species ahead of the disturbance and waiting until after a large disturbance will forego valuable opportunities and could result in significant restoration challenges. The proactive use of regeneration treatments that take advantage of currently existing vegetation to create desirable age and species diversity will be key to building resilience to inevitable large-scale disturbances.[rdquo] At the same time, the Draft Plan proposes to limit opening size for forest management treatments. It makes little sense to recognize the importance of regeneration harvests in meeting desired conditions and plan for large openings created by stand replacing fire behavior while limiting the size of openings where management actions are prescribed. We recommend removing limitations on the size of openings (ex. FW-STD-TIM 03) to better meet forest diversification and resilience objectives while implementing appropriate silviculture practices to ensure stand regeneration.
* As calculated, the sustainable yield determination does not separate removal volume by diameter or product. However, FW-OBJ-TIM 01 and 02 specify amounts to be sold under different products (ie. sawtimber vs biomass). Separating the volume from the sustained yield calculation into groups is cumbersome, creates additional direction not necessary to comply with the MUSYA, and reduces the ability of the Forest to meet objectives and move towards desired conditions. We recommend replacing FW-OBJ- TIM 01 and 02 with a single objective to remove 39.5 mmbf annually (total of both objectives under alternative E).

* Sustained yield calculations are derived from only those acres within the suited base. Forest management activities, which may or may not produce a merchantable product, conducted outside the suited base are not part of that calculation. Yet, FW-STD-TIM 07 directs volume produced from unsuited lands to be credited against the sustained yield calculation. That is an incorrect application of the sustained yield calculation. We recommend removing FW-STD-TIM 07. If that standard must be retained, we recommend removing any reference to unsuited lands and to clarify exceptions.
* Guideline FW-GDL-SOIL establishes a restriction for mechanized equipment on slopes over 35 percent. That is an unusually low value. Forestry Best Management Practices for South Dakota state: [ldquo]Limit the grades of constructed skid trails on geologically unstable, saturated, highly erosive, or easily compacted soils.[rdquo] Forestry Best Management Practices for Montana state [ldquo]Avoid tractor or wheeled skidding on unstable, wet, or easily compacted soils and on slopes that exceed 40% unless operation can be conducted without causing excessive erosion.[rdquo] Additionally, forestry equipment is available that dramatically reduces impacts to soils and allows for operation on increased slopes. We recommend modifying the guideline to allow mechanized equipment on slopes not exceeding 40 percent, while allowing for operation on increased slopes when the soil type allows for it or when specifying certain equipment or operations.
Northern Long-Eared Bat
Although Northern Long-Eared Bats (NLEB) may be present on the CGNF, the draft Plan acknowledges no NLEB have been documented anywhere on the Forest. Despite that, the draft Plan discusses the biology of the NLEB, stressors, and assumes presence of NLEB on two geographic areas (Sioux and Ashland).

Assuming presence, the Draft Plan adopts restrictions proposed in the 4d rule. However, the 4d rule only requires those restrictions be followed if using the expedited consultation process under the rule. The Draft Plan, instead, applies those restrictions broadly including to areas outside the WNS buffer zone where the FWS (through the 4d rule) allows the continuation of all activities that are otherwise lawful. Merely having the restrictions under the 4d rule as part of the Forest Plan does not preclude the FS from undertaking the consultation process with the FWS nor does it meet the guidance from FWS. The consultation process is already an established pathway that would allow the Forest to take advantage of expedited consultation, undertake formal consultation, or continue with otherwise lawful activities outside the WNS buffer zone. Placing additional restrictions in the Forest Plan would reduce the ability of the Forest to meet objectives

and move towards desired conditions, and would unnecessarily consume additional FS time. Importantly, there are no scientific or other references in the Draft Plan or DEIS that support the use or effectiveness of the proposed restrictions.
We recommend removing FW-GDL-WLBAT guidelines 1 through 3 to increase the ability of the Forest to meet objectives and desired conditions.
If Guideline 2 must be retained, we recommend removing [ldquo]trees within 150 feet of[rdquo] and adding [ldquo]occupied[rdquo] after [ldquo]known[rdquo]. Extensive documentation shows NLEB are opportunistic in roosting habits and may change roosts regularly with no certainty of returning to a previous roost site.

*
* Although the Draft Plan discusses (without scientific or other reference) potential effects to the NLEB from timber management activities, any mention of the positive role timber harvest activities have in sustaining and promoting NLEB populations is missing from the effects analysis. Regarding effects of timber harvest on NLEB, the best available science is clear that timber harvest activities are likely beneficial to the NLEB in the long-term. Among other things, peer reviewed literature, along with FWS and FS analysis find:
* [ldquo]Vegetation management activities that lower tree density may have some positive effects on the bat (78 FR 61055).[rdquo]
* [ldquo]On the landscape scale, activities to make forested stands more resilient to catastrophic wildfires and insect and disease epidemics are likely to have an overall positive effect . . .

.[rdquo] Black Hills National Forest Draft BA at p. 76.

*
* [ldquo]Studies have found that female bat roosts are more often located in areas with partial timber harvesting than in random sites, which may be due to trees located in more open habitat receiving greater solar radiation and therefore speeding development of young (78 FR 61060).[rdquo]
* Cryan et al. (2001) found evidence of timber harvesting, often heavy, within all but three of the roost plots used by the northern long-eared bat in the southern Black Hills. Black Hills National Forest Draft BA at p. 78.

* Broders and Forbes (2004) discusses the negative correlation between roost sites and conifer cover and goes on to state, [ldquo]A roost site was 24 times more likely to be in a shade-tolerant deciduous tree than a coniferous tree, and trees in the mid-decay classes were 5.2 times more likely to be used than live or recently dead trees.[rdquo]
* [ldquo]Silvicultural practices could meet both male and female roosting requirements by maintaining large-diameter snags, while allowing for regeneration of forests. (78 FR 61060).

o [ldquo]Fewer trees surrounding maternity roosts may also benefit juvenile bats that are starting to learn to fly[rdquo]. (78 FR 61055, italics added)

*
* [ldquo]Cryan et al. (2000) found the relative abundance of reproductive females decreased as elevation increased in the southern Black Hills..... reproductive females may be

constrained from roosting and foraging in high elevational habitats . . . .[rdquo] Black Hills National Forest Draft BA at pp. 57-58.

*
* Northern long-eared bats roosted primarily in crevices in late-decay stage snags..... The

mean decay stage of roost trees was 5.5 [plusmn]2 [1=alive 7=decomposed]. (Cryan 1997, Cryan et al. 2001).

*
* Cryan et al. (2001) concluded that timber harvest and tree thinning activities are not expected to decrease the long-term suitability of these areas as northern long-eared bat roosting habitat.
* [ldquo]The effects from ground disturbance and habitat modification resulting from vegetation management treatments are likely to be insignificant in relation to prey availability or foraging habitat.[rdquo] Black Hills National Forest Draft BA at p. 79.

We recommend the NLEB section of the Draft Plan and DEIS include all the above listed benefits to the NLEB in discussion of potential effects from timber harvest activities. This will help to better perform a hard look at the effects and to include the best available science.
Additional benefits to the NLEB from timber harvest activities have been detailed in other research. Timber harvest directly benefits NLEB prey through habitat improvement which is likely to indirectly benefit NLEBs during the summer roosting season through similar mechanisms as described for prescribed burning (80 FR 18004, Lacki et al 2009). The Draft Plan, on p 36, indicates that high canopy cover in [ldquo]Warm Dry-montane[rdquo] forests currently more than double the maximum desired range. The maximum range of high canopy cover is also already exceeded in [ldquo]Cool Moist[rdquo] and [ldquo]Cold[rdquo] forest types. These dense forest stands are at risk for extensive future overstory losses from disturbances and they are also the most significant limiting factor to forest understory production and diversity.

Illustrating the suppressive effect from dense forest on understory plant communities, many

peer-reviewed publications have found understory production and diversity are negatively related to overstory density (Smith 2011, Uresk et al 2000, Uresk and Severson 1989). Because of the limitations imposed on understory plant communities under dense forests, it follows that many other peer-reviewed publications have found understory production and diversity respond positively to forest management activities that reduce forest tree and canopy density (Stoddard et al 2011, Smith 2011, Dodson et al 2008, Logar 2007, Moore et al 2006, Griffis et al 2001, McConnell and Smith 1970). The scientific literature generally concludes that reducing forest canopy cover through mechanical removal reduces competition for resources and, at the same time, increases the abundance of certain critical resources including sunlight and water. These findings follow the described effects from prescribed burning where understory production, abundance, and richness are increased which, in turn, directly benefits prey species of the NLEB. Although it is difficult to quantify the positive effect from timber harvest on NLEB fitness resulting from increased prey availability, NLEB individuals will benefit from increased prey availability during the summer roosting season in areas where forest canopy cover has been reduced.

We recommend the NLEB section of the Draft Plan include all the above listed benefits to the NLEB in discussion of potential effects from timber harvest activities to better perform a hard look at the effects and to include the best available science.
Other benefits to NLEB populations from timber harvesting come in the form of preventing direct harm and long-term habitat degradation. Reducing forest stand density is the most effective means of mitigating wildfire severity and insect outbreaks.

The long-term effects of high severity fire on [ldquo]Warm Dry[rdquo] forest types, including ponderosa pine ecosystems, includes conversion from forested cover types to grass-shrub or sparsely forested conditions. Neither of these non-forested ecotypes have been shown to support NLEB populations over the long-term. Research conducted in these ecosystems has examined the long- term loss of forested habitat from wildfires and arrived at the following conclusions:

* Mitchel and Yuan (2010) examined tree regeneration 10 years following a large (84,000 acre) wildfire in the Black Hills and did not detect any seedlings in the study area that experienced high severity fire effects where the fire resulted in 100 percent mortality of ponderosa pine trees.
* Long-term ecotype conversions from forested to grass-shrub types that persist decades to centuries can result from high severity wildfires (Savage and Mast 2005, Roccaforte et al. 2012).

Retaining intact forests through active forest management reduces the threat of catastrophic, high severity fire and will contribute to sustaining forested NLEB habitat now and into the future.

This information is missing from the draft Plan. Complete discussion of how vegetation management is used to preserve the very forest conditions the NLEB relies upon is critical in any effects analysis.
We recommend the NLEB section of the Draft Plan include discussion of potential long-term effects to NLEB populations from current forest conditions that create hazardous situations in the event of a wildfire and could result in loss of habitat with the occurrence of insect epidemics .
Goshawk

The Draft Plan references the distribution of goshawk across the Forest and goes further to state that goshawks [ldquo]are [a] species with known affiliations for mature to over-mature forest conditions, including the presence of large trees, snags and logs, and relatively high canopy cover. While these individual habitat components are most abundant in mature and old growth forest, they can be found in earlier successional stages as well.[rdquo] However, we find that the Draft Plan and DEIS has not adequately captured the findings from Reynolds and has not adequately addressed the findings from Graham et al (2015). Graham, with Reynolds, (2015) writes, [ldquo]Also, Reynolds and others (1992) recognized that high forest canopy cover was an essential component of goshawk habitat, especially in the older structures. As such, their canopy recommendations only applied to older vegetative structures, which, at fine scale, could be lessthan 0.25 acres (.01 ha) in size. This is an important concept when designing[hellip] forest conditions that are resilient to mountain pine beetle activity and yet capable of supporting goshawks and their prey.[rdquo]

Graham (2015) goes on to recommend a silvicultural system that, [ldquo]Using Reynolds and others (1992) as a template,[hellip] create[s] and maintain[s] forest conditions for the goshawk and its prey[hellip][rdquo] Over a period of 100 years, the stand conditions under that developed recommendation never exceed 78 sq. ft. basal area.

We recommend the Draft Plan revise the characterization of the research that goshawks are dependent on dense, mature, or over-mature stands and replace it with a more accurate characterization from the research where dense stands play a role on scales less than 0.25 acres and recommended stand structures never exceed 78 ft2 BA.

Continental Divide Trail

We are fully supportive of the Continental Divide Trail. However, to exclude timber production for a one-mile wide corridor goes beyond the requirements of the National Trails System Act.

Sec. 7) (a) (2) of the NTSA states that [ldquo]Development and management of each segment of the National Trails System shall be designed to harmonize with and complement any established multiple-use plans for the specific area in order to insure continued maximum benefits from the land.[rdquo]

The NTSA clearly recognized the benefits of multiple use, such as the co-existence of timber production and recreation along the CDNST. According to the DEIS (p 120, Table 7) only 18- 22% of the Custer Gallatin NF will be designated as suited for timber production under the various alternatives. We believe that any lands within the CDNST corridor that would otherwise for suitable for timber production should in fact be designated and managed as suitable for timber production.

Attached is a December 7, 2017 letter to the Intermountain Forest Association with CDNST Recommended Forest Plan Components. Both the letter and the recommended Plan Components speak to [lsquo]flexibility[rsquo] and [lsquo]response to public input[rsquo]. The letter states that [lsquo]Indeed, most management activities can continue to occur within the trail corridor if they are implemented in a way that is sensitive to the purposes for which the trail was designated[rsquo]. We believe that our recommendations above are a workable compromise that can satisfy multiple objectives.
P 181 [ndash] We recommend the following changes to 3.7.10 Plan Components [ndash] Continental Divide National Scenic Trail (CDNST):
-DC 01 [ndash] delete [ldquo]natural[rdquo] in the last sentence to eliminate any confusion that only [ldquo]natural[rdquo] landscapes will be seen from the Trail.

-DC 02 [ndash] add the following after the first sentence [ndash] [ldquo]Suited timberlands will have a scenic integrity objective of moderate[rdquo].

-Suitability 01 [ndash] change to [ldquo]Suitability for timber production will not be changed by the mere presence of the Continental Divide National Scenic Trail corridor.[rdquo]

The IFA appreciated this opportunity to comment on the Draft Plan and DEIS. Meeting desired conditions on the Forest will require forest management activities well-beyond what is described in the Draft Plan. Alternative E is our preferred alternative, but still falls short of moving current conditions toward resiliency and desired future conditions. Reducing burdens and restrictions to forest management wherever possible will help nudge the alternatives towards success.

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