



**National Headquarters**

1130 17th Street, N.W. | Washington, D.C. 20036-4604 | tel 202.682.9400 | fax 202.682.1331  
[www.defenders.org](http://www.defenders.org)

*Sent via electronic mail to: [cgplanrevision@fs.fed.us](mailto:cgplanrevision@fs.fed.us)*

January 6, 2017

Virginia Kelly  
Forest Plan Revision Team Leader  
Custer Gallatin National Forest  
10 E. Babcock, P.O. Box 130  
Bozeman, MT 59771

Dear Virginia:

Thank you for the opportunity to provide feedback on the Draft Assessment Report of Ecological, Social and Economic Conditions on the Custer Gallatin National Forest and the Draft Preliminary Need to Change the Existing Custer and Gallatin Forest Plans, along with the affiliated specialist reports.

Defenders has been involved in the planning efforts of many ongoing Forest Service plan revisions under the 2012 Planning Rule, and we will offer suggestions on the assessment process that we believe will both improve conservation outcomes, and help fulfill the obligations for forest planning. We submitted feedback to the Forest during the pre-assessment phase in June of 2016.

**THE NATURE OF FOREST PLANS**

The Draft Preliminary Need to Change makes several concerning statements with regard to the nature of forest plans (p. 4-5):

- There is a need to replace tactical, prescriptive language of the Custer Forest Plan and the Gallatin Forest Plan with strategic language; that is, identifying land use suitability; defining desired conditions for a resource, good, or service; and identifying quantifiable objectives and project design guidelines and standards to achieve those desired conditions.
- There is a need for flexibility to manage for sustainable ecosystems and to allow adaptive responses to changing resource conditions; new science; and changing law, policy and regulation.

The first statement is echoed in the Draft Terrestrial Wildlife Report:

The findings of this assessment suggest that existing plans are generally adequate to manage wildlife habitats for healthy populations. However, the prescriptive nature

of existing plans (mandates to use specific methods, processes and/or techniques) can become problematic as information, science, and technology changes over time” (p. 22).

The conversation would be better served if specific cases of existing plan direction were cited with the accompanying argument that they are not compatible with the 2012 Planning Rule’s objectives and requirements. Generally, the assessment does a less than perfect job of forecasting the effects of continued implementation of the current plan, which forms the basis for the need to change and the proposed action. Specifically, the assessment should spell out how the existing plan direction is problematic. A more complete discussion, perhaps in a public forum, of the differences between tactical and strategic forest planning may be useful, for it seems foundational in the Forest’s approach to forest planning.

Flexibility may not be the word the Forest is looking for when describing adaptive management. The planning rule supports adaptive management. It is the framework of assessment, planning, monitoring and then plan amendment or revision that “creates a responsive planning process” and “allows the Forest Service to adapt to changing conditions” (36 CFR 219.6(a)). However, there is nothing in the planning rule that provides authority to establish a flexible forest plan by building uncertainty into the plan components themselves.

If flexibility translates into vague plan components or the deferment of plan-level decisions to the project-level, there may be a problem. A plan that provides discretion for future decision-makers to adopt programmatic decisions on a project-by-project basis would provide the Forest Service with the ability to essentially change or create plan direction in the future without public involvement. Such would be counter to the fundamental purpose of NFMA of providing integrated and strategic direction for future projects (NFMA Section 6(f)(1)). It would also bypass the substantive requirements of the planning rule, and its requirement for use of best available scientific information, both of which explicitly do not apply to projects (36 CFR 219.2(c)). In the case of at-risk species, it would allow the Forest Service to avoid its statutory obligation for forest plans to provide for diversity of plant and animal communities.

### **ECOLOGICAL INTEGRITY**

The assessment acknowledges that the assessment of ecosystem integrity has not been completed (“Custer Gallatin specialists are in the process of evaluating whether current conditions in each ecosystem have ecological integrity.”). This is disheartening. The planning rule that contained this requirement was issued four years ago, and the Forest Service should have taken steps to ensure compliance prior to initiating revision of this plan. This necessitates a much more in-depth discussion of how and when in the planning process the Forest is going to meet its regulatory requirements for ecological integrity. In any case, the assessment must provide the actual reference conditions being used and provide the rationale. It does neither here in any way that relates to specific species requirements. This all suggests that the assessment will be need to redone when

adequate data is available.

We understand that the natural range of variation (NRV) (or other ecological reference model) analysis is complicated and appreciate that it takes time. Diligence on this matter is warranted given the importance of the analysis in shaping the Forest's strategy to maintain and restore ecosystem functionality, and support the persistence of at-risk species. It would be helpful if the Forest could inform us when you expect the SIMPPLLE NRV analyses to be completed so that the public has the chance to review final integrity status determinations. Those final determinations also have implications for the Need to Change. We recommend that the completed integrity analysis be presented as suggested in Section 12.14c of the Handbook, including a discussion of the relationship between the status of integrity and existing plan direction to support Need to Change discussions. We also recommend that the Forest emphasize how climate change information was factored into the analysis and discuss the implications of the integrity conclusions for species adaptation. (The Draft Forested Terrestrial Vegetation Report states that the SIMPPLLE model "included calibrations for historic and future climate" – it would be helpful to understand how it did so.)

We note that the Draft Nonforested Terrestrial Ecosystems Report does not appear to describe a method for determining the status of ecological integrity. We also note that the Draft Aquatic and Riparian Ecosystems Report provides a clearer method for determining integrity status, thanks to the PIBO reference sites and Watershed Condition Framework.

Here are some specific comments on the Draft Forested Terrestrial Vegetation Report:

- The Current Forest Plan Direction (p. 6) focuses on timber suitability and timber management goals but there is not a discussion of existing plan direction for ecological integrity. Some of the timber management goals have implications for integrity (e.g. reduce the threat of fire, balance distribution of vegetation size and age classes, reduce insect and disease losses). The assessment should shed light on the implications for future integrity assuming this plan direction remains in place.
- We don't disagree with the statement that "(f)ire exclusion the last 90 or so years has resulted in a higher proportion of late seral, shade tolerant species at the expense of shade-intolerant types" (p. 16), but it would be informative to see the existing condition compared to the reference condition given a natural fire regime.
- On p. 17 the report equates stand replacement fire with regeneration harvest in terms of ecological effects. It would be helpful to understand the assumptions underlying this statement as well as the estimated NRV for stand replacement fires.
- We appreciate the commitment to the conservation of whitebark pine and recommend that the forest plan identify areas for focused protection and restoration efforts.
- Given the decline of limber pine across the Northern Region and the "heightened concern" for its future (p. 24) we recommend that the Forest and Region initiate a discussion with relevant experts over whether the species may warrant consideration as a species of

conservation concern (SCC) (including a discussion of whether the “secure” rating from NatureServe reflects the latest and best available science). The results of the SIMPPLLE analysis should prove helpful not only in the matter of determining ecological integrity but also shedding light on implications for species persistence in the plan area.

- In the Information Needs discussion for Tree Distribution/Density (p. 29) it is stated that the SIMPPLLE NRV analysis will examine tree species by size class. Will that analysis also estimate an NRV for density?
- Will there be an NRV analysis for snags? It is not discussed in the Information Needs discussion for that section (p. 49). And apparently there will not be an NRV analysis for large woody debris (p. 51). In that case, will an alternative ecological reference model be developed to estimate integrity? Further discussion on the risks of re-burn (p. 51) may be useful.
- In the discussion of old growth (p. 52), it would be useful to know the old growth dependent and associated species. As a general matter it is helpful to know how characteristics were selected based on their ability to provide ecological conditions needed for at-risk species, particularly if the Forest will rely on the characteristic to meet the ecological needs of particular wildlife species.
- The statement in the old growth discussion that “(f)actors such as climate, fire history, insect mortality, human intervention result in homogeneity of the vegetation will less stability of old growth” (p. 55) warrants more discussion, simply because it raises the question as to whether the Forest is implying that natural disturbance regimes are undesirable because they result in homogeneity. We do not think that was the intention; rather the discussion later in the assessment implies that “altered” disturbance regimes result in homogeneity (p. 56). Concepts related to heterogeneity and homogeneity must be carefully explained as they relate to ecological integrity and there needs to be a clear comparison of natural vs. altered disturbance regimes.
- It is important to be clear that on the statement that “(r)esilient landscapes are generally made up of mosaics of age classes, composition, structures, and successional stages.” (p. 57). At some scales some landscapes naturally express conditions of homogeneity. (In other words, resiliency has to be evaluated at the appropriate spatial and temporal scales.)
- We agree that “(u)nderstanding the size of openings that can be expected under a natural disturbance regime is important for management purposes” (p. 58). It is fundamental to understanding the integrity of forested landscapes. However, the Forest needs to be thoughtful in how this applies to developing forest plan direction “such as maximum size of harvest openings.” While we agree in principle that harvest should mimic natural disturbance the two types of disturbance have quite different ecological effects.
- Please clarify the relationship between insect hazard ratings and ecological integrity (p. 64).
- When making a statement such as “(t)here is little evidence that current patterns in dry forest today are sustainable and this has important ecological consequences” (p. 87) it would be interesting to understand what the role of the existing plan was in creating these

unsustainable conditions. This is an element of the integrity analysis. More discussion on how “the landscape is set up for severe, large fire and/or potential insect disturbance events” would be useful, particularly characterizing these disturbances in terms of their present and historical range. It would be interesting to better understand what “ecological outcomes...are consistent with natural ecosystem functioning” and why the current plan is not producing such outcomes.

- Has there been any science published since 2002 related to the statement that “larger, contiguous blocks of uniform stands are subject to large beetle outbreaks and catastrophic fires when fire weather is extreme”?
- It would be good to better understand how the Adaptive Strategies in Table 40 (as well as subsequent adaptive strategies derived from NRAP) and other adaptation information in Table 41 will be employed in the revised forest plan.
- The statement that “(r)isk of uncharacteristic fire severity is very high due to uncharacteristic high forest density which will reduce timber production opportunities” (p. 104) requires clarification due to the absence of information on characteristic vs. uncharacteristic fire severities (NRV analysis). Similarly, “uncharacteristic outbreak levels” should be more clearly defined in the important discussion on p. 127.
- The discussion of the efficacy of management actions as it relates to beetles (p. 127 & 128) is interesting and would benefit from more information on the relationship to the current plan.
- There are a number of characterizations of ecosystem conditions that should be further defined including “mortality at *acceptable* levels” (p. 129) and “(m)aintaining a *healthy* forest” (p. 130).
- The statement that “(i)n some cases changes may be within the natural range of variation and will not negatively impact ecosystem integrity” (p. 131) seems premature given the absence of NRV information in the assessment.
- The report provides a key finding that “(t)he combined effects of numerous interacting factors including fire exclusion, past management activities, climate change, recent large wildfires, and invasive species have compromised the ecological integrity and resiliency of the Custer Gallatin National Forest forested landscapes” (p. 149). We are not sure the information presented in the report supports that conclusion and the other conclusory statements made in this section. Compromised ecological integrity would be indicated by a departure from reference conditions and in many cases it is not clear what the reference condition is. Furthermore, measurement terms such as “low ecological integrity” and “high risk of loss” need to be clearly defined. Again, expressions such as “uncharacteristic proportions of high-severity, stand replacing fire” need to be carefully described in relation to more characteristic proportions of these types of disturbances.

## **CLIMATE CHANGE ADAPTATION**

Provided that the Forest is continuing to work on the assessment, we offer the following thoughts on how the assessment can address adaptation in the context of ecological integrity and at-risk

species. It may be desirable for the final assessment to include a summary discussion integrating the adaptation issues as they relate to ecological sustainability so that the forest plan can develop clear adaptation strategies.

**The forest planning assessment should result in a vulnerability status report on key ecosystem characteristics and the ecological conditions needed by the at-risk species.** The status indicates whether the conservation target is likely to be sustained under the current plan, or whether the new plan must address the target's climate vulnerabilities. This is the beginning of the process for developing adaptation actions for vulnerable resources.

**For the key ecosystem characteristics indicating ecological integrity, the vulnerability status of the characteristic is determined by whether the current plan is likely to provide for adaptation to climate change.** If the assessment finds that the trend of an ecosystem characteristic is unlikely to be within the climate informed NRV, it indicates that the ecosystem characteristic may be vulnerable to climate change impacts and will require adaptation actions within the forest plan.

**The forest planning assessment must also assess the vulnerability of at-risk species, and the ecological conditions that support them in the forest planning area, to climate change.** The forest planning conservation objective for SCC is to “provide the ecological conditions necessary to maintain a viable population.” Therefore, the assessment must evaluate the vulnerability of those conditions to climate change. It should be noted that the conditions are not limited to habitat and could therefore address the impacts of climate change on human uses of the forest (e.g. increased recreation stress due to longer recreation seasons).

**The vulnerability assessment for at-risk species will occur in several contexts.** First, the at-risk species assessment is closely linked to the ecosystem assessment, as many at-risk species are likely to depend on those characteristics for their persistence. In addition, the assessment will provide information on whether climate impacts may be causing a species to be of conservation concern, as well as information on how climate stress may be exacerbating the vulnerability of a species threatened by other stressors.

**Many species will be determined to be SCC because broad scale concern over their conservation has already been documented by NatureServe, states, other federal agencies, or other authoritative sources. In some cases, climate threats will have already been incorporated into existing threat assessments for these species. Additional species may be found to be of conservation concern within the planning area due to local conservation concern about the species ability to persist over the long term in the plan area.** The Planning Rule's directives state that some of these additional species may be of conservation concern due to “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” (FSH 1909.12). It is

important to note that species threatened by climate change cannot be ignored as SCC simply because the Forest Service may not be able to directly address those threats within the forest plan.

**The forest planning assessment must determine the status of at-risk species assuming that management continues under the current plan.** This involves identifying the ecological conditions affiliated with each species and describing their “likely future status” under the current plan. If the current plan, accounting for climate change impacts, is not currently meeting or expected to provide the necessary ecological conditions for at-risk species it indicates a need to change the current plan to provide adaptation actions.

**The “need to change” should highlight the priority adaptation strategies and actions based on the assessment.** It is identified following the forest plan assessment phase, and is used to define the purpose and need to revise the forest plan; as such, it can be interpreted as prioritizing the conservation and management forces behind the planning process, based on the findings within the assessment (including the climate change vulnerability assessment).

### **GRIZZLY BEARS**

In March of 2016 the U.S. Fish and Wildlife Service (USFWS) proposed to remove Endangered Species Act (ESA) protections from the Greater Yellowstone Ecosystem (GYE) grizzly bear population. This process is not yet final. As of early January 2017 grizzly bears remain listed as a threatened species and protected under the ESA. Grizzly bear habitat protections provided through the Custer Gallatin revision process are vital to ongoing recovery of the GYE grizzly bear population in the context of the ESA, and to ensure that Forest Service lands meet the requirements of NFMA to sustain grizzly bears within individual planning areas and contribute to a robust, connected and resilient meta-population of grizzly bears in the future.

Over the last two decades, Defenders has played an important role in the recovery of grizzly bears in the Northern Rockies. Recognizing that the largest threat facing long term grizzly bear recovery is human related mortalities, Defenders has focused heavily on reducing conflict through our coexistence program. Since 1997, we have spent more than \$500,000 on more than 250 projects designed to minimize or eliminate conflicts between people and grizzly bears. These efforts assist communities living in grizzly country with the tools necessary to prevent conflicts with grizzly bears and promote tolerance. We operate these projects in partnership with local communities and residents as well as county, state, tribal and federal agencies.

The Forest should already be considering future management of grizzly bears as a species of conservation concern. There is no reason to assume that grizzly bears will not meet the criteria for SCC upon potential delisting. For example, there is no reason to assume that known threats to the species will no longer be present or relevant in the plan area at that time. In fact, the USFWS *Proposed Delisting Rule* (81 FR 13173) assumed that “grizzly bears would remain on the Forest Service

Sensitive Species list after delisting” or would be managed as SCC under the 2012 Planning Rule (FR 13198).

We noted that the Wildlife Report states that the Greater Yellowstone grizzly bear population cannot “grow unrestrained forever” (p. 39). This is referring to recent science suggesting that the Yellowstone grizzly bear population may be approaching carrying capacity (van Manen, et. al., 2015). This statement is misleading as it does not acknowledge that, while evidence suggests the population may be reaching carrying capacity, that does not exclude the ability of the population to continue to expand outside the PCA. Expansion is occurring and is evident in the distribution map provided in the Draft Assessment (Figure 11., p. 46). Yet, as the assessment points out “Aside from the travel plans, there are no forest plan standards or guidelines that apply specifically to grizzly bear habitat management on national forest lands outside the recovery zone (p. 47). The assessment should provide the information needed to determine appropriate plan components for these areas.

**The Custer Gallatin National Forest should clarify the process for adopting adequate regulatory mechanisms in forest plans to support grizzly bear delisting.** There is significant confusion as to whether and which forest plans are currently incorporating habitat standards and other relevant provisions of the GYE Conservation Strategy and if not, whether and how the relevant forest plans will be amended to incorporate the necessary adequate regulatory mechanisms to maintain a recovered Yellowstone grizzly bear population.

The draft GYE Conservation Strategy makes the following ambiguous statements: “[l]and and resource management plans for *some* National Forests and National Parks in the GYE have incorporated the habitat standards and other relevant provision of the Conservation Strategy” and that for “those standards and provisions *not yet incorporated* into management plans, the agencies will implement the habitat standards and monitoring requirements...through their established planning processes, subject to NEPA or other legal requirements” (emphasis added). It continues by stating that affected national forests will continue to follow existing land management plan direction “until amended or revised.” We are uncertain how to interpret this direction and it has caused significant confusion within the Yellowstone grizzly bear conservation community on what needs to be done with regard to the forest plans, including the Custer Gallatin. How this affects the Custer Gallatin should be thoroughly explained as part of the “need for change” for the Custer Gallatin revised plan. The Draft Preliminary Need for Change only ambiguously states that “(t)here is a need for plan direction to be consistent with conservation strategies, such as those for grizzly bear...” (p. 14).

The Assessment implies that the Gallatin clean-up amendment, effective November of 2015, has already adequately updated the Gallatin National Forest grizzly bear habitat management: “Therefore, the Custer Forest Plan direction for grizzly bear habitat management is still outdated and in need of modification, whereas the 2015 Gallatin Forest Plan (Amendment No. 51) formally adopted the conservation strategy guidance as direction, regardless of the status of the species under the Endangered Species Act” (Draft Terrestrial Wildlife Report, p. 25). This is incorrect because it does not recognize that the 2007 GYE Conservation Strategy, adopted and cited in the clean-up

amendment, has been significantly modified in the 2016 GYE Conservation Strategy, which was finalized and signed December 2016. To remedy this confusing situation prior to the proposed action, the Custer Gallatin should clarify what regulatory mechanisms are required under the 2016 Conservation Strategy and how those mechanisms are either legally in effect on the Forest, or will be incorporated within the plan, within the context of the forest plan revision.

**The Custer-Gallatin National Forest should commit to a proactive strategy to provide for habitat connectivity for grizzly bears.** The national forests have been a substantial contributor to grizzly bear recovery in the GYE and will continue to be pivotal in both maintaining the Yellowstone grizzly bear population as well as facilitating connectivity to other populations, such as the Northern Continental Divide Ecosystem (NCDE). It is important to remind the Forest that it has conservation management obligations for grizzly bears not only under the ESA but under NFMA as well. The obligation in the Planning Rule to contribute to recovery on the Custer Gallatin applies to the species as a whole; not just the Yellowstone subpopulation. Through management of Forest Service lands inside and outside the USFWS Services' identified Primary Conservation Area (PCA), the Custer Gallatin National Forest will play a critical role in regards to habitat security for bears moving between the GYE and NCDE.

The Yellowstone grizzly bear population continues to be isolated from the more robust NCDE population to the north. It is well known that grizzly bears require large tracts of secure, high quality habitat and that roads and human development can negatively impact female grizzly bears and females with young, leading to avoidance of habitat and habitat fragmentation (Mace et al. 1996; Proctor, et al. 2012, Proctor, et al., 2015). Montana's human population is forecasted for continued growth (Census and Economic Information Center. 2013) and with it development of private lands. Grizzly bears are sensitive to such development and even low densities of residential development can become sink habitats (Schwartz et al. 2012). Therefore, NFMA-based habitat protections and designations on public lands that promote connectivity between larger blocks of secure areas are fundamental to achieving and sustaining a viable meta-population of grizzly bear populations in the lower 48. If this is not achieved populations, like Yellowstone, could remain disconnected and less resilient to future changes to their environment and ongoing threats to their survival. Connectivity and linkage between grizzly bear populations has been stated as both a goal of the USFWS as well as the state of Montana.

It is FWP's long term goal to allow the populations in western Montana to reconnect by occupying unoccupied habitats. (Grizzly Bear Management Plan for Western Montana Grizzly Bear, 2006, P. 56)

Loss and fragmentation of natural habitat is particularly relevant to the management and survival of grizzly bears...Ideally, preserving linkage between populations is a more legitimate long-term conservation strategy than are attempts to manage separate island populations. (USFWS Grizzly Bear Recovery Plan 1993, P. 24)

Whether the grizzly bear population in the Yellowstone ecosystem retains ESA protections or not, the Custer Gallatin (as governed by NFMA and the 2012 Planning Rule) will play a significant role in ensuring connectivity between populations. The importance of the Custer Gallatin to connectivity is acknowledged as a key finding in the Wildlife Report:

The Custer Gallatin National Forest plan area covers much of the northern portion of the Greater Yellowstone Ecosystem for grizzly bears, and is therefore important in terms of facilitating connectivity between the Greater Yellowstone Ecosystem and the Northern Continental Divide Ecosystem to the north. (p.44)

Facilitating connectivity between populations is not an optional clause under the planning rule. Grizzly bears on national forest lands must be sufficiently distributed “to be resilient and adaptable to stressors and likely future environments” (36 CFR 219.19). This clearly implies affirmative management to facilitate interactions between populations, taking into account historical distributions. Similarly, the rule’s integrity and connectivity requirements also require such management attention. The forest plan should consider “(e)cological connectivity at multiple temporal and spatial scales that would provide landscape linkages facilitating the exchange of resources and the movements of species across the broader landscape” (FSH 1909.12, 23.11b).

A key finding within the Wildlife Report is that the Custer Gallatin is “important in terms of facilitating connectivity between the Greater Yellowstone Ecosystem and the Northern Continental Divide Ecosystem to the north” (p. 44) and notes that “a natural connection of the Greater Yellowstone Ecosystem and Northern Continental Divide Ecosystem populations is possible” (p. 40). It is the role of the forest plan to guide the agency actions that can help realize this possibility. The report notes that the mountain ranges within the Bridger, Bangtail, and Crazy Mountain landscape are “potentially important travel corridors that could eventually facilitate grizzly bear distribution between the Greater Yellowstone Ecosystem and Northern Continental Divide Ecosystem populations” (p. 37). The forest plan must reflect this finding and the assessment must formally address it. The proposed plan must outline clearly how the Custer Gallatin will contribute to connectivity both within the plan area (within the PCA and outside the PCA) as well as between populations. One way the assessment could address this would be by identifying important linkage areas on the forest so that within those areas the revised plan could specify measures such as limitations on developed sites and road densities.

Within the PCA, direction is provided by the 2006 Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests. We suggest that some of the protections identified within this document should be carried into key linkage areas within the forest, outside the PCA. An example can be found in the draft NCDE Conservation Strategy which identifies demographic connectivity areas (DCAs) outside the NCDE primary conservation area that are meant to facilitate female occupancy and dispersal between the NCDE and other ecosystems (NCDE CS, p. iv). To assist with connectivity between the NCDE and the GYE, the NCDE

Conservation Strategy also identifies Zone 2 which is meant to provide an opportunity for males to move between the NCDE and GYE (NCDE CS, p. iv). Through its planning process, the Flathead National Forest is now coordinating the grizzly bear amendments associated with the NCDE Conservation Strategy, that would apply to the NCDE PCA and associated zones. These draft amendments propose additional grizzly bear related habitat protections outside the PCA within important connectivity areas.

Based on the information provided in the assessment, the Custer Gallatin should develop a proposed action that outlines desired conditions, standards and guidelines that maintain the strongest habitat protections for grizzly bears within the PCA and extend connectivity habitat protections outside the PCA. If ESA protections are removed for the GYE population the Demographic Monitoring Area (DMA) will continue to be the area where the bear population size is estimated and mortality is counted (81 FR § 13186). By implementing habitat protections both inside and outside the PCA, the Custer Gallatin would allow for connectivity and proactively prevent grizzly bear mortalities in a manner consistent with the NFMA.

**Food storage orders are an important component of grizzly bear recovery.** We applaud the Forest Service for implementing food storage orders across grizzly bear occupied habitat in the GYE (Wildlife Report, p. 35). As opportunistic omnivores, grizzly bears are frequently enticed by anthropogenic attractants like unattended coolers, garbage and livestock. This situation rarely ends well for the bear and can lead to habituation to human activity which often becomes a human safety issue. By continuing to enact and enforce food storage orders the Forests will be able to minimize such conflicts, improving safety for both people and bears. Funding for enforcement personnel will continue to be important to program success. We are encouraged to see that the Forest Service, together with the Interagency Grizzly Bear Committee and Wildlife Management Institute (WMI) have provided the public a user friendly, interactive map identifying Food Storage Orders across all forests (<http://igbconline.org/food-storage-regulations-2/>). It will be important for all partners to alert the public to this map and food storage regulations. As visitation increases the Forest Service will have to adapt outreach campaigns to ensure the majority of the visiting public understands and complies with food storage orders.

### **CANADA LYNX**

The Preliminary Need for Change document states that “(t)here is a need for plan direction to be consistent with conservation strategies, such as those for grizzly bear and lynx” (p. 14). No other mention of this need to change the current plan is made in the assessment nor in the Draft Terrestrial Wildlife Report. Can the Forest clarify what the intent of this statement is with regard to Canada lynx?

In addition, we note that the Wildlife Report does not reference Kosterman (2014) as we discussed in our pre-assessment letter to the Forest.

## **WOLVERINE**

In our opinion the Forest is inappropriately dismissing the risks posed by recreation to wolverines within the planning area, in a manner that may be counter to the planning rule and NFMA. Citing USFWS's determinations on those effects within the context of the ESA – at the species (DPS) level of biological organization - is not appropriate within the NFMA context, where the Forest is concerned with the persistence of the individuals that makeup a population within the plan area. The Wildlife Report concludes that the USFWS “found no evidence that winter recreation has a negative effect on wolverines” (p. 74). This is not presented within the appropriate context. The USFWS determined that “the best available information does not indicate that winter (or summer) recreation is a threat to the DPS” (79 FR 47524, August 13, 2014).

The Forest Service viability risk assessment occurs at a different scale of biological organization and spatially within the plan area: “(I)t is the Department’s expectation that for the purposes of this subpart, the individuals of a species of conservation concern that exist in the plan areas will be considered to be members of one population of that species” (77 FR 21217, April 9, 2012). At minimum the Forest has an obligation to discuss and evaluate the information provided by the USFWS within this appropriate context.

We recommend that the Forest look to the Flathead forest plan revision for a model of how to deal with the scientific uncertainty surrounding winter recreation and the amount of disturbance female wolverines will tolerate within their home range; the Flathead acknowledged uncertain risks and used the NEPA and effects analysis process to meaningfully address the scientific uncertainty and legitimate concern. In addition, the assessment should provide an update on any forthcoming information from the Heinemeyer and Squires study on this subject, which was expected in fall of 2016.

We also point the Forest to this recent publication, which is likely relevant to this subject:

Larson CL, Reed SE, Merenlender AM, Crooks KR (2016) Effects of Recreation on Animals Revealed as Widespread through a Global Systematic Review. PLoS ONE 11(12): e0167259. doi:10.1371/journal.pone.0167259

## **TERRESTRIAL SPECIES OF CONSERVATION CONCERN**

At the risk of sounding cynical, the Forest seems to be making efforts to find a reason to avoid having to address any SCC in the planning process, at least for terrestrial species. Different outcomes for terrestrial, aquatic and plant SCC determination processes may also indicate different interpretations of policy and different methodologies. In any case, many of the rationales for the terrestrial species are unconvincing and inadequate. Below are objections to 32 additional terrestrial species (8 additional aquatic species are discussed in a later section) where the best available scientific information documented here indicates substantial concern for the species’ persistence in the plan area.

While sensitive species were considered, there is no attempt to explain what has changed so that they are not SCC. The change from 30 sensitive species with concern for viability to 2 terrestrial SCC begs for a comprehensive explanation of what has changed. The discussion on p. 76 is insufficient. It simply suggests that a concern for population viability does not necessarily mean there is a concern for persistence in the plan area. This is counter-intuitive, and as a hypothesis it needs to be explored in detail for each sensitive species.

The only basis for exclusion of species with documented occurrence in the plan area should be “transient” or “accidental.” A common question is the extent to which a number of decisions were based on the presence of only “migratory” range, which is not a valid basis for exclusion. However, if the NatureServe rank of vulnerable is limited to a type of range that is not present in the plan area, this may be a valid reason (as was done for California gull and grey-crowned rosy finch). They also considered sensitive species on forests in adjacent regions.

The species considered do not appear to include S3 “vulnerable” species. However, the evaluation does consider state recommendations, which covered some of these species, but probably not all. We request that this information be provided.

Because the plan area occurs in two states, there are different NatureServe ranks for some species, which can be confusing. It is probably reasonable to exclude species where they are only at-risk in one state if and they are not known to occur in the plan area in that state (see Clark’s nutcracker). Or even where they are secure in one state, but not in the other (see Cooper’s hawk, hoary bat). Their persistence in “the plan area” would not be at-risk.

Baird’s sparrow: Where a species has been documented in the plan area, and the plan area is within the range of the species, there should be a heavy burden to prove absence. (The language is conflicting about whether occurrences were on or near the plan area.) Instead, the Forest argues that there is insufficient evidence to prove presence. There must be additional rationale for why the species would not be expected to be established or becoming established (including the relevance of climate change).

Black rosy finch: There are several arguments that there are no threats to the species on the Forest. That could change, so it is not a reason to exclude the species as an SCC if it is at risk elsewhere or from other factors, and this may affect its persistence on the Forest. This all needs to be discussed.

Black-backed woodpecker: Where a species is a sensitive species that is known to occur in the plan area, the rationale has to explain how the rationale for SCC exclusion leads to a different result. It appears that “recent” increases in habitat might be the reason for downplaying the state rankings as “vulnerable,” but this needs to be explained.

Blue-gray gnatcatcher: This species is known to occur in the plan area. The fact that it is a “small portion of the plan area” is irrelevant to the SCC determination. Also, there is no requirement that

the plan area provide breeding habitat, which may be a misperception that is being applied. Because the range of the species is expanding towards the plan area, there should also be some discussion of whether the species is becoming more established.

Brown creeper: The “imperiled” NatureServe status cannot be overruled by a healthy status on the Forest unless it is demonstrated that the Forest status is not dependent on the rest of the population. That needs to be discussed.

Bufflehead: The species is “known to use suitable habitat throughout the plan area.” The fact that there is no breeding habitat is not relevant, even if the only identified threats are in breeding habitat (addressing threats comes at the next planning step; however, if the NatureServe rank was limited to breeding habitat, that could justify exclusion). The fact that it is secure globally does not counter the fact that it is imperiled at the state level, which more directly affects the local populations.

Chestnut-collared longspur: There should be an explanation of why the single observation was considered “transient” when portions of the plan area are “within summer/breeding range.” This situation may be sufficient for a finding that the species is known to occur.

Ferruginous hawk: There should be an explanation of why observations were considered “transient” when the entire plan area is “within summer/breeding range.” Moreover, the fact that only “most” were considered transient, and that habitat is only “more abundant” outside of the plan area, confirm that the species is known to occur in the plan area.

Great gray owl: The S3 rank in Montana means that the species is vulnerable. This indicates that there is “information indicating declining populations/habitat, and/or substantial threats.” This requires more discussion of the best available scientific information the Forest believes indicates otherwise (and not limited to the plan area conditions).

Harlequin duck: The species is imperiled in Montana, but the “breeding population in the Rocky Mountains (is) relatively stable.” This needs to be reconciled. Lack of surveys or lack of threats on the Forest are not relevant to this determination.

Lewis’ woodpecker: The two main reasons for excluding are not sufficient. While habitat may be “typically” outside of the plan area, the species is nevertheless known to occur in the plan area. The presence of habitat in the plan area cannot be a sole determinant of risk to a species persisting in the plan area.

Loggerhead shrike: The main reason seems to be that breeding habitat is outside of the plan area. This is not a valid reason of excluding the species. The statement of “populations relatively stable in Montana” conflicts with the NatureServe rank of vulnerable and further discussion is needed.

Long-billed curlew: All of the reasons given for excluding this species are irrelevant. Breeding does not

need to be confirmed in the plan area, lower abundance of habitat outside of the plan area does not mean species are not present in the plan area, and the nature of threats in the plan area can only be used to include additional species, rather than ignore species that already have identified risks.

Mountain plover: Here, the summary equates “transient” to “migrating.” This is not the definition of transient, and it raises questions about analysis of other species where this was a factor. If they use the habitat regularly during migration, it is important to them. In this case there is only one documented occurrence, but since all of the data sources show at least some of the plan area in the species’ range, it should be considered known to occur.

Sage thrasher: The comments, which are mostly about the plan area and threats, do not invalidate the NatureServe conclusions of “imperiled” (SD) and “vulnerable” (MT) status, which contribute to risk of persistence in the plan area.

Sprague’s pipit: The species was rejected because of only two “transient observations.” This rationale is suspect, as described above, and especially because parts of the plan area are within the mapped range of the species.

Trumpeter swan: The rationale for exclusion appears to be that the plan area provides “migratory and wintering range.” There is nothing in the SCC criteria that allows species to be excluded for these reasons.

Veery: The globally secure rank cannot be used to offset the state vulnerable and imperiled ranks, which are more relevant to persistence in the plan area. Lack of breeding is not relevant. Failing to include this species is especially concerning where the population decline in Montana is “significant” and a “steeper decline than elsewhere in species’ range.”

Yellow-billed cuckoo: This species was apparently rejected because there is only a single “provisional” observation. Given that the entire plan area is summer range, this suggests, if nothing else, lack of surveys, and that factor should be explained. Even this one sighting should be sufficient, even if “preferred” habitat is “typically” found outside of the plan area, especially because the “species has experienced serious population declines in the west.”

Bighorn sheep: The fact that there are no active sheep allotments is not a relevant factor. This would be addressed through plan components, which may change. Similarly, the apparently unmitigated risk of goats used for packing. The fact that bighorn sheep are currently hunted under state law is not an argument against SCC classification. This is a species for which the comparison of the conclusion for sensitive species and SCC must be carefully explained, especially since it was included on this list in 2011 (p. 109). The relevance of existing or planned viability analyses should also be considered.

Bison: The rationale refers to an existing management plan. This has no bearing on the status as

SCC, because it is subject to change as a result of plan revision. The rationale seems to put the cart before the horse. Any “target population” cannot be the basis for national forest management unless it has been based on a viability analysis that is part of forest plan revision. Without plan components that compel an adequate conservation strategy for national forest lands, there is a substantial concern about the species persistency on those lands.

Black-tailed prairie dogs: The rationale makes an excellent case for identifying this species as an SCC. It is a sensitive species that is vulnerable in Montana, but not protected from its greatest threat of recreational shooting. If shooting is mentioned here as a factor outside of the control of the Forest Service, that is both inappropriate at the SCC stage, and untrue as a matter of law. The forest plan could protect this species from shooting.

Fringe-tailed myotis: The appendix contains no information that counters the South Dakota “imperiled” rank. (However, the S4 rank in Montana could be the basis for no substantial concern in the plan area.)

Little brown myotis: The appendix contains no information that counters the Montana “vulnerable” rank. (It discusses only the plan area conditions.) (However, the S5 rank in South Dakota could be the basis for no substantial concern in the plan area.)

Long-eared myotis: The appendix contains no information that counters the South Dakota “critically imperiled” rank. (It discusses only the plan area conditions.) (However, the S4 rank in Montana could be the basis for no substantial concern in the plan area.)

Pallid bat: The appendix contains no information that counters the Montana “vulnerable” rank. (It discusses only the plan area conditions.) For a species that is currently classified as sensitive (having risk to viability), there needs to be a clearer explanation for why it is not viewed as having substantial concern for persistence. Lack of information should not be the basis for exclusion when there was enough information to classify the species as sensitive.

Spotted bat: The appendix contains no information that counters the Montana “vulnerable” rank. The fact that it is apparently secure globally is less relevant than that state rank, which was not addressed in the rationale. For a species that is currently classified as sensitive (having risk to viability), there needs to be a clearer explanation for why it is not viewed as having substantial concern for persistence. Lack of information should not be the basis for exclusion when there was enough information to classify the species as sensitive.

Townsend's big-eared bat: The appendix contains no information that counters the South Dakota “imperiled” and Montana “vulnerable” ranks. (It discusses only the plan area conditions.) For a species that is currently classified as sensitive (having risk to viability), there needs to be a clearer explanation for why it is not viewed as having substantial concern for persistence.

Sage brush lizard: A secure global ranking does not relieve the concerns based on the “imperiled” rank for South Dakota. (However, the “apparently secure” rank in Montana might.)

Short-horned lizard: No information is provided to counter the South Dakota “imperiled” rank; the global rank of “secure” is not relevant to persistence in the plan area when the state ranks are vulnerable or greater. “Limited survey efforts” in the plan area are not necessarily relevant if there are broader scale risks.

Frigga fritillary: The Montana S1S2 species was excluded partly because it is secure globally, which is not relevant, and partly because threats are unlikely because management activities are unlikely to affect them, which is relevant to plan components rather than SCC identification. The fact that it is “at the southern extent of its range” is not relevant (unless the point is that climate change would move habitat away from the plan area, which would require further discussion).

Gray comma: The Montana “imperiled” rank is not negated by a secure global rank. (The suggestion in the aquatics section that lack of inventory is causing it to be rare is confusing.)

#### **ADDITIONAL COMMENTS ON THE DRAFT TERRESTRIAL WILDLIFE REPORT**

p.8, p. 21: It is very disappointing that the assessment “lacked adequate summary data for the natural range of variation assessment,” and that the Forest is “in the process of developing such data.” The planning rule that contained this requirement was issued four years ago, and the Forest Service should have taken steps to ensure compliance prior to initiating revision of this plan. This necessitates a much more in-depth discussion of how and when in the planning process the Forest is going to meet its regulatory requirements for ecological integrity. In any case, the assessment must provide the actual reference conditions being used and provide the rationale. It does neither here in any way that relates to specific species requirements. This all suggests that the assessment will be need to redone when adequate data is available.

p. 11: The assessment states that beavers have increased over time. (We note that the Draft Aquatic and Riparian Ecosystems Report states that “(b)eaver populations have likely declined across much of the assessment area...” p. 20.) This suggests that something is known about the historic levels of beaver occurrence, which are relevant to ecological integrity. It also appears to suggest that there are too many beavers, in contradiction to the Aquatic Report, which states that declining populations “results in reduced and less resilient riparian and aquatic habitats...”. This needs further explanation. There may be similar discussion needed about too many herbivores.

p. 13: The discussion of travel plan decisions that relate to wildlife are useful and necessary. However, they are not a substitute for the plan components necessary for diversity, and may need to be changed as a result of forest plan revision. This relationship needs to be acknowledged.

p. 15: The assessment contains some useful information about connectivity. However, it seems to

lead to an inappropriate conclusion. While large blocks of wildlife habitat may provide the greatest amount of connectivity, this may not provide the greatest benefit to at-risk species. The greatest benefits are likely to occur through appropriate management of small areas where connectivity is most restricted, especially by unnatural developments. The assessment generally appears to inappropriately discount the value of such areas or the ability to influence management there. It nevertheless includes as a key finding that there must be “coordination across boundaries and jurisdictions” (p. 22). This apparent disconnect should be reduced, as the plan can include components that address this important aspect of connectivity.

p. 22: The assessment states: “However, the prescriptive nature of existing plans (mandates to use specific methods, processes and/or techniques) can become problematic as information, science, and technology changes over time.” This “key finding” was not based on discussion of any specific problems with the existing plan. The assessment is intended to demonstrate whether there is a need to change the existing plan, and much more information is needed to make that case here.

p. 44: There should be some key findings that address the possibility that grizzly bears will be delisted, since that is in progress (including the possibility that they will be hunted). In fact, that whole process and how it relates to the plan should be explained in the assessment (see *Grizzly Bears* section in this letter for more discussion).

p. 56: The “key findings” for lynx do not acknowledge any management threats. That must be part of the assessment (see *Canada lynx* section in this letter for more discussion).

p. 61: For listed species, the assessment should address ecological conditions needed for recovery, so that plan components may contribute to them. It is not just about minimizing adverse effects (to black-footed ferrets in this case). That should be the implications of unregulated shooting of prairie dogs. Opportunities for reintroduction should be discussed.

p. 65: The assessment incorrectly asserts that, “individual forest plans are not amended each time a species is added or removed from the Regional sensitive species list.” In fact, the Forest Service Manual requires, “that plans should identify or be amended to identify known sensitive species and provide forest standards and guidelines that ensure conservation when an activity or project is proposed that would affect the habitat of a sensitive species.” (FSM 2622.10)

p. 75: Given the extensive discussion of the need by wolverines for connectivity, and the fact that, “wolverines from the Greater Yellowstone Ecosystem showed limited genetic connectivity to the rest of the continental United States Distinct Population Segment,” there should be a “key finding” on the importance of connectivity to other populations (see *Wolverine* section in this letter for more discussion).

p. 81: For sage grouse, there should be some discussion of the recent plan amendments to add the conservation strategy and whether or how the strategy and amendments affect the Custer Gallatin.

p. 86: The discussion of climate change does not consider whether the general upslope movement of drier habitats in a warming climate might lead to reduced forest cover and sagebrush habitat moving upward and onto additional national forest lands.

p. 92: The section on ungulates does not address seasonal connectivity needs, except that it is mentioned for bighorn sheep. It can also be problem for other species in some areas, pronghorn in particular. Do any such areas exist?

p. 114: The section on recommended conservation measures for bighorn sheep should be replicated for any species where such measures have been recommended. This is part of the best available scientific information which may be relevant to the plan area for these species, and must be included in accordance with 36 CFR 219.6(a)(3) and 219.6(b).

p. 137: Under “trends and drivers” for pronghorn, there are no drivers.

#### **AQUATIC SPECIES OF CONSERVATION CONCERN**

Plains spadefoot: The fact that it is ranked as “vulnerable” in Montana does not demonstrate that it is secure or that there is not significant concern about its persistence. If there is a potential that new information would lead to a need for SCC status, the forest plan should provide direction to obtain this information, and should include protective plan components in the interim.

Great plains toad: The fact that the species is globally secure does not outweigh the fact that it is “imperiled” in the state.

Northern leopard frog: It is not clear why that information purportedly eliminating one cause of population declines demonstrates that there is not a concern for persistence of a species classified as “critically imperiled.” Status of the species in the plan area cannot be the sole basis of refuting this broader scale status.

Iowa darter: The fact that the species is globally secure does not outweigh the fact that it is “imperiled” in the state, and the fact that it is ranked as “vulnerable” in Montana does not demonstrate that that it is secure or that there is not significant concern about its persistence. The fact that it is a likely stronghold suggests that it is important to the state status and should receive special attention. If there is a potential that new information would lead to a need for SCC status, the forest plan should provide direction to obtain this information, and should include protective plan components in the interim.

Northern redbelly dace: The fact that inventory efforts are planned suggests that the species may occur or may be becoming present. This situation warrants further discussion of why the species is currently not expected to occur based on best available scientific information.

Sauger: If the Forest has management authority of habitat (such as through a road right-of-way), that should be the basis of finding that the species does “occur” for the purpose of forest planning and SCC identification since plan components may affect it. The effects of the existing road are not relevant to this determination.

Striate disc: The fact that the species is “globally stable” does not outweigh the fact that it is “critically imperiled” and “imperiled” in the two states.

Berry’s mountainsnail: The fact that the species is “widespread globally” does not outweigh the fact that it is “critically imperiled” and “imperiled” in the two states.

#### **ADDITIONAL COMMENTS ON DRAFT AQUATIC AND RIPARIAN ECOSYSTEMS REPORT**

- There are a number of ecosystem classification systems and scales described, and there is information about the NRV. However, it is not clear how the two are related (which NRV apply to which ecosystems). Also the existing conditions (p. 11) do not exactly correspond to aquatic ecosystems or address the same conditions as the NRV discussion.
- While there seems to be an abundance of information, we are concerned that the assessment is possibly operating at too large of a scale. For example, information appears to exist about specific stream miles or populations, but is only summarized at the forest level (Table 5). The assessment needs to provide the basis for differing management of different circumstances.
- The snapping turtle was mentioned as a “species of greatest conservation need,” but was not included in the SCC evaluation (p. 19). Nor was “a stonefly species potentially found on the national forest” that “is currently under review by the U.S. Fish and Wildlife Service” (p. 21).

#### **DRAFT TIMBER REPORT**

At the conclusion of the Timber Report the Forest states that “(t)here is a need to reanalyze the lands designated as tentatively suitable for timber production” (p. 19). Now is the time to do that analysis and the assessment should provide the information to support it. The use of the term “tentatively suitable” acres causes a great deal of confusion in the report; it is not clear how it is being defined, nor is there a clear discussion over the relevance of that designation and those acres to the forest plan revision process. P. 12 of the report apparently defines “tentatively suitable” lands as those that “where management of forest stands for timber products is legally and technically feasible, will not cause irreversible damage to other resources, and is compatible with the area’s desired conditions and objectives.” It is our judgment that after applying these criteria the lands are suitable. Is it possible that the Forest is distinguishing between plan-level determinations and future project-level determinations? The matter is confused further by a footnote in Table 1 which states that “(s)uitable acres differ from forest plan estimates of suitable acres in 1987.” When was this suitability analysis done?

The term is not used in the 2012 Planning Rule. The Handbook requires the assessment to provide "information relevant to identifying land that may be suitable for timber production." The report should explain how the Forest Service will use the provided information, including the "tentatively suitable" acreage, to carry out that responsibility.

The assessment needs to provide the information relevant to making suitability determinations. For example, information regarding current forest conditions that will be used to project future harvest volumes (like age distributions) should be discussed in the context of timber suitability (we note that some of that information was provided in the Draft Forested Terrestrial Vegetation Report).

Similarly, the assessment should provide the specific information on how "other conditions" such as wildlife habitat may affect timber harvest. The statement that "(i)n some cases, harvest may be limited on NFS lands to provide for multiple resource requirements such as watershed health or wildlife habitat" (p. 18), should be accompanied by the details of these cases. In that same section the report states that "(o)ther regulatory agencies, such as the U.S. Fish and Wildlife Service, may also provide direction that limits management activities to protect threatened and endangered species, meeting their responsibility under the Endangered Species Act." The facts associated with this direction should be provided in the assessment. The phrasing implies that the ESA may be driving this dynamic within the forest planning process; rather, NFMA and the planning rule require that the activities necessary to contribute to the recovery of listed species be part of the planning process (not outside of it). This section also refers to "additional resource regulations and policies"; those should be discussed within the assessment.

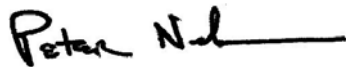
The report states that "(f)orests within the geographic landscapes are showing decreased resiliency to natural disturbance events, such as insects and disease and wildfires" (p. 19). As discussed above, the analysis behind this conclusion is still pending, and it would be useful if the Timber report cited to the relevant sections of the vegetation report to support this statement. The report also makes an interesting statement that "(c)urrent forest plan direction addressed forest health objectives but the assessment indicates that forest resiliency to disturbance agents such as wildfire, insects, and disease has decreased and therefore the forest health objectives have not been effective." We do not recall the vegetation report making this same general conclusion regarding the ineffectiveness of the current plan to provide for resiliency, which has strong implications for the need to change the current plan, notwithstanding the fact that a final assessment of integrity is still pending.

The report also states that "intense interest in timber management...will impact level of harvest and supply of commercial forest products" (p. 18). The information that will allow for the determination of this impact should be included in the assessment. In that same discussion, the report states that "(r)educed opportunities to use timber harvest will limit the ability to change vegetation structure, species compositions, landscape patterns, and other conditions for the purpose of improving forest resilience, creating desired conditions, reducing forest fuels, or other purposes." We are not exactly clear on the purpose of this statement. The assessment should provide the information to support the Forest's projection (decision?) that opportunities will be reduced.

The statement that “National Forest Management Act states that reforestation is required within five years following natural disturbance events as well as final regeneration harvest” (p. 14) is not consistent with our understanding of the law which refers to “assurances” of reforestation within five years of “harvest” (Section 6(g)(3)(E)).

Please let us know if you have any comments or questions regarding the content of this letter. We look forward to working with you on the next phase of the forest plan revision.

Sincerely,

A handwritten signature in black ink that reads "Pete Nelson". The signature is written in a cursive, slightly stylized font.

Pete Nelson, Senior Policy Advisor  
Defenders of Wildlife, Bozeman MT  
[pnelson@defenders.org](mailto:pnelson@defenders.org)  
406-556-2816

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