Appendix G. Supplemental Response to Comments

Table of Contents

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Introduction

This appendix supplement provides more detailed responses to some of the complex comment categories found in appendix G. Those comment categories (CRs) marked with an asterisk in Table 1 of appendix G can be found in this supplement. The summary responses to the concern statement are found in appendix G; only the supplemental information is provided in this appendix.

The supplement is arranged by resource, in the same order as they are presented in the FEIS and in appendix G. Supplemental responses are generally organized by individual comment number, which includes the letter number followed by the comment number. Please refer to Table 1 in appendix G for comment numbers assigned to the submitter, as well as comment category numbers.

General

CR51 Monitoring - General

Supplemental Concern Statement: See the summary concern statement in appendix G.

Supplemental Response: Forest inventory and analysis (FIA) data is the most accurate, reliable, and relevant data source for monitoring terrestrial vegetation conditions because it follows nationwide, statistically based protocols. Similarly, PACFISH/INFISH biological opinion (PIBO) data is the most accurate, reliable, and relevant data for monitoring aquatic ecosystem conditions because it uses a probabilistic sampling design. The program was initiated to evaluate the effect of land management activities on aquatic and riparian communities at multiple scales and to determine whether management practices are effective in maintaining or improving the structure and function of riparian and aquatic conditions.

As stated in Appendix B of the 2020 Forest Plan: Items included in this monitoring plan also use data collection protocols for terrestrial and aquatic ecosystems at appropriate temporal and spatial scales. For example, monitoring item MON-VEGT-02 would be used to assess the change in key ecosystem characteristics of forest and non-forest vegetation at the scale of the biophysical setting as well as forestwide. Using adaptive management principals, recently re-measured FIA data informed the development of management direction in the revised plan and would assist the Forest in determining if adjustments to management direction are needed in the future. For example, FIA data was used to assess the trend in the amount of old-growth forest by determining the amount burned by wildfire since the last FIA measurements were completed. In light of this monitoring information, the revised plan has added plan components that place more emphasis on management for key ecosystem characteristics of old growth forest, such as live trees and snags in the 20-inch-diameter at breast height class. Monitoring item MON-WL-03 would be used to assess the status of habitat for wildlife species associated with snags and live trees in the 20-inch-or-greater diameter at breast height class.

CR67 Attachments – No Further Response Required

Supplemental Concern Statement: Commenters provided attachments in support of their statements.

Supplemental Responses:

112-3: The 1986 Helena Forest Plan was utilized in the analysis.

114-3: Thank you for your map and comments.

128-1: The comments are considered in CARA.

128-2, 3: Please see references spreadsheet.

263-18: Please see references spreadsheet.

285-101: The comments are considered in CARA.

341-2: Please see references spreadsheet.

362-6-11: Thank you for the articles; the information was considered in the formulation of the preferred alternative.

495-3: Thank you for the photo.

529-3: Thank you for attaching; all comments received in scoping were reviewed.

557-2: Please see references spreadsheet.

561-10: Thank you for the map that shows the areas recommended in the letter.

596-3: Thank you for the photo.

622-4: Thank you for the photo.

664-87, 88, 89, 92, 93, 94: Thank you for the attachments. We have both of them and have considered them in our work on the 2020 Forest Plan and FEIS.

719-6, 8: Please see separate references spreadsheet for responses to individual items from these attachments.

750-5: Thank you for the photos.

790-7 and 8: MT High Divide Trails input on the HLC NF forest plan revision, including RWA, CDNST and other recommendations. Many of these recommendations were included in our preferred alternative.

791-24: Letter from past forest supervisor Tom Clifford, withdrawing Elkhorns from old and gas development. Forest plan revision is not an oil and gas leasing decision document. The Elkhorns GA includes a standard that requires no surface occupancy for any new leases (EH-EMIN-STD).

795-8: Thank you for the map.

913-2: Thank you for the photo.

949-2: Thank you for the photos.

954-19: List of issues from Blackfoot River Prospecting Club; not directly applicable to forest plan revision.

991-2: The Mountain Bicycle Guild letter was submitted as comment #993 in CARA.

1016-40, 41: Thank you for the maps.

1030-2, 3: Thank you for the photo and letter.

1035-35, 36: Reference to attachments, A is attached to letter; 1 may be missing.

1054-59: Refers to attached maps.

1081-1, 2: Attachments not specific to the HLC FPR.

989-2, 1065-1, 1089-5: Thank you for the photos.

1091-1: Article attached; nothing in comment about how to apply the information.

115-4: Montana Bicycle Guild letter was submitted as CARA comment #993.

1156-1: Nothing attached in CARA.

1160-1: Not an attachment.

1186-14: Attachment was a duplicate of that submitted by Capital Trail Vehicle Association.

Geographic Areas

CR134 Rocky Mountain Range GA

Supplemental Concern Statements:

A. 410-14: Commenter asked for Rocky Mountain Range GA specific plan components for wildlife.

B. 1024-51: Rocky Mountain GA Ecological Characteristics page 166: State there are numerous rather than several streams that support westslope cutthroat trout. Keep the wording for the meta-population in Badger. Include under Plan Components, RM-DC-FAH 01 specifically mentioning the need to maintain viability of the various westslope cutthroat trout populations. In support of the DC. A guideline RM-GDL-FAH-01 should be added which provides wording that westslope cutthroat trout viability in various streams will be maintained in cooperation with MFWP, other agencies and private organizations.

C. 1041-106: Grammar correction

D. 1041-107: b. 4th paragraph; 11th sentence; p. 165: Rocky Mountain juniper is not in the same class of "rare" as ponderosa pine. It is more prevalent throughout the GA than ponderosa pine.

E. 1041-108: Corrections noted.

F. 1041-109: Plan Components - Rocky Mountain Front Conservation Management Area (CMA); p. 172 a. Desired Conditions (RM-CMA-DC-02); p. 172: Providing "wildlife habitat" should be listed as a management priority. b. Suitability (RM-CMA-SUIT-02); p. 173: Please consider adding a second sentence: "Active grazing management strategies will be utilized whenever possible to provide for necessary vegetation conditions (e.g., forage, cover) for both livestock and wildlife."

Supplemental Responses:

A. 410-14: In addition to these plan components, please refer to the Forestwide plan components for wildlife. The GA sections do not repeat Forestwide direction, and only plan components that don't apply Forestwide are listed here.

B. 1024-51: The intent of the forest wide plan component FW-FAH-GO-02 - "Work with Montana Fish, Wildlife, and Parks to contribute to the expansion of core populations of westslope cutthroat trout as outlined in the Westslope Cutthroat Trout Conservation Strategy (or the latest guiding document)." is to achieve the same result as requested by the commenter, but in all GAs on the HLC.

C. 1041-106: The sentence has been corrected.

D. 1041-107: The sentence has been revised.

E. 1041-108: Applicable corrections noted.

F. 1041-109: The suggestions were considered; however, changes to plan components were not incorporated. The plan components are consistent with the law establishing the Rocky Mountain Conservation Management Area; and, specific to RM-CMA-SUIT-02, forestwide plan components would apply to ensure that grazing management strategies to provide for necessary vegetation conditions.

Aquatic Ecosystems and Soils

CR91 Fish/Aquatic Habitat

Supplemental Concern Statements:

A. 141-1: A strong and multi-pronged effort to reverse the decline in our cold water fisheries resources: Among the measures needed are increased funding for fisheries management, the removal of barriers to fish migration, the mitigation of mine pollution, and the restoration or reintroduction of native westslope cutthroat and bull trout.

B. 141-05: In addition to providing access to quality hunting and fishing opportunities, this work is a critical means of addressing sedimentation issues and protecting riparian habitat.

C. 145-3: Increase funding for fisheries management, the removal of barriers to fish migration, the mitigation of mine pollution, and the restoration or reintroduction of native westslope cutthroat and bull trout.

D. 476-18: Chapter 3, p. 37, 38 - I applaud the selection of westslope cutthroat trout as a focal species for monitoring habitat integrity of cold-water native fisheries. However, this species has been extirpated from the majority of streams on the HLC NF. How will the integrity of cold-water fish habitat be assessed in most HLC NF streams which no longer support westslope cutthroat? Montana FWP surveys indicate that most westslope cutthroat trout in the Missouri Region of the HLC NF no longer express a migratory life history.

E. 476-29: Because all action alternatives incorporate the same plan components (standards and guideline) specifically designed to protect aquatic resources, the DEIS suggests that the effects on fisheries and aquatic organisms will be similar. However, that outcome is not certain. Although existing plans had standards and guidelines to protect riparian resources, they were often circumvented by conflicting objectives, congressional directives and program funding shortfalls. Therefore, alternatives with more development activities and greater use of motorized routes should be expected to carry greater risk of affecting aquatic resources.

F. 561-8: TRCP believes that the HLC plan should include strong conservation measures for native fish. HLC lands provide critical habitat for bull trout and westslope cutthroat populations. Stream protections on the North Fork of the Blackfoot are essential to sustain populations of these native trout species.

G. 561-9: In regard to native trout recovery efforts, TRCP supports the continued implementation of the North Fork of the Blackfoot Fish Project. This project which is intended to occur upstream of the North Fork Falls represents a potential conservation/recovery area for imperiled native trout, including both westslope cutthroat trout and bull trout. The project has been in the evaluation stage for several years and represents collaborative efforts from state and federal agencies as well as private conservation partners. We encourage additional efforts to reintroduce populations of native species in other appropriate streams such as portions of the Judith River and Tenderfoot Creek.

H. 579-5: There is a distinct lack of discussion and management approach in the DEIS for the westslope cutthroat trout. The 2012 planning rule includes strong requirements for maintaining and restoring watersheds and aquatic ecosystems, among other items, in the planning area. While the DEIS and Draft Plan included priority watersheds, the discussion on how native trout species such as westslope cutthroat trout will be protected is lacking. We request a more thorough discussion in the Final EIS that provide mitigation requirements and monitoring approaches for making sure westslope cutthroat trout receive the necessary focus for maintaining their long-term status in the HLC. This is particularly important in light of increased fires, warmer water temperatures brought on by climate change factors, and potential impacts from mining activities. Appendix C of the DEIS discusses bull trout and its management approaches including the HLC's participation in the numerous conservation agreements and recovery plans. The discussion of the Conservation Watershed Network includes the identification of the importance of conservation efforts in protecting bull trout and westslope cutthroat trout. However, that one sentence is all the

coverage westslope cutthroat trout receives. We believe the Final EIS needs to elaborate further on the impacts that westslope cutthroat trout are currently challenged with, the protection efforts that will be needed to maintain connectivity, resiliency and habitat integrity, and the actions the HLC will take to address all these factors.

I. 1024-38: Big Belts GA Ecological Characteristics page 113. Replace the sentence stating that there are westslope cutthroat trout in Ray and Whites Gulch with: There are a number of westslope cutthroat trout streams containing conservation populations of westslope cutthroat trout that play a role in the viability of westslope cutthroat trout in the Upper Missouri and Smith River 4th code hydrologic units (HUC). Some examples include Ray, Magpie Avalanche, and Greyson creeks as well as Whites Gulch in the Upper Missouri 4th code HU and Camas Creek in the Smith 4th code HUC.

J. 1024-45: Page 140 Ecological Characteristics. The current statement on westslope cutthroat trout should be replaced by: With the wildlife emphasis designation that the Elkhorn Mountains has under the 1986 Forest Plan extensive efforts to expand the distribution of westslope cutthroat trout and limit the effects of brook trout on westslope cutthroat trout in the GA occurred. A number of these efforts have been successful and have helped increase the potential for continued viability of westslope cutthroat trout populations in the upper Missouri 4th code HUC.

K. 1041-114: In addition to Rays Creek and Whites Gulch supporting westslope cutthroat trout populations, please add that portions of Cottonwood, Elkhorn, Tyrel Creeks on MFWP owned and managed Beartooth Wildlife Management Area and adjoining private lands also support westslope cutthroat trout populations.

L. 1044-10: Important cold-water fisheries resource and populations continue to decline in many areas. TRCP strongly recommends and supports efforts to increase funding for actions that address this continued decline.

M. 1044-15: In regard to native trout recovery efforts, TRCP supports the continued implementation of the North Fork of the Blackfoot Fish Project. This project which is intended to occur upstream of the North Fork Falls represents a potential conservation/recovery area for imperiled native trout, including both westslope cutthroat trout and bull trout. The project has been in the evaluation stage for several years and represents collaborative efforts from state and federal agencies as well as private conservation partners. We encourage additional efforts to reintroduce populations of native species in other appropriate streams such as portions of the Judith River and Tenderfoot Creek.

N. 1081-142: The FS doesn't seem to understand these requirements of forest planning. The DEIS states, "The comparison between reference and managed reaches are not meant to be used as goals to be attained in managed reaches, but rather an indication of management-induced disturbance" (p. 48). That may be true for PIBO as a monitoring tool, but it is not correct for forest planning since the reference conditions represent ecological integrity, and that is the substantive requirement of the Planning Rule. The very next sentence admits that, "managed areas on both sides would still need to be improved to meet desired conditions" (referring back to the reference conditions, which is why they must be in the plan). If there are some watersheds where this is not expected to happen, now is the time to inform the public of those effects.

O. 1081-143: We note that desired conditions appear to be known now because "The current trends in stream conditions and aquatic habitat have been documented to be stable or no(t) meeting desired conditions" (p. 46). If they are known, they must be included in the plan to inform the public. Similarly, where "Water quality restoration goals for sediment were established" (p. 46), these should be forest plan components.

P. 1081-147: "The DEIS implies by the phrase "such as" that species other than westslope cutthroat trout were the basis for conservation watershed designation (p. 72); this needs clarification." Clarified in the DEIS.

Q. 1090-74: As discussed earlier, the Plan should include interim Standards for riparian and aquatic habitat until AMP revisions are completed that contain allowable use limits including measureable standards for band trampling and utilization.

R. 1159-137: Native fish, aquatic and riparian habitats. Before we get into specifics about these topics, we note there are good reasons for having strong reservations about FS priorities as they are described in the DEIS: Watershed-scale improvements may occur slowly given current and anticipated funding levels. With the direction and emphasis in the Forest Plan, watershed restoration may tend to be prioritized and directed by more commodity-based resource decisions, such as restoration associated with timber harvest activities and integrated vegetation restoration projects. In many ways, the Draft Forest Plan Components for these issues is representative of the FS' avoidance of adopting strong management direction to protect and restore environmental conditions on the HLC NF. There is inadequate support for any conclusion that native fish populations are currently viable for the long term.

S. 1159-144: Add write up for Multi Scale analysis.

T. 1159-40: The DRAFT FOREST PLAN must be more explicit on which landtypes or areas are "with high mass wasting potential." FW-RT-GDL-09: "Streams should have crossing structures and not be routed down ditches." Since that is illegal anyway, why not be explicit about what is meant by "maintain natural hydrologic flow paths to the extent practical" beyond such an obvious common-sense case. FW-RT-GDL-11: "Prevent diversion of stream flow out of the channels in the event the crossing is plugged or has a flow greater than the crossing was designed." What is your vision of where the water would flow if the culvert/bridge is plugged or overtopped?

Supplemental Responses:

A. 141-1: We agree that additional funding for aquatic work would be beneficial. FW-FAH-GDL-05 and FW-RT-GDL-10 address man-made barriers and instructs the Forest to provide and maintain passage for all life stages unless a barrier prevent the spread of nonnative species. 2020 Forest Plan objective FW-EMIN-OBJ-01 identifies reclamation goals for abandoned mines over the life of the plan. Furthermore, desired condition FW-WTR-DC-06 and -07 address water within Forest Lands meeting water quality standards, fully supporting beneficial uses, and addressing impaired water resources. Westslope cutthroat trout are addressed in FW-FAH-GO-03 as well as in the CWN plan components. Bull trout are addressed in FW-FAH-GO-01 and DI-FAH-GO-01, UB-FAH-GO-01, DI-FAH-DC-01 and -02, UB-FAH-DC-01 and -02.

B. 141-05: The FS agrees road maintenance is important to reduce sedimentation.

C. 145-3: The FS agrees that cold water fisheries habitat management should be adequately funded, specific funding for managing and enhancing fisheries habitat, barrier, and mitigation of pollution and water quality as well as reintroduction of native salmonids is beyond the scope of forest plan revision. FW-FAH-GDL-05 and FW-RT-GDL-10 address man-made barriers and instructs the Forest to provide and maintain passage for all life stages unless a barrier prevent the spread of nonnative species. 2020 Forest Plan Objective FW-EMIN-OBJ-01 identifies reclamation goals for abandoned mines over the life of the plan. Westslope cutthroat trout are addressed in FW-FAH-GO-02.

D. 476-18: The integrity of fish habitat on the HLC NF will be evaluated using the PIBO effectiveness monitoring program data.

E. 476-29: While any development carries risk to aquatic resources the Standards and Guidelines as well as the National BMP and State of Montana SMZ rules were developed to mitigate potential impacts to aquatic ecosystems. See FW-RMZ-STD-01 thru 06, and also FW-RMZ-GDL 01 thru 12.

F. 561-8: The FS agrees that the HLC NF provides important habitat for native trout species. The 2020 Forest Plan includes standards and guidelines to protect aquatic species. In addition, the conservation watershed network provides additional protections for important watersheds that include westslope cutthroat and bull trout populations. Please see FW-RMZ-GDL 12, FW-FAH-DCs, and FW-CWN-GDL 03.

G. 561-9: FW-FAH-GO 01 and 02 promote the expansion of core populations of bull trout and cutthroat trout.

H. 579-5: The Draft and Final FEIS discuss the threats to the viability of westslope cutthroat trout populations throughout the planning area including the risk of hybridization or extirpation through predation or replacement by nonnative species from a broad perspective that is appropriate for a planning document at this level. Restoration efforts and strategies are available in subbasin plans and annual westslope cutthroat trout challenge cost share reports for individual populations are available in much greater detail than would be possible in the FEIS. The FEIS discusses the effects of the 2020 Forest Plan components developed with the goal to protect the strict habitat requirements of westslope cutthroat trout (*Oncorhynchus clarki lewisi*) and bull trout (*Salvelinus confluentus*) that require colder and cleaner water. These 2020 Forest Plan components developed for aquatic habitat resiliency and integrity and their dependent species will provide stream habitat conditions suitable for not only bull trout and westslope cutthroat, but also for numerous other aquatic organisms as well and maintain connectivity for meta-populations and migratory life history forms.

I. 1024-38: The text was modified.

J. 1024-45: The text was modified.

K. 1041-114: The suggested text was added to the FEIS. The text was not added to the Plan since those population are not on NFS lands that the plan covers.

L. 1044-10: The FS agrees that cold water fisheries habitat management should be adequately funded. Specific funding for managing and enhancing fisheries habitat, barrier, and mitigation of pollution and water quality as well as reintroduction of native salmonids is beyond the scope of forest plan revision.

M. 1044-15: FW-FAH-GO 01 and 02 specifically sets out the goals of the HLC plan to protect and expand the range of bull trout and westslope cutthroat trout.

N. 1081-142: The FS would disagree the reference conditions and ecological integrity are the same thing. Ecological Integrity refers to the ability of an ecosystem to support and maintain ecological processes and a diverse community of organisms. While reference condition is a range of conditions that is represented in minimally managed watersheds. It is the goal of the standards and guidelines in the Forest Plan to move aquatic systems towards desired conditions which will result in ecological integrity.

O. 1081-143: The results of PIBO monitoring indicate that stream conditions in some but not all sampled streams are not meeting desired conditions. FW-WTR-DC-07 and -08 are plan components that address sediment levels to comply with the state of Montana's water quality standards or are permanently above natural or background levels and that the sediment regime is within the NRV, which would not include anthropogenic sediment.

P. 1081-147: The language in the FEIS has been modified to "Additional watersheds have been included in the proposed plan as part of the action alternative where native salmonids are present." Both westslope cutthroat and bull trout were used as the basis for designation of conservation watershed network subwatersheds. Some subwatersheds considered priorities for increased connectivity or restoration of meta-populations were included. It does make them a priority for restoration, which INFISH did." Please see the CWN section of the 2020 Forest Plan.

Q. 1090-74: When allotment management plans are revised then the new standards for bank trampling and utilization with be implemented.

R. 1159-137: You are correct that restoration opportunities are often most often associated with vegetation treatments. If is our opinion that any improvement to the forest infrastructure that reduces sedimentation of streams is a benefit to aquatic resources. Viability of specific populations is highly variable.

S. 1159-144: Please see 2020 Forest Plan appendix E.

T. 1159-186, 287, 288, 289, 298, and 299: The FS agrees roadless areas do provide the best habitat for native fisheries and provide refugia that minimize sediment, maintain temperatures, and habitats in the face of climate change. The 2020 Forest Plan will not include travel planning decisions on the current infrastructure. It does include plan directions on management of current travel routes. FW-CWN-GDL-01 provides direction to limit stream crossings and increase road lengths in RMZs. FW-CWN-GDL-02 give CWN watersheds high priority for road decommissioning. Under the 2012 Planning Rule, the forest is required to meet all previous legal requirements. The 2020 Forest Plan contains standards, guidelines and objectives to meet obligations under the Clean Water Act, Endangered Species Act (ESA), National Forest Management Act, and Federal Land Policy and Management Act.

U. 1159-40: Infrastructure is designed to handle up to a 100-year event. In events larger than that you would likely sustain damage to the infrastructure.

CR96 RMZs

Supplemental Concern Statements:

A) 1024-62 and 65; 1081-151: Concerns with Riparian Management Zone Widths.

B) 1024-3 and 56; 476-20; 1084-4; 1081-15, 152; 1159-154: Concerns about management within RMZ.

C) 476-22 and 27; 406-4: Concern with RMZs and EIS analysis.

Supplemental Responses:

A. 1024-62: Based on BASI, RMZs west of the divide are adequate to protect aquatic resources. Also, these RMZ plan components are also required on the east side of the divide as well.

   a. 1024-65: Typographical error corrected.

   b. 1081-151: The EIS shows that under Alt A there would be a total of 51,110 acres managed as Riparian (INFISH west side and SMZ east side) areas as compared to 101,250 acres proposed riparian management directions under the 2020 forest plan. The 300-foot RCHA requirement would be the same in the proposed action as INFISH on the west side and the inclusion/adoption of RMZ standards to the east side.

B. 1024-56: Edited DEIS to include deferred grazing impacts comment.

a. 476-20: The FS agrees and recognizes the challenges of livestock management within RMZs. The goal to include livestock stocking rates are beyond the purview of this forest plan.

b. 1024-3: The FS acknowledges there could be additional risk in managing the outer RMZ when vegetation and aquatic desired conditions are on an equal basis. The implementation of the 2020 Forest Plan components and project design features BMPs would minimize risk to RMZs.

c. 1084-4: Added suggested GDL and edited DC to include connectivity.

d. 1081-152: As discussed in the FEIS, Hiers et al. (2016) present the argument that more flexible and decentralized approaches may result in more effective management in a changing environment.

e. 1081-152: Desired conditions change across landscape and GAs. The ability to move towards desired conditions depends upon the conditions and existing disturbance within the RMZ. This limits the ability to have specific NRV or desired conditions across the wide range of forest ecosystems covered by the forest plan.

f. 1159-154: The 2020 Forest Plan would restrict (FW-RMZ-STD-03) vegetation treatments within the RMZ only to restore or enhance aquatic and riparian-associated resources. Also, FW-RMZ-STD-04 restricts vegetation management in the outer RMZ as long as the treatment does not prevent attainment of desired conditions.

C. 476-22: The HLC NF acknowledges that historic mining as well as grazing have had a major impact to stream habitats and water quality across the planning area. With the adoption of the 2020 Forest Plan desired conditions, the HLC NF expects improvements water quality conditions across the forest. Ongoing mine clean up and the adoption of new grazing standards will also lead to improved conditions.

a. 476-27: The HLC NF understands and acknowledges the difficulty of management of projects with the current budget constraints of the FS.

b. 406-4: Our assumption is that the reference is to Table 2.21 (not 2.20) in the assessment. The table and figure are found in the lifeform and cover types section of the terrestrial ecosystems report. All riparian areas and wetlands will be protected through the RMZ standards and guidelines, not just the ones currently mapped as existing. It is not the purpose of this plan to limit the protection to only known, or mapped, occurrences of riparian areas and wetlands.

CR97 Watershed

Supplemental Concern Statements:

A. 488-2, 489-18, and 777-19: Watershed resilience in the face of climate change

B. 922-9: Comments directed to specific watersheds

C. 476-1, 17, 20; 1041-11; 1081-163, 168, 173, 17; and 1159-1404: DEIS Watershed Analysis.

D. 1041-100, 1159-144, and 1159-290: Forest plan and FEIS.

Supplemental Responses:

A) 488-2, 489-18, 777-19: The FS agrees these areas are important areas in the face of climate change for snowpack and runoff for downstream users and aquatics. The 2020 Forest Plan includes plan components that provide directions to improve and protect riparian areas and watersheds in the light of the ever-changing climate. These components also support beaver and their ecologic important habitat across the forest in the aid to mitigate climate change. The 2020

Forest Plan provides desired conditions (FW-WTR-DC-01, 13) as well as other components that provides direction for development of future projects in the face of climate change.

B) 922-9: Tenderfoot, Deep Creeks and the Smith River all have excellent water quality. The 2020 Forest Plan include desired conditions and other plan components so that water quality meets or exceeds water quality standards and fully supports beneficial uses (FS-WTR-DC-05).

C) 476-1, 17, 20: The FS believes the plan components in the 2020 Forest Plan will provide a means to help manage areas within grazing allotments to move riparian areas towards desired conditions. Comment added to EIS. The RWAs proposed in the 2020 Forest Plan are for the most part roadless and the impacts from the current transportation system within these areas are very low. There would be little difference in impacts between alternatives based of the current roadless areas would remain roadless under the all alternatives with only very insignificant changes that would not have affect to water quality. Lastly, the HLC NF agrees livestock grazing is a direct effect to RMZs and the 2020 Forest Plan will help us move watersheds to desired conditions.

    a. 1041-11: There are 27 criteria in the Watershed Condition Framework that are used to determine the rating of each 6th code HUC and each of these criteria are weighted based on ecological importance to determine the condition of each watersheds. These scores are based on forest monitoring and professional judgement of forest specialist. Those criteria and scores can be found here: https://www.fs.fed.us/naturalresources/watershed/condition_framework.shtml

    b. 1081-163: The 2020 Forest Plan is a programmatic analysis. The FEIS includes analysis of the plan components and their effects to the watershed resources across the plan area that would be expected under any of the alternatives. The effects to individual watershed would be similar as all projects would be managed under these plan components.

    c. 1081-168: The report was corrected to the correct tables and appendix.

    d. 1081-173: The EIS does not determine the amount, timing or specifications for possible future road construction in the project area, this is done at the project level. Though treatments within Conservation watersheds are possible under the 2020 Forest Plan, they are required to meet higher standards and guidelines for projects within these important watersheds. FW-CWN-GDL-02 states that CWN have the highest priority for road decommissioning. FW-CWN-GDL-04 CWN have the highest priority for restoration actions and 05 prioritizes CWNs for road maintenance.

    e. 1081-174: Comment added to EIS. There is no assumption that logging can fund enough restoration to offset its adverse impacts. The assumption is that logging can generate funds to help offset (or totally cover) the cost of restoration. Logging does not necessarily result adverse impacts; many times it can be beneficial to the landscape and return forests, and watersheds, to their NRV.

    f. 1159-140: Updated the FEIS.

D) 1041-100: Table 9 in Appendix E has been updated. Some watersheds were removed from the CWN on the west side of the continental divide to better prioritize the watersheds with bull trout within them.

    a. 1159-144: In Appendix E of the 2020 Forest Plan there is direction for multi-scale analysis and how it was used to develop the CWN.

b. 1159-290: The FS is required to follow all rules and laws and roadless rule restricts the addition of roads without prior Washington approval. Also, the 2020 Forest Plan does not include or authorizes the addition of roads or travel management actions in process.

CR137 303D Listed Streams/Total Maximum Daily Load Issues

Supplemental Concern Statements:

A. Priority of treatments to 303d listed streams in Appendix E.

B. EPA requested an edit to the plan to clarify that the 2016 MT 303d list has been finalized.

C. There are no objectives relating to 303d streams such as acquiring a baseline for these systems.

D. There appears to be a discrepancy in 303d listed streams on the Forest and other MT State evaluated streams that were fully supportive of all beneficial uses.

E. Why is FW-WTR-GDL-01 (Clean Water Act) a plan component; it is a law and required?

Supplemental Responses:

A. The 2012 Planning Rule requires that all watershed with 303 d listed stream within the planning area be included and designated within/as Conservation Watershed Networks. CWNs have plan components that would be required in project management actions within watersheds with 303 list streams. Completed TMDLs include a baseline data of the designated WS. The CW act stipulates the forest will work within the parameters of the TMDL to move towards attainment of beneficial uses. Additionally, our baseline for stream conditions would be based on PIBO monitoring and forest monitoring. Completed TMDLs also include heavy metals where appropriate and the Forest works closely with the EPA and State to improve the water quality in contaminated systems. Chemical pollutants include heavy metals.

B. Suggested changes were incorporated.

C. The 2012 Planning Rule requires that watershed with 303 d listed stream in the planning area be included and designated as Conservation Watershed Networks. CWN have specific plan components that would be required in project planning and management in those designated watersheds. Completed TMDLs include a baseline data of the designated WS. The Clean Water act stipulates the forest will work within the parameters of the TMDL to move towards attainment of beneficial uses. The HLC works closely with the State of Montana acquiring baseline data of streams on the forest managed lands and we plan to continue that effort. The State manages the schedule analysis for listed streams.

D. 1159-138: The assessments from the state, and our internal Watershed Condition Framework classification, are conducted using different methods and on dissimilar timelines (10 years vs 2 years). Clarity was added to the FEIS on this topic.

E. 1159-146*:* Suggested changes were incorporated in the plan.

CR152 Watershed – Municipal

Supplemental Concern Statements:

A. 116-2, 122-2, 463-4, 552-1, 552-2, 552-3, 552-4, 593-1, 724-8, 975-2, and 1016-39: Protection of the Municipal watershed in the Big Snowies

B. 346-09, 409-03, and 970-6: Include additional information on the Tenmile Municipal watershed, increase protection of Ten Mile Municipal Watershed:

C. 790-2: Administratively withdrawn and classed unavailable for federal and oil gas leasing in the Ten Mile Municipal Watershed.

D. EPA; Address organic loading from Bug Kill within Municipal watersheds.

Supplemental Responses:

A. The 2020 Forest Plan includes the addition of and the designation of Lewistown Municipal watershed; the source of water for the City of Lewistown. This recharge area to this groundwater source area is located in the Big Snowy Mountains which discharges to the surface at Big Springs Creek. This Municipal Watershed designation in the 2020 Forest Plan provides specific plan components to provide special management directions in the designated watersheds and provide the City of Lewistown representation of any future proposed management actions by the Forest within the Municipal watershed. The groundwater recharge area is approximately the north two thirds of the Big Snowy Mountains. The designation (Conservation Watershed Network CWN) will also provide addition emphases and prioritization for long-term conservation. CWN watersheds have specific desired conditions and guidelines to prioritize management actions within those designated watersheds. As designated municipal watershed in the 2020 Forest Plan, the municipality would have input in any future forest management projects within the municipal watershed. Prescribed fires are normally low intensity resulting in low burn severity to soils. Though there are few studies on fire and groundwater, the effects of fire to groundwater systems is normally very low.

B. The 2020 Forest Plan was edited to include additional information on Tenmile Municipal watershed. The Tenmile watershed is designated in the 2020 Forest Plan as a Municipal watershed and a CWN. Municipal watersheds and CWNs have specific plan components where those watersheds are prioritized for long term conservation of natural resources and desired conditions.

C. An oil and gas leasing decision will not be included as part of this Forest Plan Revision. It is a separate decision and beyond the scope of this analysis. An Oil and Gas Environmental Impact Statement and Record of Decision was released in 1998 for the Helena NF and for the Elkhorn Mountains portion of the Deerlodge National Forest. This decision is still in place but may be changed by subsequent new laws and legislation.

D. A mineral withdrawal is a comprehensive and time-consuming process and it requires a great deal of administrative review, which could take several years of analysis and public engagement before reaching a final decision. A mineral withdrawal for the Ten Mile Municipal Watershed is beyond the scope of this analysis and will not be included in this Forest Plan Revision.

E. The FS acknowledges the potential concerns and effects of increase organic loading in municipal watersheds. The Forest will continue to work with the Municipalities if concerns would arise within designated source water areas. (Mikkelson, Dickenson, Maxwell, & McCray, 2013) even concludes further research is needed for water treatment facilities to better prepare and possible modify water treatment processes.

CR170 Soil – Productivity, Quality, Function

Supplemental Concern Statements: See the summary concern statement in appendix G.

Supplemental Responses:

A. 1159-253: 15% areal extent of detrimental soil disturbance is based on soil productivity, not timber feasibility.

B. 1159-247 and 257: Please see Appendix C, Soils Section p. 20.

C. 1159-262: The FS generally does not "decommission" skid trails, landings and burn piles; however we do our best to rehabilitate, or reclaim them. The treatment methods could depend on

many factors, such as level of compaction, burn severity, etc. Slashing and seeding, along with scarification are often used.

D. 1159-263: By limiting the extent of soil disturbance, the FS is preserving those functions.

E. 1159-269: This GDL is a constraint on management that is necessary for soil protection.

F. 1159-270: Soil functions are difficult to measure directly, so they are usually assessed by measuring soil quality indicators (i.e. soil structure, rooting depth, vegetation, etc.). There are a number of different indicators, many of the components of the R1 SQS, that are used during timber monitoring, can be used to determine if the soil is function at the level expected for the site as noted in the NRCS Soil Surveys for the Forest. Also, please see the soils section of the FEIS.

G. 1159-271: Soil quality is the measure of the soil to perform necessary functions. Please refer to 1159-270 for more information.

H. 1170-6: The soil quality standards are not meant to measure soil productivity. Instead they are meant to provide a threshold of detrimental impact for management activities.

I. 1170-7: Please see the Soils section of the 2020 Forest Plan, Appendix C.

CR178 Watershed – Plan Components

Supplemental Concern Statements:

A. 285-10; 553-12 and 13; 1048-27: Forest wide Standards.

B. 285-07 and 553-9: Forest wide Desired Conditions.

C. 285-09; 553-11; 1035-26: Forest wide Objectives.

D. 285-11; 804-28; 1081-146: Forest wide Guidelines.

E. 553-10: Forest wide Goal.

Supplemental Responses:

A. 285-10, 553-12: Table 1 was returned to the 2020 Forest Plan.

   a. 553-13: Livestock grazing does include standards and guidelines to help manage grazing in riparian areas. FW-GRAZ-STD-01 and 02 includes standards to include site-specific prescriptions to meet or move toward applicable desired conditions during the development of new or revised allotment management plans and to move towards or maintain desired riparian function and habitat. Also, FW-GRAZ-GDL-01, 02, 04, 06, 07, 08, 09 have specific guidelines for the management of livestock in RMZs.

   b. 1048-27: FW-RMZ-STD—03 states "Vegetation management shall only occur in the inner RMZ in order to restore or enhance aquatic and riparian-associated resources." 05 "States Herbicides, pesticides, and other toxicants and chemicals shall only be applied within RMZs if needed to maintain, protect, or enhance aquatic and riparian resources or to restore native plant communities."

B. 285-07: See suggested change to Plan Component. 553-9: Changes were made to the plan.

C. 285-09: This would be outside the scope of the 2020 Forest Plan.

   a. 553-11: Watersheds that include streams on the 303d list are incorporated as Conservation Watershed Networks which have specific forest plan standards and are considered Forest priorities within the new plan.

   b. 1035-26: The forest has been very aggressive with our road obliteration in the past and has accomplished many miles of roads. The proposed objectives are our best estimate

based on past FS funding and possible future funding as well as past accomplishments. These are conservative estimate projected for the life of the plan, 15 years.

D. 285-11: The Forest decided to keep the section organized as they are based on the input from the specialists who will be implementing them.

   a. 804-28: FW-WTR-STD-03 currently states: To support aquatic habitat quality and resiliency, beaver complexes (including wetlands and riparian areas) should be enhanced or maintained unless their activities directly threaten roads/other human developments, Suggests to delete this part of the GDL: or create habitat conditions that threaten reproduction and survival of threatened and endangered fish species or fish species of conservation concern.

   b. 1081-146: All of the aquatic plan components are for maintaining or improving riparian zones and the associated biological functions.

E. 553-10: This request is outside the scope of the 2020 Forest Plan.

CR184 Riparian Management Zones – Plan Components

Supplemental Concern Statements:

A. 408-1; 476-23; 553-14; 1024-22 and 1024-23; 1041-9 and 16; 1081-153and 160; 1081-160; 1159-148, 155, 157, 158, 159, 160, and 170: RMZ Standards.

B. 285-12; 804-19 and 26; 1024-21: RMZ Desired Conditions.

C. 285-13; 476-2; 625-9; 1041-15; 1024-20: RMZ Objectives.

D. 136-5; 1041-14, 18 19 and 10; 285-14; 285-15, 16 and 17; 1159-161, 162, 163, 164, 165, 166, 167, and 168: RMZ Guidelines.

Supplemental Responses:

A. The following responses are made to the suggested standards.

   a. 408-1: The restriction is within the inner RMZ. Salvage harvest, the removal of dead or burnt trees, is restricted because it is not a consist activity within the inner RMZ. BASI suggests that wood recruitment is an important component part of the complex habitat within the riparian and stream channels. These trees are left to restores or enhance riparian resources i.e. large wood recruitment.

   b. 476-23: Edited in FEIS.

   c. 553-14: Updated the RMZ plan components to include highly altered RMZs. The suggested objection to completed mapping and characterization of priority RMZs would be difficult to include because the current and future budgets will likely not include additional funding to accomplish the suggested objective. Riparian widths are based on BASI to maintain riparian areas and move them towards desired conditions. FW-RMZ-GDL-12 includes all management activities.

   d. 1024-22: The regional direction of 100 feet on steep gradient (>35%) slope intermittent streams. This is supported by BASI.

   e. 1024-23: Chemical application will follow the use labels to reduce risk to aquatic uses. Also, BMPs for chemical uses would be applied as required by the National Best management practices.

   f. 1041-9: The RMZ plan components will be implemented Forestwide, including the areas east side of the continental divide.

g. 1041-16: The HLC NF agrees that non fish bearing streams have the potential for reintroduction and are a useful tool for native fish conservation purposes. Updates to fish distribution and RMZ data will occur after reintroductions occur.

h. 1081-153: The FEIS will be modified to conform to FW-RMZ-STD-04, which states: Vegetation management may occur in the outer RMZs to meet desired conditions, so long as project activities in RMZs do not prevent attainment of desired conditions for wildlife and the inner RMZ. The effects any such treatments would be determined at the project level.

i. 1081-160: Vegetation management which includes harvest (FW-RMZ-STD-03) precludes logging unless it restores aquatic or riparian resources. Non-mechanical treatments may be authorized. FW-RMZ-STD-07 only address salvage logging in the inner RMZ and does not speak to or allows other types of logging.

j. 1159-148: Numerous plan components to protect water quality and fish habitat in addition to streamside management zone law and other federal and state laws. Regarding the widths of management areas next to streams, the interim minimum distances listed for fish-bearing (300 feet) and perennial streams (150 feet) arguably remain the most controversial components of the existing strategies. Numerous studies have been completed since the strategies were first published that investigate how management affects the different ecological processes that are a function of riparian management zones.

k. 1159-155: Anderson and Poage (2014) found that the variable-width buffers can be effective for moderating the impacts of thinning on small headwater streams has been used to partially justify buffers narrower than the 1-tree and 2-tree-height guidelines in recent project-level and regional planning efforts for federal lands. Leinenbach and others (2013) also showed that 75-90% shade can be achieved with a wide range of buffer widths, ranging from approximately 9 to 43 m.

l. 1159-157: The FS agrees; changes were made.

m. 1159-158: The standard states that only vegetation treatments are permitted if they enhance aquatic and riparian resources. Therefore, Vegetation treatments would be analyzed to determine if a treatment is need. Some heavily impacted sites i.e. mine reclamation, could potentially receive restoration treatments that have included equipment within RMZs.

n. 1159-159: There would be occasion during fire suppression or riparian restoration that refueling within the riparian zones may be needed. Therefore, a spill response for potential spills is a possibility.'

o. 1159-160: Vegetation management which includes harvest (FW-RMZ-STD-03) precludes logging unless it restores aquatic or riparian resources. Non-mechanical treatments may be authorized. FW-RMZ-STD-07 only address salvage logging in the inner RMZ and does not speak to or allows other types of logging.

p. 1159-170: The forest would, as required, during the project level NEPA process to determine all existing conditions within the project area. Therefore, all sediment and erosion sources are disclosed within the watershed report.

q. 1173-2: FW-RMZ-STD-01 states that wetlands, lakes and ponds are considered Category 3 and 4 RMZs. Therefore, they would be protected by; FW-RMZ-STD-01 through 07. Also, FW-RMZ-GDL-03 further protects peatlands, fens, and other groundwater dependent ecosystems.

B. The following responses were made relative to suggested desired conditions.

   a. 285-12: Added suggestion to 2020 Forest Plan.

   b. 804-19: Added suggest change and will consider.

   c. 804-26: The HLC believes that our plan component for RMZs provides for have similar desired conditions as the one suggested and other plan components in our plan promote beaver habitat.

   d. 1024-21: Added natural disturbance régime to glossary.

C. The following responses were made relative to suggested objectives.

   a. 285-13: Suggestion added to FP.

   b. 476-2, 625-9, and 1041-15: Estimates of these objectives are based past accomplishments and projected future budgets.

   c. 1024-20: Livestock impacts are addressed in FW-CWN-GDL-03 and OBJ-2 addresses road and stream crossings

D. The following responses were made relative to suggested guidelines.

   a. 136-5, 1041-19: FW-RMZ-GDL-12 - All management activities in RMZs should protect key riparian processes, including maintenance of stream bank stability, input of organic matter, temperature regimes, and water quality.

   b. 285-14: The PC calls for a minimum of a 100 foot but allows for a larger buffer based on site specific information.

   c. 285-15: The specialist implementing the 2020 Forest plan feel that these guidelines allow for more flexibility to accomplish restoration goals.

   d. 285-16: Added suggested change to 2020 Forest Plan

   e. 285-17: Suggestion add to 2020 Forest Plan. To include all management activities.

   f. 1041-14, 1041-19: though grazing is not directly indicated in 2020 Forest Plan standard FW-GDL-RMZ-12 does state "ALL Management Activities".....forest plan

   g. 1041-18: the definition of vegetation management does not include grazing. vegetation management is a management activity that changes the composition and structure of vegetation to meet specific objectives that may be done with a variety of implementation methods (such as by hand or with machinery), including but not limited to activities such as prescribed fire, timber harvest, tree planting, non-commercial stand tending, re-arrangement and/or removal of hazardous fuels. For the purposes of this decision, the term does not include removing vegetation for permanent developments like mineral operations, ski runs, roads and the like, and does not apply to fire suppression or to wildland fire.

   h. 1041-19: Activities include anything approved that occurs on National Forest System lands.

   i. 1041-20: The RMZ Desired conditions, Standards and Guidelines are forest wide and pertain to all management activities (includes Grazing). REF: FW-RMZ-GDL-12.

   j. 1159-161: Suggested change. FW-RMZ-GDL-01: "Trees felled inside RMZs should be left onsite to achieve aquatic and riparian desired conditions. Trees that pose a safety risk should be directionally felled towards or into streams and left on site."

k. 1159-162: Suggested change: FW-RMZ-GDL-03: "Management activities that would potentially disturb or compact soil or damage vegetation should be excluded within 100 feet of peatlands, fens, and other groundwater dependent ecosystems unless site-specific information, such as topography, drainage features/patterns, and rare plant association, support a larger buffer."

l. 1159-163: The FS disagrees; this GDL would limit the building of sediment producing crossings and roads in the future and correct probable roads and crossing current existing on forest lands.

m. 1159-164: Suggested change: To minimize sediment delivery and adverse effects to stream channels, construction of machine fireline in RMZs should be avoided.

n. 1159-165: Suggested Change to PC: FW-RMZ-GDL-06 Suppression tactics during unplanned fire operations will minimize heavy equipment use and impacts to RMZs.

o. 1159-166: Suggest removing second sentence. Second sentence seems redundant for a GDL which by definition allows for these types of departure.

p. 1159-167: The impacts to RMZs by treatment prescriptions would be minimized by project design features at the project level.

q. 1159-168: Will modify the FEIS to conform to FW-RMZ-STD-01 and 03 and 04.

CR189 Aquatics/Fish Habitat – Plan Components

Supplemental Concern Statements: See the summary concern statement in appendix G.

Supplemental Responses:

A. 285-67: The FS believes that FW-FWL-DC 5 refers to FW-FAH-DC 05. This desired condition focuses on native species, of which bull trout is one.

B. 1048-39: Desired Conditions and Goals specific to bull trout are located in the Divide and Upper Blackfoot geographic areas since bull trout distribution is limited to those areas. FW-FAH-OBJ 01 is an example of a forestwide plan component that addresses implementation of bull trout habitat.

C. 1159-169: The FS agrees, sediment could persist for a period of time during and after construction activities, thus the work would be completed to minimize impacts to fisheries. However, as required, BMPs would be implemented to mitigate sediment from construction activities.

CR190 Aquatics – Bull Trout Conservation Strategy

Supplemental Concern Statements: See the summary concern statement in appendix G.

Supplemental Responses:

1081-55, 1081-165, and 1159-156: A new desired condition has been added to the Divide and Upper Blackfoot geographic areas to demonstrate the intent of contributions to recovery. The DC (DI-FAH-DC-02 and UB-FAH-DC-02) is: "The bull trout population trends towards recovery and is supported through the Bull Trout Conservation Strategy, the Bull Trout Recovery Plan, and the Columbia Headwaters Recovery Unit Implementation Plan or the latest guiding documents." Also, FW-FAH-GO-01 directs the HLC to Work with Montana Fish, Wildlife, and Parks to contribute to the expansion of core populations of bull trout as outlined in the Bull Trout Conservation Strategy (or the latest guiding document).

Following a review of Frissell et al. (2014), we were unable to locate a discussion of either the Revised Draft or the Recovery Plan for the Coterminous United States Population of Bull Trout (*Salvelinus confluentus*) in this paper.

CR191 Aquatics – INFISH

Supplemental Concern Statements:

A. 1081-131: This package of management direction was integrated and interdependent. INFISH was judicially reviewed for compliance with NFMA viability requirements in Friends of the Wild Swan v U. S. FS (966 F. Supp. 1002, 1019 D. Or. 1997), where the court approved it as an interim strategy, but implied that it was inadequate as a long-term strategy. Therefore the aquatic strategy proposed for this revised forest plan and its effects must be considered against this background (where plan revision replaces Interior Columbia Basin Ecosystem Management Project) and must represent an improvement over INFISH.

B. 1081-132: "Nevertheless, INFISH meets the NFMA's viability requirements largely because it is an interim strategy. Although INFISH's duration has always been tied to the FS completing its larger plan, I note that the FS originally expected INFISH to last 18 months and now expects that it will last three years. At some point, if the FS does not adopt the Interior Columbia Basin Ecosystem Management Project on its current schedule, INFISH will be inadequate as a long-term fulfillment of the FS's viability responsibilities to the bull trout. In addition, I suggest that the FS may want to more fully articulate its viability analyses for sensitive, threatened, and endangered species when it adopts the Interior Columbia Basin Ecosystem Management Project." The Forest acknowledges that there is a need to "update" and "improve" the INFISH aquatic strategy (p. 58). However, the "update" has ignored the BASI and modified this strategy to make it inconsistent and less effective than INFISH. It says the plan is "improved" with "additional" plan components, without acknowledging what has been removed, and what the adverse effects of that are. We do acknowledge and support the expansion of an aquatic strategy to areas not presently covered by INFISH.

C. 1081-133: The aquatic strategy proposed for the HLC NF revised forest plan has been dismembered and watered down from INFISH. The riparian goals remain as descriptive desired conditions, but the specific objectives have been removed and subsumed into the monitoring strategy. Watershed analysis is no longer part of the strategy and the emphasis on managing priority watersheds (now conservation watersheds) for aquatic resources has been weakened. Standards and guidelines have been modified and don't all retain their original force and effect. The FS has not presented any scientific basis for removing any of those elements or reducing their role. An action alternative should be included that retains and improves INFISH and extends it to the Missouri River Basin lands.

D. 1081-145: The DEIS sums up its approach to replacing RMOs as follows (p. 102): "The analysis in the DEIS of existing habitat conditions based upon PIBO monitoring form the basis of the desired conditions in the plan, as well as the effects that may occur with implementation of the plan. The revised plan includes plan components that would provide the ecological conditions necessary to maintain, improve and restore ecological conditions within the plan area that maintain viable populations." That is what should have been done. Yes, monitoring should have been used to develop specific desired conditions and objectives, but it wasn't. These could then become indicators for evaluating the effects of alternatives, but they weren't. It is not possible to assess viability outcomes with this information.

E. 1081-148: Watershed analysis The DEIS states: "Site specific, interdisciplinary analysis at multiple scales would occur before actions proceed within RMZs" (p. 93). There are no plan components that require this, and it cannot be just assumed to occur. Under INFISH, science-based watershed analysis was required prior to certain actions to provide the ecological context for those actions. That requirement would be eliminated. The DEIS acknowledges that it was "recommended for inclusion in plan revisions by the Interior Columbia Basin Ecosystem Management Project (2014) strategy" (p. 59). There is nothing in the plan components that requires any kind of watershed or multi-scale analysis. While the DEIS touts "the inclusion of a

multi-scale analysis strategy in appendix C of the draft plan," it is no longer a requirement. The DEIS must consider the effects of removing this requirement. This is especially disturbing because of the numerous references to the revised plan being improved over alternative A because "All action alternatives would emphasize a watershed approach to the management of hydrology and watershed processes…" (p. 101, also p. 74). This appears to be a misrepresentation. A watershed approach featuring watershed analysis is now optional. The term "watershed approach" is neither defined nor used in the revised plan. What does it mean, and what plan components comprise such an approach (especially if watershed analysis is not one of them)? (The term "landscape scale" is also used in the soil section, and "watershed scale consideration and protection of soil processes and functions.")

F. 1081-149: Standards and guidelines According to the DEIS, "INFISH standards and guidelines impose directions for management actions within riparian habitat conservation areas. These have been effective at improving and maintaining riparian habitats and water quality on the west side of the Continental Divide" (p. 62). Then the DEIS attempts to justify changes in these successful standards and guidelines: "The HLC NF Plan Revision is also being completed under the 2012 Planning Rule so text and style of original INFISH component standards and guidelines have been adjusted to be compliant with the current Planning rule." It is true that the new Planning Rule definitions require reclassifying some of the plan components from INFISH, but the original intent must be preserved. The stated rationale does not provide justification for changing standards to guidelines since standards are still allowed by the new Planning Rule (and may be required to provide certainty for at-risk species). Several of the INFISH standards and guidelines included a prohibition against retarding attainment of riparian management objectives. That requirement has been removed, and the result is that in the revised plan these projects would only be prohibited from foreclosing achievement of desired conditions. This would allow greater adverse effects to occur.

G. 1081-156: The DEIS assumes that "protection measures outlined in the 1995 INFISH BO continue to be implemented on the west side GAs …" in the no-action alternative (p. 73). These measures obviously need to be in the plan for its plan components to comply with ESA, so they need to be included in the action alternatives as well. That is unless they are modified by consultation on the revised plan, in which case the new protective measures would need to be plan components. However, if this DEIS is the extent of the analysis of effects allowed by the revised plan, it would not meet ESA requirements for information for consultation and may be misleading. And if new information about effects is developed for the purpose of consultation, it may require a supplemental draft EIS.

H. 1081-159: Somewhere in the discussion of alternative A vs. the action alternatives there needs to be recognition that the action alternatives have greater adverse effects than INFISH because of the modifications that have been made (as well as any improvements). Especially since "INFISH PIBO monitoring results have shown statistically significant improvements in the majority of stream habitat attributes …" under INFISH (p. 69). The DEIS has to provide useful information on which to base a decision to change INFISH and it doesn't. It also misrepresents the environmental impacts by ignoring some of them, which would be a fatal flaw under NEPA. There should be an action alternative that retains INFISH on the west side and applies it to the east side.

Supplemental Responses:

A. 1081-131: The aquatic strategy plan components in the 2020 Forest Plan are an updated synthesis of the two existing aquatic strategies: 1) Interim Strategies for Managing Anadromous Fish-Producing Watersheds in Eastern Oregon and Washington, Idaho, and portions of California (U.S. Department of Agriculture & U.S. Department of Interior, 1995) and 2) the Inland Native Fish Strategy (U.S. Department of Agriculture, 1995). PACFISH and INFISH were originally expected to only provide direction for a few years while a broader effort, the Interior Columbia Basin

Ecosystem Management Project, was completed for the Interior Columbia River Basin. Although that strategy was never completed, science from that effort has been retained in the form of guidance for plan revisions in the Interior Columbia Basin Ecosystem Management Project Framework Memorandum of Understanding (2014). While portions of the revised plan area were not originally subject to these strategies, the underlying principles in these plan components and strategy are relevant and applicable. The 2020 Forest Plan addresses new requirements in the 2012 Planning Rule, advances in BASI for such components as riparian management objectives, and standards and guidelines. The Northern Region has also provided guidance for identifying compliance with the goals of a conservation strategy as first outlined by PACFISH and INFISH. Additional guidance addressed aquatic and riparian ecosystem integrity and connectivity. Some components, such as desired conditions, have been added or altered to provide more clarity in project development under the 2020 Forest Plan.

B. 1081-132: Thank you for your comments.

C. 1081-133: Regional guidance provided oversight to ensure compliance with the aquatic strategy replacing INFISH. In all alternatives, the aquatic strategy had been extended to the Missouri River Basin.

D. 1081-145: PIBO monitoring will demonstrate whether habitat trends are degrading or improving towards desired conditions based on the physical stream habitat metrics at each site that are appropriate for the stream rather than the interim riparian management objectives that were not site specific.

E. 1081-148: NEPA analysis would occur on all proposed projects and BMPs would be implemented as required by law. Also, INFISH required a science-based watershed analysis which was performed on numerous watersheds west of the continental divide. That analysis will be incorporated into all future actions. "INFISH provided for a network of priority bull trout watersheds within the proposed action area, based on metapopulation needs of bull trout. Ongoing projects within the priority watersheds will be screened to determine their potential habitat effects and whether they will need to be modified. Watershed analysis would also be required for some management activities within the riparian habitat conservation areas in priority watersheds." INFISH watershed analysis has occurred on priority watersheds.

F. 1081-149: FW-RMZ-STD-03 States: "Vegetation management shall only occur in the inner riparian management zone in order to restore or enhance aquatic and riparian-associated resources. Non-mechanical treatments may be authorized with site-specific analysis as long as aquatic and riparian-associated resources are maintained."

G. 1081-156: The INFISH Direction was amended to the 1986 Helena Forest Plan as Amendment 14 in May 1996 and as a result continues to be part of the no-action alternative. An aquatic strategy's plan components that would replace the INFISH Direction in the 2020 Forest Plan would be required to comply with ESA and a programmatic biological assessment would address the effects of implementing the 2020 Land and Resource Management Plan aka the "2020 Forest Plan" on bull trout and designated bull trout habitat on the HLC.

H. The intent of the 2020 Forest Plan is to replace the Interim INFISH Direction with Plan Components that provide the same result and would utilize PIBO monitoring to determine if habitat conditions are trending towards desired conditions using a science-based methodology.

CR203 Monitoring- Aquatics

Supplemental Concern Statements:

A. 476-18 Chapter 3, p. 37, 38 - I applaud the selection of westslope cutthroat trout as a focal species for monitoring habitat integrity of cold-water native fisheries. However, this species has been extirpated from the majority of streams on the HLC NF. How will the integrity of cold-water fish habitat be assessed in most HLC NF streams which no longer support westslope cutthroat?

Montana FWP surveys indicate that most westslope cutthroat trout in the Missouri Region of the HLC NF no longer express a migratory life history.

B. 476-24; p. 48 - It is notable that PIBO data has confirmed the ongoing adverse impacts to HLC NF streams from livestock grazing.

C. 476-25: p. 65 - While the new fixed-width RMZs for streams east of the Continental Divide and the additional plan directions for riparian zones are commendable, it remains unclear how they will be implemented. If livestock grazing is expected to continue at current levels (which are known to be degrading fish habitats), what evidence suggests that riparian zones will somehow move toward desired conditions? There needs to be fundamental changes in grazing management for riparian areas on the HLC NF to recover.

D. 625-8: Sixty-five percent of inventoried subwatersheds are functioning at risk or are impaired. This has been the status quo for some time, so there is concern that management is not adequately addressing the situation, or worse, management is sustaining the problem or engendering decline. There should be plan direction to pick up the pace of restoration. There should be clear direction to avoid construction of road/trails in compromised watersheds. Livestock grazing should be critiqued and where damaging should be reduced or suspended. Activities that spread of noxious weeds should be avoided since allopathic weeds kill native vegetation, and thus contribute to sediment production.

E. 1024-7; Page 13 Intro to Aquatic Ecosystems. Is it the position of the Forest that the Watershed Condition Framework suffices as the necessary level of watershed analysis for the life of the plan or is there something else to replace the watershed analysis that was required before large scale active management in riparian areas under the Inland Native Fish Strategy? Will it be a comparison of desired conditions of the various resources during a project proposal?

F. 1024-8: Pg 16 DC 12. What is being considered for as reference range? Certainly, something like sediment can range to very high levels immediately following a fire/rain event. Does this mean that a managed drainage can maintain sediment levels at a very high level, and it is ok? Suggest that some sort of statement be included that the reference range for fine sediments be defined as some measure around the mean level. For instance, 1 to 2 standard deviations above or below the mean sediment level.

G. 1041-149 Monitoring Elements by Resource Area; Aquatic Ecosystems - Watershed (WTR) and Riparian Management Zones (RMZ); pp. 4 and 5: Grazing practices are not mentioned here. There should at least be a reference to GRAZ if monitoring will occur there.

H. 1048-13: As mere Guidelines, the Draft Plan directs the FS to avoid wetlands when reconstructing existing roads or constructing new roads, and to minimize impacts "where avoidance is not practical," and to minimize sediment delivery when constructing, reconstructing, or maintaining roads. See Draft Plan at 92 (FW-RT-GDL 07, 08) (emphasis added). The FS also identifies as Guidelines (instead of legally required Standards8) plan components directing roads and trails be hydrologically disconnected from delivering water, sediment, and pollutants to water bodies to maintain the hydrologic integrity of watersheds; that physical barriers such as berms be sufficient to avoid future risks to aquatic resources; and to not construct new or relocated roads or trails on lands with high mass wasting potential. Draft Plan at 92-93 (FW-RT-GDL 01, 02, 04, 05, 09, 10, 11). As Guidelines - which are not legally required - these plan components are insufficient to maintain the hydrologic integrity of watersheds or avoid future risks to aquatic resources, much less ensure compliance with the Clean Water Act. This is especially true in light of historic practices on the HLC and BASI.

I. 1081-34; The DEIS provides this explanation for how it is changing riparian management objectives: "While the Draft Plan does not contain numerical Riparian Management Objectives

like INFISH did, descriptive desired conditions contained in the Draft Plan would be used to guide project location, development, and actions." "Descriptive" desired conditions are not "improved" and are not "specific" as required by the Planning Rule. And replacing specific RMOs with descriptive desired conditions is not consistent with the intent behind interim RMOS to refine RMOS when Forest Plans were revised (not at some future time).

J. 1081-135: We agree that PIBO monitoring represents the BASI for designing the monitoring strategy. However, we disagree that there is any new science regarding the importance of having riparian management objectives as plan components.

K. 1081-136: It is also important to recognize that the 2012 Planning Rule now defines what plan components are and what plan components are necessary to meet NFMA requirements. The planning rule requires that plan components be based on the BASI. If the BASI is the results of PIBO monitoring, then those results must be incorporated into plan components when a plan is revised. This is the "refinement" of the interim RMOs envisioned for INFISH.

L. 1081-137: The Planning Rule does not permit decisions about plan components necessary for species viability to be made at the project level. That is the effect of substituting future PIBO results for actual objectives. Monitoring is not a plan component, is not binding, and cannot be viewed as directing management outcomes. Moreover, because monitoring is budget-dependent, there is no guarantee that any actual objectives would ever be in place.

M. 1081-140: The approach required by NFMA is for BASI regarding the desired conditions to be applied to plan components when a Forest Plan is revised. The EIS states that, "With over a decade of consistently collected data and improvements in data analysis, comparisons between managed and reference watersheds can now be scaled down to conditions on an individual NF" (p. 47). These reference conditions are exactly what needs to be included in the 2020 Forest Plan now.

N. 1081-144: Regarding PIBO data, the DEIS states: "All of this information will enable the Forest to adapt its management strategies and adjust decisions in the future, if needed, based upon what has been learned" (p. 58). We understand that there may a need to update these conditions based on the results of future monitoring. However, including a blank check for future changes in the 2020 Forest Plan is not the process allowed by the Planning Rule. Adaptive management is a purpose of the plan amendment process, as described in 36 CFR §219.5. Importantly, if and when specific desired conditions or objectives are determined for all future projects in a watershed, the plan would have to be amended to include that programmatic direction.

O. 1159-139: "Habitat quality monitoring methodologies, such as Proper Functioning Condition (PFC) (Dickard et al., 2015) assessments and channel stability index (Pfankuch, 1975) have been conducted across the forest." Does the HLC NF maintain a publicly accessible database documenting the results of this monitoring? Also, does the HLC NF maintain a publicly accessible database documenting the results of "PIBO monitoring" data collected on the HLC NF?

P. 1159-141: The draft forest plan and DEIS contain no quantitative measures of the physical, hydrological, or biological "factors that caused the degraded state." This enables the FS to avoid setting any meaningful standards for protecting and restoring streams and other aquatic features. Such a lack of quantitative measures also enables the FS to avoid detecting management-caused improvements or further degradation.

Q. 1159-145: The DEIS states: "Effects from restoration projects would have a long-term positive effect, but the short-term effects may be negative. Typically, short term effects occur during implementation due to increased sediment, however, long term sediment reductions are accrued."

Please cite some documentation of where the FS has gathered sediment data in streams on the HLCNF and where such sediment reductions were verified.

R. 1159-147: The DEIS discloses, "PIBO …trend data show fewer trends in the desired direction for habitat attributes for managed sites or reaches when compared to all PIBO managed reaches monitored in Region 1. The overall index score of integrator sites … is also lower for all areas on the HLC NF for managed areas when compared to Region 1 as a whole. … When we have qualitatively compared PIBO data sets to forest collected data, many areas have shown that livestock impacts to streams and riparian areas continue to occur." Whereas this suggests INFISH and 1986 Forest Plans direction have failed to restore watersheds, every alternative in the DEIS proposes to weak protections, as we now explain. "(M)anagement controls harvest extent across the watershed and below a threshold of concern." The draft forest plan contains no threshold of concern. It might seem to be a good idea to expand INFISH-like protections to watersheds east of the Continental Divide. But the FS has some explaining to do to make anyone understand how the draft forest plan direction is an improvement over INFISH anywhere. The draft forest plan embraces logging within RMZs more explicitly than INFISH. One way it does this is to concoct "outer riparian management zones" where "more active management is allowed." The DEIS and Assessment fail to identify the BASI that supports this scheme.

S. 1159-153: The draft forest plan makes no expressed commitment to reducing sediment in waters already impaired by management-induced sediment increases, to more natural and ecologically sustainable levels by including measurable, quantifiable sediment standards or guidelines. Similarly, there are no standards or guidelines that place a quantifiable, measurable limit on project-induced sediment increases during project activities. This runs counter to BASI and common sense. The draft forest plan states: In order to achieve watershed desired conditions, the riparian management zone is broken into two areas called the inner and outer zones (see Table 1). Some activities are prohibited or restricted in the inner zone, whereas more active management is allowed in the outer zone. Riparian management zones are not intended to be "no touch zones," but rather "carefully managed zones" with an increase in protections in close proximity to water resources. The FS fails to provide scientific support for these premises that claim vague "careful management" isn't highly risky. The FS should be prioritizing rehabilitating existing sediment sources in damaged riparian zones, not risking them with more industrial activities. FW-RMZ-STD-04 states, "Vegetation management may occur in the outer RMZs to meet desired conditions, so long as project activities in RMZs do not prevent attainment of desired conditions for wildlife and the inner RMZ." First, we note that this "standard" does not meet the draft forest plan definition of a standard: "a mandatory constraint on project and activity decision making." Second, it is an example of this draft forest plan watering down a supposedly nondiscretionary standard with vague, discretionary "desired conditions" language that is impossible for anyone to measure. A large body of scientific research shows that logging near streams can have long-term and devastating consequences for stream ecological integrity and water quality. Logging in RMZs can cause degradation of water quality such as stream temperature increases, changes to stream temperature patterns, increased fine sediment inputs, stream bank instability, and other problems. The draft forest plan and DEIS ignore and downplay the well-documented negative effects and ecological risks associated with logging within streamside corridors. Even non-commercial thinning in RMZs is, at best, a large scale and ecologically risky experiment in which little is known about the outcome. Risks are considerable, and the outcome can have unintended negative consequences. Rieman et al. (2001) noted: "…vulnerable aquatic species could be impacted in the short term in ways from which they could not easily recover, even if long-term benefits eventually became evident in later years." Studies have found even selective logging may be associated with increases of instream fine sediments (Kreutzweiser, Capell, & Good, 2005; Miserendino & Masi, 2010), changes in macroinvertebrate community structure or metrics (Flaspohler, Huckins, Bub, & Van Dusen, 2002; Kreutzweiser et al., 2005), alterations in nutrient

cycling and leaf litter decomposition rates (Lecerf & Richardson, 2010), and increases in stream temperatures (Guenther et al., 2012). Flaspohler et al. (2002) noted that changes to biota associated with selective logging were found decades after logging. These studies strongly suggest that alterations caused by logging within RMZs may result in significant changes in water quality parameters and stream biota in many areas; these results are likely tied to dynamics that may be common to many forested streams to Guenther et al. (2012) found increases in stream temperature in relation to selective logging. They found increases in bed temperatures and in stream daily maximum temperatures in relation to 50% removal of basal area in both upland and riparian areas. Increases in daily maximum temperatures varied within the logged area from 1.6 to 3 degrees Celsius.

T. 1173-01: The Montana Native Plant Society agrees that the Pacfish/Infish Biological Opinion (PIBO) monitoring program should be continued. We hope that monitoring protocols for wetlands will be developed and implemented because many rare plants occur in wetland habitats such as fens, marshes and springs.

Supplemental Responses:

A. 476-18: The PIBO monitoring program will provide information to evaluate habitat integrity of cold-water native fish.

B. 476-24: Thanks for your comment. The FS agrees the PIBO data does confirm effects of management. The new HLC 2020 Forest Plan includes components to move aquatic habitat towards desired conditions FW-GRAZ-STD 01 and 02, FW-GRAZ-GDL 1-7.

C. 476-25: The new RMZs will be implemented Forest wide under the new FP. The RMZ widths are the same as what was included in INFISH which have resulted in improvements in habitat conditions in the Region 1 Forests covered under INFISH. The new HLC NF 2020 Forest Plan includes a number of components to help move streams and riparian areas toward desired condition (FW-GRAZ-STD 01 and 02, FW-GRAZ-GDL 1-7).

D. 625-8: The PIBO Effectiveness monitoring program has been collecting data on the Helena NF since 2001 and the Lewis-Clark NF since 2006. The PIBO data shows a positive trend in stream and riparian habitat conditions. FP Guidelines were designed to reduce the effects of the road system on aquatic habitat and to maintain the hydrologic integrity of watersheds (FW-RT-GDL 1-12). In addition, the 2020 Forest Plan includes a number of Standards and Guidelines for grazing management to help move streams and riparian areas toward desired condition FW-GRAZ-STD 01 and 02, FW-GRAZ-GDL 1-7.

E. 1024-7: Watershed condition framework is a tool that allows the FS to have comparable information about watershed conditions across all watersheds, and as such, it is a helpful tool to effectively direct restoration funds. The analysis for watershed condition framework, which is the Watershed Condition Classification (WCC), occurs generally every 10 years. Within each NF there are up to 5 identified priority watersheds. These watersheds are given the highest priority for restoration. Every subwatershed (HUC12) within a project boundary will be analyzed at the project level. Furthermore, we believe the 2020 Forest plan RMZ plan components will be of greater benefit to all riparian dependent species than Infish or the 1986 Forest Plans.

F. 1024-8: For aquatic plan components, NRV means the expected range of variation for a condition or process as described by monitoring that condition or processes in a similar biophysical setting in relatively unmanaged landscape. The approach of defining "reference range" developed by the PIBO program takes into account many covariates that better predict expectations for things like fine sediment because they take into account stream power and geology.

G. 1041-149: The monitoring requirements for Grazing are included in the grazing section of the 2020 Forest Plan.

H. 1048-13: FW-RT-GDL are all designed to minimize the impacts of the road and trail system on wetlands and aquatic resources of the HLC NF. The 2012 planning rule gives direction on how Forest Plans are developed and implemented.

I. 1081-34: The forest wide Desired Conditions for Fisheries and Aquatic Habitat establish objectives for aquatic resources under the 2020 Forest Plan FW-FAH-DC 1-8. The interim INFISH RMO will be replaced by the 2020 Forest Plan standards and guidelines.

J. 1081-135: The 2020 Forest Plan was written following the guidance given in the 2012 planning rule. The use of one size fits all riparian management objectives has been shown to not represent the "best available science" (Kershner & Roper, 2010). See Monitoring Appendix A. The interim INFISH RMOs will be replaced by the 2020 Forest Plan.

K. 1081-136: Previous monitoring and the HLC NF monitoring plan incorporated PIBO monitoring to evaluate the attainment of desired conditions. The forest will use the PIBO habitat index approach to evaluate status and trend of site conditions as a replacement for INFISH RMOs. See Monitoring Appendix A.

L. 1081-137: The FS agrees the species viability will not be addressed at the project level those evaluations will be made at the Forest and species level. The PIBO monitoring is not designed to evaluate species viability but is designed to evaluate status and trends in aquatic conditions at large scales. The FS agrees that monitoring is budget dependent as written in the 2020 Forest Plan.

M. 1081-140: Reference condition depends on many factors. The PIBO index model will be used to describe stream habitat conditions relative to reference conditions.

N. 1081-144: The FS agrees the PIBO data should be used to evaluate and adapt management strategies. If adaptive management is necessary the 2020 Forest Plan will be modified by issuing an amendment. Desired conditions and objectives are not determined for future projects, they are determined for a specific resource such as watersheds, RMZ or riparian area. Future project will work towards achieving desired conditions.

O. 1081-167: The "water quality indicator macroinvertebrate assemblage" monitoring described for alternative A, the no action alternative, is based on the PACFISH/INFISH Biological Opinion Monitoring Program (PIBO) protocol and is anticipated to be maintained on the forest under all alternatives. It uses macroinvertebrate sampling as one element in a suite of biological and physical attributes to determine whether the functions of upland, riparian, and aquatic systems are being degraded, maintained, or restored at PIBO sites throughout the NFS lands and across the PIBO landscape. The methodology determines the direction and rate of change in riparian and aquatic habitats over time as a function of management practices.

P. 1159-139: Presently neither the PFC nor PIBO data is available on a public website. If budget allow such tools may be available in the future.

Q. 1159-141: You are correct that the draft forest plan and DEIS do not contain quantitative measures. However, the PIBO program collects quantitative stream and riparian data across the HLC NF.

R. 1159-145: The PIBO data has shown a decline in fine sediment data on many streams on the HLC NF.

S. 1159-147: The PIBO data shows more positive trends in stream habitat conditions on forest covered under the INFISH decision. The 2020 Forest Plan includes RMZ standards that mimic

those in INFISH (FW-RMZ-STD 1-3). The RMZ included in the 2020 Forest Plan are more restrictive than the State of Montana SMZ restrictions.

T. 1159-153: Thanks for your comment.

U. 1173-01: The USDA recently published Gen. Tech. Report WO-86a, March 2012 to monitor ground water dependent ecosystems.

CR260 Conservation Watershed Network – Plan Components

Supplemental Concern Statements:

A) 476-31, 1024-19, 1035-20, 1044-13, 1159-143 and 149: CWN Standards.

B) 1059-321: CWN Desired Conditions.

C) 285-23 and 1159-150 CWN: Objectives.

D) 285-22 and 24; 553-16; 1024-20; 1035-21 CWN: Guidelines.

Supplemental Responses:

A. The following responses are made for the suggested standards.

   a. 476-31: The FS agrees with statement however; Forest Plans do not address maintenance or travel planning. We acknowledge levels of use and/or road maintenance budgets have a direct effect on aquatic resources.

   b. 1024-19: Made changes to the 2020 Forest Plan. Reworked introduction. It now reads: "Emphasis would be placed in areas absent of non-native competition or in areas where non-native species are present that are critical to maintain viability of native species at an appropriate scale which could vary from a 6^{th} code to a 4^{th} code HUC". The FS agrees with the commenter that some streams that support non-native species are very important to address to ensure viability of bull trout or westslope cutthroat anywhere from a local hydrologic unit to possibly at a 4th code hydrologic unit basis. The appropriate level of review would include Multi-Scale analysis, the replacement of watershed analysis.

   c. 1035-20: The 2020 Forest Plan includes specific CWN standards and guidelines to maintain and move watersheds towards desired conditions. Also includes Forest wide standard and guidelines to protect watershed through the use of best management practices.

   d. 1044-13: The FS agrees and believes the Forest Plan will provide strong conservation measures through the use of specific plan components to support of conservation watershed networks to maintain or enhance habitat connectivity and conditions.

   e. 1159-143, 149: The FS faces funding difficulties. Timber harvests allows for the upgrade of culverts and roads as well as other crossing and mitigation implantation to reduce sediment delivery to stream channels. Subpart A of the Road Management Rule pertains to the administration of NFs' transportation systems. In part, subpart A requires each unit of the NFS to (1) identify the minimum road system needed for safe and efficient travel and for the protection, management, and use of NFS lands (36 CFR 212.5(b)(1)) and (2) identify roads that are no longer needed to meet forest resource management objectives (36 CFR 212.5 (b)(2)). In determining the minimum road system, the responsible official must incorporate a science-based roads analysis at the appropriate scale. According to FS policy (FS Manual 7710.3), the travel analysis process defined in FS Handbook 7709.55, chap. 20, serves as the "science-based roads analysis" required by 36 CFR 212.5 (b)(1). Travel analysis is not a decisionmaking process. Rather, travel analysis informs decisions related to the administration of the national forest transportation system and helps to

identify proposals for change (FS Manual 7712). The HLC NF has completed Travel Analysis Reports, and they were considered in the development of plan components. These broad-scale analyses encompass all existing NFS roads on the Forest. The report provides an assessment of the road infrastructure and a set of findings and of opportunities for change to the transportation system. These reports do not change or modify any existing NEPA decisions but should help to inform Forest managers as they identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of NFS lands.

B. 1059-321: A desired condition is a description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. It is important to have an understanding of the ecological, social/economic, and cultural/historic context of the plan area. Doing so helps to set realistic and achievable desired conditions, which are the basis for management direction over the next 15 years. The HLC NF intends to move toward these proposed forestwide desired conditions over the next 15 years, although they may not all be achieved for many decades. Some desired conditions may be very difficult to achieve, but it is important to move toward them over time.

C. The following responses are made relative to the suggested objectives.

    a. 285-23: The OBJ has been modified to make 2 road/stream crossing repairs the minimum. No maximum is listed.

    b. 1159-150: The Forest Travel Analysis Reports, which address the effects of road segments on fish, and FW-OBJ-CWN-01 will both help address existing roads within important fish watersheds. FW-OBJ-CWN-02 reads as follows: "Stormproof 15 to 30% of the roads in the conservation watershed network prioritized for restoration to benefit at-risk aquatic species and municipal watersheds. See appendix C for specific strategies for discussion of treatment options and for prioritization."

D. The following responses are made relative to the suggested guidelines.

    a. 285-22, 553-16: DC-02 is actually GDL-02 in the 2020 Forest Plan.

    b. 285-24: Completed and added to FEIS

    c. 553-16: DC 02 is a GDL-02 will consider numbers in objections. Changed minimize with desired condition as indicated in comment.

    d. 1024-20 Livestock impacts are addressed in FW-CWN-GDL-03 and OBJ-2 addresses road and stream crossings.

    e. 1035-21: The guidelines in CWN are additive to WTR and RMZ, so there are many more components for maintenance or protection in CWN all directed at achieving the Desired Conditions.

Fire and fuels

CR222 Fire – Silviculture

Supplemental Concern Statements:

A. 316-4, 1185-5, 1159-231: Need a more detailed description of existing condition. DEIS does not provide scientific support that disturbance regimes have been altered.

B. 316-4: Change FW-FIRE-OBJ-01 to a range from 15,000 to 25,000.

C. 410-44: Table 34 in the DEIS has outdated information on fire regimes. Review available scientific information on fire regime and update table as needed.

D. 489-16, 777-17, 558-3, 600-1, 1173-7: Need to detail how wildfire and prescribed fire can be managed to help restore/maintain ecosystem function. Forest health is poor, and the forest needs to be proactively managed to address fire risk and to benefit recreation and wildlife. Ogden Mountain, Dalton Mountain and Lincoln Gulch areas need active management to address fire risk and restore forest health. Prescribed fire can be used in old growth.

E. 1081-18: Need to identify which vegetation types are maintained by fire and have fire as a means to maintain/restore ecosystems.

F. 1159-232: DEIS nullifies many statements in the draft forest plan in stating that fire regimes do not vary much between alternatives because projected future treatments are generally the same.

G. 1185-15: Follow the National Cohesive Wildland Fire Management Strategy goals and use forest products to generate funds for restoration efforts.

Supplemental Response Statements:

A. 316-4, 1185-5, 1159-231: A detailed discussion on existing condition can be found in the project record specifically the Forest Assessment.

B. 316-4: FW-FIRE-OBJ-01 is designed to set the minimum expectation of treating 15,000 acres in the WUI. See FW-VEGT-OBJ-01. This objective specifies treating 130,000 acres per decade which included all fuels treatments.

C. 410-44: The FEIS uses the BASI which supports the information in table 35. Additionally, no references were provided to support the claim made that we are using outdated science.

D. 489-16, 558-3, 600-1, 777-17, and 1173-7: Throughout the FEIS and forest plan fire is identified as an essential function in the ecosystem. FW-FIRE-DC-01, 02 and 03 sets the standard for having fire across the landscape. Additionally, FW-FIRE-GDL-01 addresses that vegetation treatments should allow opportunities for naturally ignited wildfire to occur. The use of prescribed fire is acceptable in old growth, see the Old Growth section. See FEIS and project record for more detail on the role of wildfire and prescribed fire in managing and restoring ecosystems.

E. 1081-18: Vegetation types that have frequent fire and where fire is needed to maintain/restore ecosystem function are described in FW-VEGT-DC-01. Additionally, FW-VEGNF-DC-05 identifies vegetation conditions where fire maintains non-forested vegetation.

F. 1159-232: The reason fire regimes and wildfire occurrence are generally the same is due to projected treatments and wildfire estimates are fairly similar across alternatives. This is discussed in the FEIS.

G. 1185-15: The National Cohesive Wildland Fire Management Strategy is part of the regulatory framework and is followed. The 2020 Forest Plan is developed to achieve this strategy. Forest products are factored in the plan and FEIS; see the terrestrial vegetation section of the forest plan and FEIS. Funds from commercial harvest are put back into land management activities within existing laws and regulations.

Terrestrial vegetation

CR243 Vegetation - Editorial

Supplemental Concern Statements:

A. 285-32, 553-19, 1041-23, and 1041-24: Specific wording edits are suggested to FW-VEGT-DC-01 regarding plant species.

B. 285-33, 553-19: Please add "topsoil stockpiling" to FW-VEGT-GDL-01.

C. 346-11: Within the Divide GA:

    a. Does the information reflect live versus dead lodgepole pine cover type?

b. Discuss old growth.
c. How can the ponderosa pine DC be achieved?
d. In nonforested vegetation, add a discussion about mine water impacts; wetlands stabilization; and treating water exiting adits.
e. In nonforested areas, discuss invasive weeds at the GA level; what are the long-term goals? Biological controls? Mention diverse native plant communities on divide and mid-elevational ranges. Mention that these areas should remain weed-free, even with cattle using the area.
f. In nonforested DCs, what is the existing condition and desired range? Remove the word "rough".

D. 553-19: Provide a detailed description of the PVTs.
E. 553-19: Describe fire regimes in detail or refer readers to the glossary.
F. 553-19: Add an objective to the VEGNF section for treating 100% of grasslands every 20 years.

Supplemental Response Statements:

A. 285-32, 553-19, 1041-23, and1041-24: The suggested edits were incorporated into the 2020 Forest Plan.
B. 285-33, 553-19: The phrase "topsoil stockpiling" was not added to the plan component; that activity is one possible method of minimizing the impacts of vegetation removal.
C. 346-11: The FS appreciates the level of detailed knowledge provided for the Divide GA.
    a. Cover type existing conditions and desired conditions incorporate the current proportion of live and dead lodgepole pine. Lodgepole pine recently killed by mountain pine beetle may still be a lodgepole pine cover type or shift to a different type, depending on the understory. The existing condition is described using intensified FIA plots which have been updated since the mountain pine beetle outbreak.
    b. Old growth is discussed Forestwide, not at the GA level.
    c. Increases in the ponderosa pine cover type and/or species presence may be achieved through management or natural disturbances that remove competing species, creating conditions suitable for natural or artificial regeneration. The eastern portion of this GA is where ponderosa pine is currently found to the greatest extent and where it is most likely to be promoted in the future.
    d. Water quality impacts from mining are covered in the Forestwide Energy and Minerals and Aquatic Ecosystems Sections of the FEIS.
    e. Invasive weeds are addressed at the Forestwide level; more specific invasive plant management goals and methods would be described in sub-plans or projects. Diverse native plant communities are also addressed in Forestwide plan components, including the desired conditions for minimizing weeds in grazed areas.
    f. Nonforested vegetation desired conditions were refined, including the addition of a quantified cover type DC in the Terrestrial Vegetation section for each GA. The suggested wording change regarding rough fescue was incorporated.
D. 553-19: A detailed description of the PVTs is provided in Appendix D of the 2020 Forest Plan.
E. 553-19: Fire regimes are described in the glossary, and readers are directed there in the vegetation section.
F. 553-19: The suggested objective was not added; please see the response to Concern #238.

CR247 Vegetation – NRV and Desired Conditions

Supplemental Concern Statements:

A. 410-2, 410-4, 410-28, 625-12, 793-3, 1041-4, 1159-335, and 1159-339: The NRV analysis and results are not well explained and/or inappropriately used to guide future management. The NRV needs to be described as well as how it was determined. NRV does not adequately consider wildlife.

B. 793-3: NFS lands may need to compensate for departures from NRV on adjacent lands.

C. 1041-150, 1159-223, 1159-335, and 1159-339: The desired conditions are established in a way that requires management, and/or is at conflict with natural processes. Late successional stages and shade tolerant species are important for wildlife habitat.

D. 1159-60, 1159-335: The analysis used to determine DCs has not been peer reviewed for scientific reliability/validity/limitations and cannot adequately address climate change.

E. 1159-60: Clarify why the NRV is the basis for DCs, when it is acknowledged that the NRV is not necessarily a management target.

F. 1159-62, 1159-339: There is no adequate analysis of the reference conditions of landscape pattern using scientific metrics; or analysis that shows treatment effects would mimic these patterns or contribute to wildlife viability.

G. 410-2: Increases in roads and old growth management are not consistent with the NRV.

H. 410-2, 410-6: The desired conditions and associated management actions do not adequately take into account wildlife habitat needs; and inadequate direction is provided to guide habitat management.

Supplemental Responses:

A. 410-2, 410-4, 410-28, 625-12, 793-3, 1041-4, 1159-335, and 1159-339: The NRV analysis was conducted using the SIMPPLLE model, as documented in a project record file for the DEIS. The NRV analysis was updated and the process and results are summarized more thoroughly in appendix I for the FEIS.

B. 793-3: All lands in the project area were included in the modeling to determine the NRV.

C. 1159-223, 1159-335, and 1159-339: The desired conditions may be achieved through natural processes, such as fire, in addition to management activities. Natural processes were applied to both the NRV modeling (and therefore are integral to the formulation of the desired conditions) as well as the future modeling of all alternatives. While the NRV analysis and desired conditions do indicate a need for an increase in some intolerant species and open forest structures, shade tolerant species and closed forest structures are also reflected as important conditions on the landscape.

D. 1159-60 and 1159-335: The process to determine desired conditions is documented in appendix H of the FEIS. A science review on the neighboring Custer-Gallatin National Forest supported the findings of a similar process to model the NRV and utilize the results as a basis for desired future conditions. The model used, SIMPPLLE, itself has been peer reviewed, and the assumptions used in the model undergo rigorous review from forest and Regional subject matter experts. An additional peer review process of the analysis is not required by law, policy, or regulation.

E. 1159-60: The use of NRV as a basis for desired conditions is consistent with the direction found in FSH 1909.12. Detailed discussion is available in appendix H of the FEIS. As required to provide for ecological integrity, the desired conditions are consistent w/ NRV unless there are specific reasons to deviate as documented in appendix H.

F. 1159-62 and 1159-339: Refer also to CR 233. Landscape pattern, including opening size, amount and relative distribution of cover types and tree species as well as forest structure, was modeled using BASI to establish the estimated NRV (refer to Appendix H for details) and to estimate pattern under all alternatives. Information in the Terrestrial Vegetation section of the FEIS discusses the predicted pattern, amount, and distribution of various vegetation (and therefore)

habitat components under all alternatives. The NRV for key ecosystem characteristics is captured in the desired conditions, which would be considered during site specific project development and analysis. The desired conditions and plan components for various habitat characteristics allows the Forest flexibility in designing projects or mitigations as needed to maintain or enhance wildlife habitats, as appropriate. Discussion of how the coarse filter plan components would support persistence of native species is provided in the Terrestrial Wildlife Diversity section of the FEIS, and also addressed in CR 277 and CR 136.

G. 410-2: The FS understands that there were no roads in the historical condition on the landscape; however, despite their presence today as a result of multiple uses on the Forest, the use of historic vegetation conditions as a basis for desired future conditions remains a valid approach to providing for ecological integrity. The impacts of roads on wildlife, watersheds, and other resources is addressed in the FEIS.

   Forest management, including potential management within old growth stands, was also not occurring in the historical period. Rather, natural processes such as wildfire, insects, and disease caused changes within these stands. The revised plan does allow for some management within old growth stands, but, except for specific situations, that management must result in the maintenance and improvement of old growth conditions - that is, in harmony with the natural processes that affect old growth. The affects to old growth are disclosed in the old growth section of the FEIS.

H. 410-2, 410-6: The 2020 Forest Plan is consistent with the 2012 planning rule and associated directives with respect to ensuring wildlife species viability. The Federal Register (volume 77, number 68, p. 21212) states that "The premise behind the coarse-filter approach is that native species evolved and adapted within the limits established by natural landforms, vegetation, and disturbance patterns prior to extensive human alteration. […] These ecological conditions should be sufficient to sustain viable populations of native plant and animal species considered to be common or secure within the plan area. These coarse-filter requirements are also expected to support the persistence of many species currently considered imperiled or vulnerable across their ranges or within the plan area." Habitat needs of wildlife species or groups of species were assessed in developing the 2020 forest plan; refer to Appendix D for additional information. The planning rule acknowledges that fine-filter or species-specific plan components may be required for some at-risk species. The 2020 Forest Plan includes plan components for some at-risk species, as well as specific plan components for some species or groups of species based on the need to mitigate impacts to wildlife or habitats from management or other activities occurring on NFS lands.

CR249 Vegetation – Snags

Supplemental Concern Statements:

A. 519-5 and 793-5: Retaining all very large snags is appropriate; it would also be appropriate to leave more large snags given their rarity especially in the Warm Dry PVT.

B. 625-19: Please provide the existing condition of snags per acre (Table 9).

C. 1081-28: Explain why the current snag guidance (alternative A) is less clear than the action alternatives, and how the proposed guidelines provide clarity.

D. 410-25, 1159-56, and 1159-328: The snag guideline is flawed. It is dependent on the FS having up to date project level snag surveys, which it never does. It encourages "gerrymandering" of treatment unit design. The guideline is not based on BASI. The guidelines are confusing and it is not possible for the public or managers to determine how many snags should be left in logging units. There is no connection between the desired levels of snags and the retention required in the snag guidelines.

E. 1159-126: The analysis fails to quantify the cumulative snag loss in previously logged areas or other losses such as firewood cutting.

F. 410-24, 1159-126, and 410-24: The analysis fails to apply BASI to describe the snag habitat needed to sustain the viability of pileated woodpecker and other snag-associated species. Because there is no compensation for snags lost in treated areas, the plan does not provide a valid snag management strategy for wildlife such as species such as 3-toed woodpecker which require snags within forests (as opposed to within logged openings).

G. 410-25, 1159-111, and 1159-327: If a higher proportion of large snags are found on lands suitable for timber production, then protecting snags in these areas is critical for wildlife viability. Why are snags in wilderness/IRAs the best indication of NRV? What data source was used to estimate historic snag conditions?

Supplemental Responses:

A. 519-5 and 793-5: Desired minimum retention for both large and very large snags is provided in FW-VEGF-GDL-02. This guideline has been revised to reflect public and internal comments. It requires that the largest snags available be retained; this would ensure that very large and large snags are the priority for retention in project areas.

B. 625-19: The existing condition of snags is provided in FW-VEGF-DC-06 as well as in the snag section of the FEIS.

C. 1081-28: The snag section of the final EIS was revised to better describe the differences between alternative A and the action alternatives in terms of snag management; in addition, the guideline was re-written to improve clarity (FW-VEGF-GDL-02). While the 1986 Forest Plans do provide snag retention requirements for harvest projects, they do not point to a quantitative desired condition for snags.

D. 410-25, 1159-56, and 1159-328: The snag desired conditions (FW-VEGF-DC-06) and guideline (FW-VEGF-GDL-02) have been revised in the Forest Plan to improve clarity. The BASI used to inform the snag plan components is Bollenbacher 2008, with additional data queries amended in 2017. Following the work in this document, FIA plots are used to determine the historic and desired levels of snags as well as the retention requirements in the guideline. The desired condition is based on the mean of the number of snags found in wilderness/roadless areas on the HLC NF, because these areas best represent a historical condition due to minimal management intervention. The guideline numbers are based on the lower bound of the 95% confidence interval around that mean, with the intent that managed areas should contribute toward snag desired conditions to ensure appropriate distribution across the landscape, but that snags may be less common in these areas. Together with natural disturbances in unmanaged areas, maintaining this minimum level in managed areas would contribute to achieving the desired condition. The guideline allows that when project level data is available, it may be used to design the best retention and linkages of snags across the project area. Such information may be available from aerial detection surveys of mortality, stand examinations, and/or specific snag surveys. When such project level data is unavailable, snags may be left explicitly within treatment units to ensure adequate snag habitat is retained. The intent of the guideline is to allow managers to design and retain the best linkages of snag habitat throughout the project area.

E. 1159-126: The effects of past logging and firewood activities on snags are taken into account with the existing condition estimates, which are based on the latest available FIA data; additional description was added to the snag section of the FEIS.

F. 410-24, 1159-126, 410-24: Desired conditions for snags are based upon the best available information related to the NRV at the forestwide scale. The responsible official believes that the forest plan components related to snag desired conditions, and the guideline that directs how activities that may affect snags and snag habitat must be conducted, would provide for the needs of snag-dependent wildlife species as well as for future downed wood habitat. Plan components allow flexibility to manage for site-specific needs to maintain or enhance wildlife habitat as needed. Additional discussion is provided in the wildlife section of the FEIS.

G. 410-25, 1159-111, and 1159-327: Historic snag conditions were estimated based on the number of snags currently present in wilderness and roadless areas on the HLC NF estimated using FIA data, as described in the snag section of the final EIS. Estimating the historic snag conditions in this manner is consistent with the BASI for snags on the eastside forests of Region 1 (Bollenbacher 2008). The deciding official recognizes the importance of snag habitat that is well distributed across the landscape, including in lands suitable for timber production. Retaining snags, especially large snags, within those lands is one of the functions of FW-VEGF-GDL-02.

CR252 Vegetation Modeling

Supplemental Concern statements:

A. 1081-53, 1081-190, 1159-95, 1159-97, 1159-99, 1159-275, 1159-276, 1159-277, 1159-278, 1159-280, and 1159-341: The vegetation modeling is inadequate or unclear in terms of supporting the analysis and decision.

B. 519-6 and 1041-105: The graphs and charts are unclear; specifically, why the Decade 0 of the model is different than the estimated existing condition.

C. 1159-95 and 1159-97: Using these models to support wildlife viability conclusions is not valid, given the multiple assumptions used to formulate the models and because the models do not estimate the possible impacts of salvage treatments.

D. 1159-99, 1159-275, 1159-276, 1159-277, 1159-278, and 1159-280: The model methodologies and results are not appropriate to support decision making because they have not been validated as the BASI, supported by literature citations, or observations. An independent peer-review process should be conducted. The reliability of the input data has not been disclosed or ensured; the models have not been validated for the way they are used in the EIS.

E. 1081-53: Further explanation is needed as to why the models are not "predictive"; prediction is necessary to ascertain viability. Displaying the results as an average of alternatives is inappropriate - the EIS needs to disclose the differences across alternatives whether large or small.

F. 1081-190: The EIS suggests that alternatives A-D are modeled to harvest more warm/dry sites to achieve large size classes; but then suggests projects might not actually do this. This has impacts to wildlife - how are the effects determined if the models do not conform to reality?

G. 1159-341: Wildlife habitat models should be validated with independent wildlife-use data.

Supplemental Responses:

A. 1081-53, 1081-190, 1159-95, 1159-97, 1159-99, 1159-275, 1159-276, 1159-277, 1159-278, 1159-280, and 1159-341: The vegetation modeling processes used represent the best available data and modeling techniques to support Forest Plan revision analysis and decision-making. The data and techniques used by the HLC NF align with other efforts in Region 1. Modeling assumptions and limitations are disclosed in appendix H.

B. 519-6 and 1041-105: Decade 0 as reported by the model differs in some cases from the estimated existing condition because two different data sources are used. The existing condition used in the plan for most attributes is based on the most statistically reliable data, FIA and FIA intensified grid plots. Decade 0 in the model is derived from the spatial input file, which is derived from R1 VMap. The spatial input file for the model was refined to be more similar to FIA; however, there are inherent differences in the two products. Both starting conditions are disclosed and shown on the graphs to ensure transparency in the analysis processes. Additional explanation is found in Appendix H of the final EIS.

C. 1159-95 and 1159-97: The future projections from the model are utilized primarily to compare alternatives; the model is heavily driven by future disturbances, and it is not known specifically when and to what degree disturbances will actually occur. Using these programmatic models to

reach conclusions regarding wildlife viability is consistent with other work conducted across Region 1. The model is calibrated to incorporate a broad range of potential future disturbance scenarios, to provide the most likely future trend. The monitoring of actual vegetation conditions on the ground through time, as per the monitoring plan in Appendix B of the 2020 Forest Plan, would inform habitat analyses and influence the actual management that occurs on the ground, rather than the projected model results. Potential salvage activities are not included in the PRISM (timber scheduling) model, because per the Directives these activities should not be included in potential timber output estimates. Salvage activities would be dependent the timing and location of disturbance events, which is uncertain. The potential effects of salvage are addressed qualitatively in the Terrestrial Vegetation section of the FEIS.

D. 1159-99, 1159-275, 1159-276, 1159-277, 1159-278, and 1159-280: The SIMPPLLE model tool has been peer-reviewed (Chew, Moeller, & Stalling, 2012) and has been used consistently in Region 1 for Forest Plan revisions and other broad scale vegetation analyses. As a knowledge-based model, there are many calibrations that can be done. The calibrations and assumptions used for the HLC NF build upon other work being conducted in the Region, and included input and extensive reviews from subject matter experts on the planning team, in the Regional Office, and at the Rocky Mountain Research Station to ensure that the assumptions and results were appropriately represented for the ecosystems on the HLC NF. The assumptions in the model are also based on actual data when possible - for example, to emulate the levels of known fire start frequencies and locations, actual acres burned historically, and mapped insect infestations. Even so, the analysis acknowledges and discloses the limitations of the model and utilizes other BASI when needed to reach analysis conclusions. The reliability of the input data is disclosed in appendix H of the FEIS. The accuracy assessment of the R1 VMap, along with the statistical reliability of FIA estimates (with 95% confidence intervals) reflect the general accuracy of the input data, because those two products were utilized to create the model input landscape.

E. 1081-53: See also the response for #3, regarding the predictive value of vegetation models. Appendix H of the FEIS discloses the detailed model results by alternative and decade. However, in many cases the results across alternatives were nearly identical, and not compelling for the purposes of display and discussion in the body of the FEIS.

F. 1081-190: Appendix H of the FEIS describes how each alternative was modeled in PRISM related to future timber harvest. In alternatives A-D, the model emphasized attainment of desired conditions. In contrast, alternative E was modeled to maximize timber production as a priority in addition to achieving desired conditions; this was done to provide a range of possible management emphases on the landscape. In this alternative, the model harvested more productive forest types to a greater extent (such as lodgepole pine); this was not inconsistent with desired conditions but did not contribute as greatly to movement toward desired conditions. The timber section of the FEIS clarifies how the model emphasis relate to on -the-ground management.

G. 1159-341: The wildlife habitat model estimates are based on the BASI which inherently incorporate known wildlife use and patterns. The habitat models used are consistent with other broad scale modeling efforts in Region 1, and specifically include the rigorous work conducted by the FS and partners to develop the East Side Assessment for wildlife habitat for many species.

CR262 Vegetation – Other Species

Supplemental Concern Statements:

A. 1081-20: Explain how aspen can be in decline due to fire exclusion and a changing climate, and yet be modelled to increase in the future forestwide. How do the plan components cause these effects, especially when fire management is not materially different than in alternative A?

B. 410-38: The plan does not ensure a diversity of plant species because it fails to protect aspen from livestock grazing.

C. 1081-66: The EIS notes desired conditions for cottonwood stands, but cottonwood is not included in vegetation desired conditions; and no information is available for the GAs as indicated.

D. 1081-217: The spruce/fir cover type is predicted to increase and remain above NRV; the question of whether there can be "too much" habitat needs to be addressed in the EIS and explain why the NRV is not achievable.

E. 1170-3: If ponderosa pine is a rare and minor species in a GA, why is there a desired range?

Supplemental Responses:

A. 1081-20: Discussion on the expected trends of aspen has been expanded in the terrestrial vegetation section of the FEIS. The FEIS model results show only modest increases in the cover type abundance and individual tree extent of this species; given the statistical bounds around the mean estimates, it is not possible to conclude with certainty that this trend is actually different than the existing condition at most scales of analysis. The modeled increases in aspen are likely due to the expected wildfires on the landscape more-so than direct management actions, although plan components would support treatment actions to increase aspen. Projected wildfire acres are modeled assuming current fire suppression strategies continue, but with potential increases incorporated due to climate changes.

B. 410-38: The 2020 Forest Plan includes an array of plan components for livestock grazing that would protect aspen (see FW-GRAZ plan components in the 2020 Forest Plan). This species would be included in those components as part of "native plant communities" and "riparian vegetation". In addition, the desired conditions for the aspen/hardwood cover type (FW-VEGT-DC-02) and individual tree species presence (FW-VEGF-DC-01) call for increases in this species, especially in the warm/dry potential vegetation type. Livestock grazing practices, and all other management activities, would be required to not preclude achievement of these desired conditions.

C. 1081-66: Cottonwood is combined with aspen for the purposes of alternative modeling, because it is relatively rare. The NRV condition of the hardwood species is disclosed in Appendix I of the FEIS.

D. 1081-217: The vegetation modeling was updated for the FEIS, and trends specifically for the spruce/fir cover type are different than what was predicted in the DEIS. The results show that the spruce/fir cover type would remain fairly static and within desired ranges Forestwide, and trends upward slightly in the cool moist PVT toward the desired condition. The type declines in the cold PVT, away from the desired condition. More generally, for all vegetation and habitat conditions, the NRV is not always achievable within the analysis period due to the long timeframes needed for natural successional processes to occur and/or the outcomes of disturbance events that occur in the short term. Additional discussion is included in the terrestrial vegetation section of the FEIS regarding vegetation and habitat conditions that remain or trend outside of the desired ranges during the planning period.

E. 1170-3: Ponderosa pine is a minor species on several GAs. The NRV modelling indicated that it was more prevalent in the past and may be a viable species given expected warm and dry climate conditions. The desired condition reflects both the historic and potential future condition, although it remains a minor component compared to the other species on these GAs. Further explanation is added to the terrestrial vegetation section of the FEIS.

Old Growth, snags, and downed wood

CR248 Vegetation – Old Growth

Supplemental Concern Statements:

A. 410-23, 1159-105, 1159-326, 1173-6: No treatment in old growth should occur. All old growth on the landscape should be protected, and the amount of old growth increased, to provide ecosystem integrity and because of the value it provides for wildlife and plants. If minimum amounts and scale are unknown, then no old growth should be managed. An alternative should be considered that actually conserves all old growth by making it a priority over other objectives, given that the NRV is uncertain but likely higher than current levels.

B. 1159-105, 1159-106, 1159-107, 1159-329, 410-23, 625-21: Logged old growth stands would no longer remain effective wildlife habitat. The analysis provides no research or monitoring that shows that treating old growth results in a net benefit to old growth or old growth dependent wildlife species. Old growth dependent wildlife species are not sufficiently addressed. Clarify why old growth stands should be treated from a wildlife perspective - particularly cool/moist types that may become more fire-prone after treatment.

C. 410-21, 1159-108, 1159-109: Old growth should be mapped. The FS is misleading the public on the availability of an old growth inventory. There are available inventories in the Snowies and Little Belts; and inventory is in process on the HNF per Juel (2003).

D. 410-22, 1159-94, 1159-105: There is no standard to protect the amount and distribution of old growth to resemble historic conditions. The estimated NRV of old growth is too low. An appropriate NRV level of old growth should be included as a DC.

E. 410-22, 410-23, 1159-94, 1159-324: There is no plan component to protect the amount and distribution of old growth necessary to sustain old-growth associated wildlife species. Minimum patch sizes should be set; at least 100 acres. The desired distribution of old growth should be specified (in every watershed or about 10,000 acres) to provide adequate wildlife habitat.

F. 625-18: The existing condition of old growth should be provided (Table 8).

G. 1081-24: The analysis is inconsistent when it states that all old growth is conserved, but some removal of old growth is allowed by plan components (p. 243).

H. 1081-25, 1159-58, 1159-106: The agency isn't clear on the definition of old growth. Because the glossary states that old growth habitat may or may not meet the definition of old growth forest, the FS can define old growth as whatever remains after treatment; and may not be consistent with Green et al 1992.The potential to changing old growth maps and definitions through time would be Forest Plan amendments.

I. 1159-54: The EIS is inconsistent in how it describes the trend in future size classes r.e. the effects of fire suppression versus the results of the SIMPPLLE model.

J. 1159-54: If there is no means to determine the old growth NRV because there is no site-specific inventory, doesn't that mean tree size class estimates are also unreliable because they are based on remote inventory techniques?

K. 1159-57, 1159-58: By allowing an exception to the old growth GDL that allows for the removal of old growth when mortality is imminent, the plan is not consistent with BASI regarding the processes that create old growth and the important features (dead trees etc). By including direction to help protect old growth from mortality agents, the agency is suppressing the important natural processes that create wildlife habitat.

L. 1159-107: The plan doesn't require that snags be left in old growth, since the snag GDL is applied at the project area scale.

M. 1159-113: The analysis and plan does not provide science discussing fire refugia for old forests or provide direction for how to identify or protect it.

Supplemental Responses:

A. 410-23, 1159-105, 1159-326, 1173-6: The plan acknowledges the ecological importance of old growth. Forest plan direction complies with a USDA policy statement (1989). FW-VEGF-DC-05 calls for maintaining or increasing this condition across the landscape. FW-VEGF-GDL-04 provides protection for old growth and ensures it is not removed during project activities unless management can be used to improve the condition of old growth, with a few specific exceptions. Even though these exceptions may result in the removal of some old growth, all projects would still be required to not preclude the achievement of FW-VEGF-DC-05.

   Additional discussion has been added to the old growth section of the FEIS on treatment approaches and the supporting science that could support the maintenance or development of old-growth forests. The forest plan provides direction that limits the kinds of treatments that may be applied in old-growth forest. Specific conditions must be met to protect its values and attributes. Site-specific analysis at the project level, supported by the necessary science, is the appropriate place to determine whether a specific old-growth forest stand would or would not benefit from treatment.

   Treatment for the purpose of promoting future old growth likewise would be evaluated and supported at the site-specific, project level. A key approach is to promote stand conditions that enhance tree growth to increase the potential that very large trees—a critical component of old-growth habitat—may develop.

B. 1159-105, 1159-106, 1159-107, 1159-329, 410-23, 625-21: The stated purposes for treating in old growth (FW-VEGF-GDL-04) would result in stand conditions generally consistent with the natural processes that create old growth, and therefore those stands would likely remain useful for many wildlife species. It is acknowledged, however, that some factors would differ between treated and untreated stands. The HLC NF does not have any at-risk species that are specifically dependent upon old growth conditions; however, a variety of other wildlife would use these areas. It is unknown the specific degree to which various species would utilize old growth stands following potential treatments; there remains a substantial research need in this arena. However, active management is likely to impact only a fraction of old growth stands on the HLC NF. Additional discussion has been provided in the Wildlife section of the FEIS.

C. 410-21, 1159-108, 1159-109: There is not a comprehensive map of all of the old growth across the HLC NF that can be used at the programmatic level, because complete field inventory would be required. Existing levels of old growth can be reliably estimated using FIA data, but these points do not necessarily correspond to a stand or patch of old growth. Remote sensing techniques can be used to identify potential areas, but similarly cannot be used to identify stands of old growth because attributes such as age cannot be derived. Further, maintaining a stand-level inventory of old growth would be infeasible due to constant vegetation change.

   To meet the 1986 Forest Plan standards, the Forest does identify old growth during project development. Partial inventories that may be completed in specific GAs such as the Snowies are evaluated and disclosed during project-level NEPA. However, this is not a comprehensive inventory because stand exams have been conducted on a small proportion of the landscape. In other words, old growth encountered during project development is mapped, but there is additional old growth in unmanaged areas that have not been identified.

   Old growth is subject to continual change - as old stands die, they are replaced by other stands growing older. It would be inappropriate to permanently designate a given stand as old growth into perpetuity. As old growth stands are identified during project development, they would be protected under the old growth guidelines. The intent of the revised forest plan is not to identify permanent designations of old growth, but rather provide for an increasing amount on the landscape overall.

D. 410-22, 1159-94, 1159-105: Setting a specific target for the amount of old-growth forest is infeasible. The ability to quantify historical amounts of old-growth forest and the NRV is problematic because of the site specificity of the old-growth forest definitions and the need for field inventory to confirm its presence and location, as described in the old growth section of the FEIS. The plan direction emphasizes the protection of existing old-growth forest and the development of future old-growth forest (to the degree that the Forest is able to do so), understanding that natural disturbance processes and forest succession will continue to be the primary means by which old-growth forest is created and removed on the Forest.

E. 410-22, 410-23, 1159-94, 1159-324: The minimum patch size of old growth utilized by species would vary, as demonstrated by the literature provided by the commenters. Smaller patches of old growth may have other ecosystem benefits, such as legacy seed sources. The distribution of old growth is not specified in the 2020 Forest Plan, due to the uncertainty and variability associated with future disturbance processes. The optimal distribution of old growth from a wildlife perspective would vary by species and landscape, as well as by vegetation type. There is no literature available that quantifies the appropriate distribution for the old growth type and landscape conditions on the HLC NF, and the SIMPPLLE model NRV cannot be used for this purpose. The 2020 Forest Plan provides the flexibility to recognize and adapt management practices to provide for a range of old growth patch sizes, while emphasizing that larger patches are desirable.

F. 625-18: The existing amount of old growth is disclosed in FW-VEGF-DC-05, as well as in the old growth section of the FEIS. The condition of old growth stands themselves is addressed qualitatively based on general vegetation type, as the specific condition within individual old growth stands is variable and not possible to address at the programmatic scale with available data.

G. 1081-24: The FEIS was updated to clarify that most old growth would be conserved, with some possible exceptions as allowed by the plan components. Within the limits of the Forest's capability, the forest plan protects existing old-growth forest and encourages the recruitment of old-growth forest over time, recognizing that old-growth forest conditions are not static. Stands that are currently old-growth forest may not be treated to the extent that they no longer meet old-growth forest definitions (FW-VEGF-GDL-04). Within the limits of the Forest's control, this is the direction that supports the desired condition to maintain existing old-growth forest. The analysis recognizes that the primary cause of loss of old-growth forest on the Forest is due to the effects of natural disturbances such as wildfire or epidemic levels of insects or disease. In addition, the forest plan recognizes the importance of promoting the development of future old-growth forest and addressing the desired pattern and patch sizes of old-growth forest (FW-VEGF-DC-05). Guideline FW-VEGF-GDL-01 also contributes to the development of old-growth forest over time by retaining large live trees within harvest areas.

H. 1081-25, 1159-58, 1159-106: The old growth components state that old growth is defined based on Green et al (1992) or future BASI. The definitions in the glossary recognize that old-growth dependent species may utilize habitat that does not necessarily meet the accepted definition of old growth; however, those areas would not be considered old growth. The plan requires that the best available scientific definition of old growth be used, which at the writing of the plan is from Green et al 1992. However, FW-VEGF-GDL-04 also notes that if new BASI is developed to update these definitions, the HLC NF would then use the best available definitions. The intent of this is to ensure that old growth is managed using the best scientific information available, and acknowledges that this may change in the future if new research is published. A forest plan amendment would not be needed to incorporate new BASI. Old growth maps are not part of the Forest Plan, and therefore no forest plan amendment would be needed to reflect old growth conditions change across the landscape.

I. 1159-54: The FEIS acknowledges that fire suppression may contribute to overall decreasing size class by allowing small trees to establish and dominate some forests. At the same time, the future SIMPPLLE model results indicate that large size classes will increase on the landscape, even though fire suppression is expected to continue. While the effects of fire suppression will continue to occur, large size classes may also increase overall because of other factors such as predicted increases in fire on the landscape, forest succession in small/medium forests that are abundant in some landscapes, and management practices such as prescribed fire and thinning that favor retaining large trees and removing smaller trees. Additional discussion has been added to the terrestrial vegetation section of the FEIS.

J. 1159-54: As discussed in the old growth section of the FEIS, tree size class can be reliably determined based on the remote sensing techniques used to build the input layer for NRV modeling. Size class is classified in the R1-VMap, with a known accuracy, and tracked with the SIMPPLLE model used to derive the NRV. Old growth cannot be similarly modeled, however, because the definition requires additional information, such as age, that is only available in stand-level field inventory. Such data is not available across the Forest, nor can it be derived with the model used to determine NRV.

K. 1159-57, 1159-58: The FS agrees that dead trees and late-stage forest processes are integral components of old growth. The plan component has been modified and no longer contain an exception to treat old growth when mortality is imminent, because of the potential subjectivity of that determination (FW-VEGF-GDL-04). The plan is not intended to direct the FS to suppress all natural processes that create old growth and associated habitat features, but rather to recognize that retention of old growth on the landscape is a high priority, and in some cases the resiliency of old growth stands to various disturbance processes may be improved in a manner consistent with the natural disturbance regimes and characteristics specific to the vegetation type within and adjacent to old growth patches.

L. 1159-107: The old growth guideline has been re-worded, and more specifically guides managers to retain as much of the old growth characteristics as possible in treated areas, including snags (FW-VEGF-GDL-04).

M. 1159-113: Refugia is defined in the glossary of the 2020 Forest Plan. The old growth section of the final EIS describes forest remnants that may survive fire located in topographical features such as rock outcrops. When such refugia meet old growth definitions and are identified during project analysis, they would be subject to the management limitations required in FW-VEGF-GDL-04.

Terrestrial wildlife diversity

CR44 Wildlife - Big Game Plan Components & Analysis

Supplemental Concern Statements: Commenters are concerned with the management of and analysis for elk and other big game in the 2020 Forest plan. Concerns fall into several broad categories:

A. Suggested revisions to plan components in the 2020 Forest Plan:

    a. Keep the existing (1986) plan components for security

        i. 527-1, 527-7, 527-13, 777-13, 801-11, 959-2, and 1081-69: The 1986 Forest Plan standards for elk habitat conservation have a strong scientific basis and should be retained in the 2020 Forest Plan. There is not a valid scientific basis for the plan components in the 2020 Forest Plan.

b. Add in more specific or stringent security standards to ensure security, cover, and maintaining viable populations of elk and other big game species. Elk and elk habitat provide many ecosystem benefits should be a management focus.

    i. 136-2, 316-6, 316-7, 489-12, 527-1, 553-3, 586-1, 586-2, 591-5, 777-13, 801-11, 959-2, 980-3, 1081-68, 1081-71, 1081-72, and 1159-91: There should be more stringent security standards and/or other habitat elements for big game. Big game plan components in the 2020 Forest Plan are absent, vague, not enforceable, or otherwise inadequate.

    ii. 625-23 and 959-2: The plan components for thermal cover, hiding cover, and security for big game are inadequate.

    iii. 527-13, 527-17, 777-13, and 801-11: The removal of big game standards is not consistent with the purpose and need of the forest plan. There is no assurance that viable populations of elk and other big game species can be maintained.

    iv. 1081-75: Establish a minimum percent for security in Elk Analysis Units in specific GAs, incorporate specific forage and non-forested cover recommendations for specific GAs, add components regarding management of motorized travel in specific GAs

c. Use the 2013 recommendations (appendix C) and incorporate them as plan components in the body of the plan; put the elk security components in the wildlife section of the plan.

    i. 1041-22: Elk and Other Big Game Species direction found within Appendix C should be incorporated into plan components.

    ii. 285-68, 489-12, 586-4, 777-13, 959-3, 959-5, 1041-122, 1041-147, and 1081-70: It is not clear how the collaborative work with MFWP is included in the 2020 Forest Plan or analysis. 2020 Forest Plan components should be based on the collaborative work done in 2013 with MFWP.

    iii. 1041-111: Suggest moving the specific reference out of Appendix C and into the body of the plan, and adding preamble discussing big game security; also suggest expanding to provide details on other big game species.

    iv. 1041-42: Guidance for elk security should be moved to the Wildlife section of the plan.

d. Add suitability statements for specific elk habitats.

    i. 1041-51, 1159-92: Recommends specific suitability statements: winter range not suitable for management actions and human activity during winter, fawning and calving areas not suitable for management actions and human activity in those periods, big game security areas not suitable for motorized access during hunting seasons, suitable for timber production and harvest but must maintain functional security through road management and hiding cover, and not suitable for expansive clearcuts.

e. Include information on existing elk security and use that to develop specific desired conditions and standards that will move habitat toward those conditions.

    i. 1041-79: Add information on elk security existing condition to the plan for comparison with desired conditions, allowing identification of specific needs for improvement that should be included as standards or guidelines.

ii. 410-35 and 959-2: Measurements of hiding cover and/or allowable motorized route densities should be included in plan components for elk security.

iii. 1041-127: Suggests a standard to maintain and improve big game security based on existing condition, which should be provided.

iv. 285-68, 553-38, 1041-131, 1081-75: Secure elk habitat needs to be defined for each GA; the security methodologies developed for the Divide and Upper Blackfoot GAs should be incorporated into the 2020 Forest Plan and security areas identified in those travel plans retained, add GA-specific DC to increase over existing amount of unfragmented habitat for dispersing and resident wildlife.

f. Do not include hiding cover or security plan components.

i. 573-2: Hiding cover standards for elk are not needed.

ii. 408-5: Plan components for elk security are too restricting and not necessary; other measures such as percentages of hiding cover could meet objectives.

g. Add components related to existing roadless areas.

i. 285-84 - Add guideline: "No new roads or trails should be constructed in wildlife security areas or the IRA unless it can be clearly established that wildlife or roadless characteristics are not negatively impacted and that the proposed routes are compatible with other resource values".

ii. 1041-129 - Management activities in IRAs should seek to improve wildlife habitat.

h. Other specific suggestions.

i. (959-20) there should be a specific recreational restriction on the Mount Helena Ridge Trail to protect elk; (451-15): There should be plan components that stress the importance of creating and improving early seral forest conditions in forested vegetation to provide summer forage for elk; (285-39, 553-22): Add "within the within the appropriate vegetation NRV" to FW-WL-DC -01 and 02s, and add "provide native forage species within the NRV" FW-WL-DC-06; (285-66): Modify FW-FWL-DC-01 second sentence to read "Habitat on NFS lands provides both security for hunted species as well as hunting opportunities that support Montana Fish, Wildlife and Parks population and harvest objectives including age diversity of bull elk." ; (316-5): (FW-WL-DC) I suggest a desired condition as follows: The HLC lands provide healthy and secure habitat for all big game not just elk. This will keep big game on public land, keep public hunting opportunity and fair chase hunting for the length of the hunting season. Another desired condition should be to reduce noxious weeds on big game winter ranges and increase native species diversity; (1041-80): Add DC that "Extensive, unfragmented areas of forested habitat provide hiding cover for big game during archery and rifle big game hunting seasons; (1041-81): Add specific goals that FS and MFWP cooperate to identify needs for and means to achieve desired distribution and hunting opportunity, and that FS and FWP work collaboratively to improve big game security in areas where it is currently deficient.

ii. 625-70, 959-2, and 1081-75): The term "elk security" must be defined in the 2020 Forest Plan.

iii. 1041-62: Recommends review of travel plans on an annual basis (1041-77) - Specific wording change to FW-FWL-DC-01.

iv. 1041-82: Suggested wording change to FW-FWL-GDL-01 (1041-115) - Add specific plan components for larger suite of species in the Big Belts, acknowledge importance of the Beartooth WMA, disclose information about "commercial hunting" in the Big Belts, include description of summer and winter range as desired condition; replace BB-WL-DC-01 with suggested language.

v. 1041-135: Re-word EH-ACCES-DC-01 regarding nonmotorized recreation not impacting wildlife.

B. Concerns about the science used in developing plan components and analysis, and concerns about the quality or completeness of the analysis in the DEIS.

a. The EIS does not provide adequate analysis of the effects of changing elk security plan components on elk and on various other resources.

i. 527-14, 527-15, 1081-74, 1081-83, 1081-84, 1081-85: The FS has failed to take a hard look at the impacts of dropping the existing big game standards on multiple resources and species, such as but not limited to T&E, SCCs, soils, water quality, IRAs, and wilderness. There would be impacts related to loss of hiding cover, more roads, and the like. Analysis of effects cannot be deferred to the project level. In addition, the EIS does not adequately disclose the effects of plan components for other resources such as timber on big game.

ii. 285-38, 527-12, and 1081-72: The development and comparison of alternatives for big game is inadequate. The EIS should better show the differences in managing elk security and hiding cover. The EIS does not present a reasonable range of alternatives with regards to big game. Commenters provide several alternatives for consideration.

iii. 1081-76, 1081-77, 1081-78, 1081-79, and 1081-80: The effects analysis does not adequately address modeled shortages in hiding cover and associated impacts to elk security; or display the differences in alternatives in a way that can inform the decision.

iv. 1041-102, 1081-72: The EIS is in error in concluding that all alternatives are equivalent in addressing "general habitat desired conditions" and "cover and/or habitat security" for elk and other big game species.

b. 1081-81: The EIS does not appropriately consider the relationship between travel planning and forest planning; the analysis must allow that travel plans may change unless there are plan components that preclude it.

c. 721-3: Clarification is needed regarding the effects of mountain biking on elk - the commenter states that biking does not cause elk mortality - hunting does.

d. 410-35, 489-12, 1041-122: Elk hunter days are not a valid measure for big game security.

e. 410-35, 451-8, 451-9, 777-5, and 959-2: The issue of elk displacement from public lands is not adequately addressed. The EIS does not adequately address this issue, or if and how this concern has changed since the 1986 Forest Plans. NFS lands are critical for elk and must compensate for displacement. Land exchanges or easements should be pursued to secure more elk habitat.

C. 145-1, 206-1, 451-15, 561-1, 451-1, 451-2, 451-13, 128-11, 410-35, 561-1, and 1044-2: Concerns about winter range and migration corridors for elk and other big game species and the need for clear, strong guidance about motorized travel and other management in those areas.

Supplemental Responses:

A. Changes were made where applicable, please see the Wildlife section of the 2020 Forest Plan. Where not changed per the comment, the Forest determined that the retained plan components were sufficient to meet our obligations under the 2012 planning rule. More detailed analysis on this issue can be found in Section 3.15 of the FEIS.

   a. Refer to section 3.15.5 of the FEIS, "Elk, affected environment", subsections titled "Relationship to 1986 Forest Plans" and "Elk fall habitat", including the discussion of what is meant by "elk security" (see also response to 1h.ii. below). As described there, since the 1986 plans were developed, issues regarding elk management have changed and elk numbers have increased. Standards in the 1986 plans are different for the former Helena and the Lewis and Clark NF areas, leading to management differences based on administrative boundaries rather than on habitat characteristics, elk herd ecology, or desired hunting opportunity.

      Existing standards regarding elk security in the 1986 Helena NF plan are specifically for the purpose of providing "a first week bull elk harvest that does not exceed 40 percent of the total bull harvest". Data is not available that would enable measuring whether that desired condition has been met in areas where the standard has been implemented (refer to section 3.15.5 of the FEIS, "Elk, affected environment", subsections titled "Elk habitat status", and "Relationship to 1986 Forest Plans…" and to the project file document "Elk status and information" for current measures of compliance with the 1986 plans). The amount of cover and level of elk security on NFS lands is not a reliable indicator of overall elk availability to hunters, elk distribution on public lands during the hunting season, nor of overall elk population trend.

      Meanwhile some issues regarding elk distribution, hunting opportunity, and population management have changed. Managing to achieve a specific elk harvest outcome does not allow management flexibility to respond to changing local conditions, issues specific to an area, or to the varied and changing dynamics of elk ecology and the public-private land interface. The 1986 Lewis and Clark NF plan does not contain specific requirements for managing elk security areas similar to those in the 1986 Helena NF plan, but both plans include specific requirements for hiding cover, which can contribute to elk security. However, those very specific hiding cover and security requirements do not allow managers to fully apply the most recent interagency recommendations for management of elk habitat, developed by MFWP and FS biologists in response to review and evaluation of the BASI, or other management recommendations based on new science.

   b. Refer to section 3.15.5 of the FEIS, "Elk, affected environment", section titled "Elk population size and trend", "Relationship to 1986 Forest Plans", "Elk fall habitat", and section 3.15.6, "Elk, environmental consequences", and to the response to comment summary 1a above.

      Elk numbers in Montana have increased since the previous forest plan was implemented, with many elk hunting districts on the HLC NF at or above population objectives. Viability of elk is therefore not a management concern, although higher-than desired elk numbers in some areas presents different management challenges, as discussed in the EIS.

Rather than relying on elk habitat security as a proxy to ensure habitat security for other wildlife species, the 2020 forest plan focuses on maintaining necessary wildlife habitat components, including thermal and hiding cover, forage, etc., in their own right through managing for the ecosystem characteristics (vegetation composition, structure, distribution, and function) needed by native and desired non-native wildlife species (FW-VWGT-DC-03, FS-WL-DC-02, FW-WL-DC-03), and by constraining certain actions to maintain availability and function of seasonal habitats (FW-WL-GDL-05, FW-WL-DC-06), and provide for areas that create wildlife habitat security (FW-WL-DC-04, FW-WL-DC-07). The guideline regarding management of elk habitat security in the 2020 plan (FW-FWL-GDL-01) is specifically in support of the desired condition (FW-FWL-DC-01) to have elk available on NFS land during hunting seasons.

The BASI recommends that elk habitat security be based on the characteristics and needs of specific watersheds or herd unit areas, rather than being developed or applied across broad geographic areas. The guideline in the 2020 forest plan follows these recommendations by directing the HLC NF to manage for habitat security where it is needed in specific areas and by using methods appropriate to those areas. This includes establishing security or other habitat needs and developing management tools (which could include management of cover, forage, motorized travel management, etc.) at appropriate scales. Guidelines are not optional, but rather are constraints that allow for departure from their terms, so long as the purpose of the guideline is met. Guideline FW-FWL-GDL-01 will allow managers needed flexibility to manage for specific conditions at an appropriate scale without having to amend the forest plan.

c. Habitat security as a general life history requirement for elk and other wildlife is addressed within the coarse filter plan components that would move vegetation toward the estimated NRV across the HLC NF (see desired conditions for terrestrial and forested vegetation) and maintain vegetation composition and structure for wildlife habitats (FW-VWGT-DC-03, FS-WL-DC-02, FW-WL-DC-03), and through components that would provide for wildlife general and seasonal habitat needs (FW-WL-DC-04, FW-WL-DC-07, FW-WL-GDL-05, FW-WL-DC-06).

   There is no evidence that habitat security is an issue with respect to viability of elk in central MT or on the HLC NF (refer to EIS section 3.15.5 "Elk, affected environment", "Elk population size and trend" section and others). The traditional concept of elk security habitat is aimed at providing adequate adult male elk survival while not limiting elk hunter opportunity (Proffitt, Gude, Hamlin, & Messer, 2013). Elk security on the HLC NF is a management concept that has established desired quantity and distribution of specified landscape features (vegetation and motorized access) to try to influence aspects of population sex and age structure and herd distribution, generally related to hunting opportunities and to population objectives established by MFWP (refer to section 3.15.5 of the FEIS, "Elk, affected environment", sections titled "Relationship to 1986 Forest Plans", "Elk fall habitat"). Therefore we have chosen to keep management of this issue in the Benefits to Humans section.

   The 1986 Forest Plans incorporated specific research products, methods, and management recommendations. Over the life of those plans there has been new research, new methodologies and data products, and updated management recommendations based on new research and on changing management issues. The HLC NF has had limited ability to apply new science and recommendations because of existing 1986 Forest Plan standards that require management based on specific, dated research and/or methods. Efforts to apply new or updated recommendations or base management on specific needs

and characteristics of local areas and issues has often required amendment of the 1986 forest plans, which has not always been possible.

The 2012 planning rule defines plan components; the 2013 MFWP/FS document as a whole does not fit the definitions of plan components in the 2012 rule. The document also calls for varied, site-specific approaches to managing elk habitat. In compliance with the 2012 planning rule and in order to allow managers flexibility to adapt to future research findings, to apply updated methods and use new data sources, and to respond to new management challenges, the 2020 plan includes components that direct managers to use the BASI and recommendations in order to achieve identified desired conditions. Under the 2020 plan, managers will have flexibility to use the 2013 guidance while it remains current, but also to implement adaptive management and to adjust methods to incorporate new science and respond to future challenges without requiring plan amendment.

d. The directives for implementing the 2012 planning rule guide planners to use suitability to identify whether future projects and activities are consistent with desired conditions and the inherent capability of the land to support that use (FSH 1909.12 ch 22.15). Public uses are not restricted by a suitability statement but require an action such as a travel management decision or closure order. Plans should not use suitability statements for the use of management tools such as prescribed fire, clearcuts, etc.

   Although the forest plan does not make site-specific travel management designations, it provides guidance for future decision-making. Future travel planning will need to consider the full suite of wildlife-related desired conditions, standards, and guidelines. This includes consideration of guideline FW-FWL-GDL-05, which would constrain management actions and guide management of other human activities to minimize disturbance of ungulates on winter ranges and other key seasonal habitats, and FW-FWL-DC-01 and FW-FWL-GDL-01, which address management efforts to reduce, if possible, displacement of big game off of NFS lands during the hunting season.

   The 2020 Forest Plan includes desired conditions (FW-VEGF-DC-08) for landscape pattern to reflect the NRV in terms of the size and distribution of openings and patches of early successional forest. Several standards (FW-TIM-STD-02, 04, 06, 08, and 09) constrain harvest methods such as regeneration harvest and clearcutting and constrain the size and distribution of openings created by harvest. Guideline FW-WL-GDL-06 constrains vegetation management on identified big game winter range in order to maintain or improve forage and provide for hiding and thermal cover. These components, in combination with other vegetation and wildlife desired conditions, would provide for habitat features, including hiding cover, required by wildlife. Refer also to the FEIS discussion in section 3.15.6, Elk-environmental consequences.

   Along with coarse filter plan components that would provide for the overall habitat needs of big game species and other wildlife, these plan components address the concerns raised in the comment.

e. Current measures of habitat security, based on definitions in the 1986 forest plans, are useful for determining compliance with standards in those plans and for providing one measure of existing condition. For these reasons they are provided in the FEIS at a scale appropriate to the scale of the 2020 Forest Plan, and in more detail in the project file. Measures differ between the former Helena and the Lewis and Clark portions of the HLC NF because of different standards within each of those (1986) plans.

   Definitions of habitat security, methodologies for measuring, and recommendations for managing security may change during the anticipated life of the plan based on new

science, interagency agreements, and other factors. The plan directs managers to work with MFWP biologists to evaluate and manage for habitat security based on local or area conditions or needs. The existing condition based on the 1986 plan definitions and standards is available in the project file and in HLC NF databases for use in developing management approaches as needed.

f. Refer to FW-FWL-GDL-01 which guides managers to work with MFWP to identify management actions where needed to reduce the potential for displacement of big game from NFS lands during the big game archery and rifle hunting seasons. Refer to Appendix C for possible management actions that could be used when implementing this guideline; these could include management of hiding cover, motorized access, or other approaches depending on the characteristics of specific areas.

g. Plan components for IRAs (e.g. FW-IRA-SUIT-01, FW-IRA-SUIT-03) constrain management actions in IRAs to those that will protect and/or enhance roadless area values and characteristics and the desired conditions of IRAs, which includes providing areas of unfragmented, secure habitat for wildlife (FW-IRA-DC-01).

h. Decisions regarding management of specific roads or trails are made in travel plan decisions or through site-specific analysis. Suggestions made in these comments are addressed through other planning processes (e.g. travel plans or site-specific decisions), through coarse-filter plan components that would provide wildlife habitat that includes forage and other required habitat characteristics (e.g. FW-VEGT-DC-02), move vegetation toward the estimated NRV that would include creating early seral forest (e.g. FW-VEGNF DCs, FW-VEGT-OBJ-01, FW-VEGF-DC-02, FW-VEGF-DC-08, FW-VEGNF-DC-03, and vegetation plan components for individual GAs). Wording of some plan components has been updated to address specific concerns expressed in some comments. Components regarding availability of big game during hunting seasons are in the Benefits To Humans section of the plan (FW-FWL-DC-01 and FW-FWL-GDL-01), the desired condition FW-FWL-DC-04 was added regarding large, connected, unroaded areas that provide for species that require seclusion or low levels of human disturbance; and a goal has been added (FW-FWL-GO-01) regarding collaboration between FS and MFWP.

    i. The term elk security is used both broadly and to refer to very specific combinations of vegetation and motorized access. The FEIS has been updated to clarify what is meant by "elk security" when it is referred to there.

       The functional definition of elk security is "the protection inherent in any situation that allows elk to remain in a defined area despite an increase in stress or disturbance associated with the hunting season or other activities" (Lyon & Christensen, 1992); refer to section 3.15.5 "Elk, affected environment", heading "Elk fall habitat" in the FEIS). The traditional concept of elk security habitat is aimed at providing adequate adult male elk survival while not limiting elk hunter opportunity (Proffitt et al., 2013). Elk security on the HLC NF is a management concept that applies a specified quantity and distribution of landscape features (vegetation and motorized access) to try to influence aspects of population sex and age structure and herd distribution, generally related to hunting opportunities and to population objectives established by MFWP (refer to section 3.15.5 of the FEIS, "Elk, affected environment", sections titled "Relationship to 1986 Forest Plans", "Elk fall habitat"). The 2020 forest plan does not establish specific levels of vegetation (e.g. cover), patch size, or distance from motorized access that would provide elk protection from vulnerability to hunting, but directs managers

to work with MFWP biologists to assess needs in specific areas at an appropriate scale, and develop management approaches that would achieve desired conditions. This area-specific approach is supported by management recommendations derived from the BASI (e.g. (Hillis et al., 1991), MFWP and USFS 2013, and others) to avoid strict adherence to specific published guidelines, and to use "knowledge of local conditions … and elk use patterns … in defining the security area parameters".

ii. Refer to plan component FW-WL-GO-01 and FW-WL-GO-02 regarding annual and project-specific meetings between FS and MFWP; these meetings could include review of travel management plans if desired or needed.

iii. See EIS discussion at start of Terrestrial Wildlife Diversity section regarding coarse-filter approach. See also section in 2020 Forest Plan on Plan Components: "forestwide components would apply to the GAs unless other direction is noted within the GA section. … The GA components allow us to focus on specific circumstances in specific geographic locations." With respect to wildlife, plan components are included in GAs only for species that occur only in that or a few GAs, and that require species-specific components to address specific risks presented by management or other activities.

See FW-WL-GDL-15, guiding management of habitat for native ungulates to be consistent with management of similar habitat on adjoining state or federal land, where that land is being managed to maintain wildlife values. This applies to NFS land adjacent to the Beartooth WMA, as well as to WMAs that adjoin NFS lands in other areas (e.g. the Blackleaf, Ear Mountain, Sun River, Spotted Dog, Judith River, and Haymaker WMAs).

We assume that "commercial hunting" in comment 1041-115 refers to permitted outfitter and guide operations. The table referred to in the comment lists river corridors with special emphasis designations and permitted areas that occupy a permanent mapped location on NFS land. Outfitter and guide operations do not occupy sites in a similarly permanent fashion. Outfitters are allowed use of identified sites for camps, but those may change annually or within a season depending on a variety of factors. There are no acreages associated with outfitter and guide permits nor do permits restrict hunting activity to specified areas. Permitted outfitting and guiding is addressed through plan components for Recreation Special Uses, including FW-RSUP-DC-02 and FW-RSUP-GDL-01.

iv. Plan component reads "The Elkhorns WMU… offers… nonmotorized recreation … consistent with its wildlife emphasis", which is the maintenance, restoration, enhancement, and restoration of wildlife and their habitats (EH-WL-GDL-01), and to maintain populations of native wildlife species with emphasis on those for which seclusion is an important requirement (refer to Elkhorns GA overview). Refer to plan component EH-WL-GDL that states "Management activities and permitted uses should be compatible with wildlife values, and/or should… avoid negative impacts to wildlife…"

B.

a. Refer to the updated information and analysis in the FEIS, specifically section 3.15.6 regarding environmental consequences, conclusions section. As discussed there, modelling estimates show that the amount of hiding cover would be the same under all alternatives at a forestwide and GA scale, influenced primarily by natural processes

rather than by management actions. The prevalence of hiding cover under all alternatives is a good indication that hiding cover, which contributes to elk security, would be present and available throughout the planning area with or without plan components to specifically manage for it. Alternative A would direct managers to continue managing for specific, numeric amounts of certain habitat components in the absence of defined and appropriate desired conditions, and focuses on management for the "tools" (i.e., mixes of cover and road density) rather than on the condition those tools are intended to achieve. The action alternatives (B,C,D,E, and F) would all direct managers to work toward achieving the desired condition (FW-FWL-DC-01) of elk availability to hunters on NFS lands during the archery and rifle hunting seasons. Alternatives B, E, and F include guidelines that provide more specific direction regarding maintenance of habitat security and/or management of motorized access. Because those guidelines would be applied with specific and potentially different methods (refer to Appendix C) in different areas and based on different proposed management actions, and because the standards in the 1986 forest plans (alternative A) are applied only when specific vegetation or travel management projects are planned, it is not possible to predict the amount or location of specific management actions at this programmatic planning level.

b. See other comments also related to travel planning. Although the forest plan does not make site-specific travel management designations, it provides guidance for future decision-making. Future travel planning will need to consider ROS direction, suitability plan components, and the full suite of wildlife-related desired conditions, standards, and guidelines. This would include consideration of guideline FW-FWL-GDL-01, which directs managers to work with MFWP regarding methods to reduce potential for displacement of big game species when considering actions that "would increase or change the location, timing, mileage, or density of wheeled motorized routes open during the archery and rifle hunting seasons".

c. The 2020 plan includes direction for management of activities that occur on NFS lands at a broad, programmatic level. Discussion of potential impacts to elk of various management and recreational activities is discussed broadly in the FEIS. That discussion includes, in section 3.15.5 (Elk - affected environment), an overview of past and current management issues with respect to elk and other big game species. Elk hunting is discussed as the primary factor influencing mortality of elk, and as a key factor influencing the movement and distribution of elk in some areas during the archery and rifle hunting seasons. However, human access and activities of all types may disturb elk or displace them from various habitats to varying degrees. Therefore the 2020 plan includes components that direct managers to minimize potential actions that could disturb or displace elk and other species from key seasonal habitats at times of year when those habitats are used by those species.

d. Refer to section 3.15.3 "Assumptions", which has been updated, and to 3.15.5 of the FEIS, "Elk, affected environment", subsections titled "Relationship to 1986 Forest Plans" and "Elk fall habitat", including the discussion of what is meant by "elk security" (see also response to 1h.ii.). The traditional concept of elk security habitat is aimed at providing adequate adult male elk survival while not limiting elk hunter opportunity (Proffitt et al., 2013). The 1986 Helena NF plan indicated that road management was to "at least maintain big game habitat capability and hunting opportunity", but specific standards for elk security were included in order to "provide for a first week bull elk harvest that does not exceed 40 percent of the total bull harvest".

   Because the elk security standard was specifically to provide for hunting opportunity, it is appropriate to use a measure of that opportunity as an indication of whether the purpose

of the standard is met, as discussed in the FEIS, (section 3.15.5 "Elk, affected environment", subsection "Indicators and scale of analysis"). Hunter days are not intended to be a measure of big game security itself, which as can be measured directly (see FEIS section 3.15.5 "Elk, affected environment", subsection "Relationship to 1986 Forest Plans and seasonal habitat in the plan area; elk fall habitat" and project file documents), but rather an indicator of whether implementation of a security standard is achieving its intended outcome (desired condition). The desired conditions for elk numbers and hunting opportunity included in the 1986 Helena NF plan were based on goals developed by MFWP in 1978. The 1986 Helena plan used "hunter visitor days" as an indicator with which to compare potential outcomes of plan implementation (refer to 1986 Helena NF plan, page V5). This measure does not provide information regarding the means by which hunting opportunity has been maintained but gives insight into whether continued measures aimed at providing hunting opportunity may be warranted.

Compliance with the 1986 Helena NF security standard and with hiding cover standards in both 1986 plans is reported in the FEIS, 3.15.5 "Elk, affected environment", subsections titled "Relationship to 1986 Forest Plans" and "Elk fall habitat". However, compliance with these standards and the information provided in the FEIS about existing and predicted levels of hiding cover do not tell us whether the desired amount and type of elk harvest has been achieved. Measures of hiding cover and security also not reliable indicators of overall elk or big game availability to hunters or elk distribution on public lands during the hunting season, both of which are important management issues.

Data is not available that would enable measuring whether the desired condition regarding bull elk harvest has been met in areas where the standard has been implemented or where it has not (refer to section 3.15.5 of the FEIS, "Elk, affected environment", subsections titled "Elk habitat status", and "Relationship to 1986 Forest Plans…" and to the project file document "Elk status and information" for current measures of compliance with the 1986 plans). Hunter-days are, as the commenters noted and as discussed in the FEIS (section 3.15.5 "Elk, affected environment", subsection "Indicators and scale of analysis"), dependent on a number of factors and are not a direct measure of whether the desired type of harvest has been achieved. As discussed in the FEIS, this measure provides one of the only available indicators of whether hunting opportunity has been maintained on HLC NF lands and whether that opportunity will continue under the 2020 Forest Plan.

e. Refer to the FEIS section 3.15.5, Elk- affected environment, for updated information and discussion about current management issues regarding elk. The discussion found there addresses the changing history of elk management concerns since the 1986 plans were written. The information there includes discussion of recent research findings regarding the influence of differing levels of hunting pressure, as well as forage, cover, and other factors that influence elk movements and distribution during the hunting season. Recognizing this key issue, the FS worked closely with FWP biologists and managers to develop a desired condition and guideline that directly address the issue of elk displacement from, and availability on NFS lands during the archery and rifle hunting seasons.

C. The 2020 plan includes components that guide vegetation management to provide for the habitat needs of native wildlife species and their movements, and that establish desired conditions for habitats to provide the life/natural history requirements of native and desired non-native species, and that allow wildlife to move within and between NFS parcels in response to habitat needs and other factors. The plan also includes desired conditions that key seasonal habitats, including ungulate winter ranges, are relatively free from human disturbance during the period in which

those habitats are used by those species. In addition to desired conditions that managers must achieve and/or maintain, the 2020 plan includes components providing additional guidance that would constrain management actions and other activities in key seasonal habitats in order to avoid disturbance and displacement of ungulates, and to ensure that habitat features such as forage and cover are available in those areas.

CR58 Monitoring Wildlife

Supplemental Concern Statements:

A. 285-96: The FIA intensified grid would be an appropriate data source for some wildlife modeling, including flammulated owls. Should flammulated owls be monitored in places other than the Elkhorns and Upper Blackfoot GAs?

B. 1041-151: Monitoring for wildlife should be conducted at the GA level.

C. 285-97: The monitoring is inadequate for elk security and does not fully address the desired condition; the method for monitoring elk should be developed with MFWP.

D. 625-6: The monitoring plan does not provide the examples and detail requested by commenters during the proposed action, including old growth, elk hiding cover, elk fall security, winter range thermal cover, moose and mule deer forage and winter range, road and trail density in fall habitats, and calving/fawning and nursery areas.

E. 625-6: Will Montana Cooperative Elk-Logging Study Recommendations continue to be applied?

F. 1041-117: Some wildlife monitoring metrics will not capture the information needed. MFWP suggests specific edits to a variety of wildlife monitoring elements.

Supplemental Responses:

A. 285-96: The FIA intensified grid is included as a possible data source for many monitoring elements. The monitoring plan has been updated to incorporate monitoring of flammulated owl habitat in the Big Belts, Divide, Elkhorns, and Upper Blackfoot GAs, all of which are within the known distribution of the species. Specific monitoring methods are not identified in the monitoring plan to allow flexibility to adapt methods to changing science, technology, and information, but FIA information has been a useful data source for monitoring flammulated owl habitat in the past and would be considered for future use as well.

B. 1041-151: The appropriate scale to monitor wildlife habitats depends on the species. Coarse filter vegetation attributes (which inform wildlife habitat monitoring) have been added to the desired conditions for GAs in the revised plan, along with associated monitoring at that scale. The monitoring plan identifies the scale at which monitoring should occur.

C. 285-97: The desired condition for elk that is relevant to the comment involves the availability and distribution of elk on NFS land during the hunting season. Hunter-days were discussed in the 1986 forest plans and are referred to in the FEIS as one indicator of the hunting opportunity provided by those plans, but hunter-days are not included in the 2020 Forest Plan monitoring plan for reasons discussed in the FEIS. Past monitoring has focused on quantifying habitat identified as 'secure' (Helena NF) or as providing hiding cover in project areas (Lewis and Clark NF). As discussed in the FEIS, measurement of these items only provides information about the "tool" (i.e. habitat management) rather than about whether that tool or other management has been successful in achieving the desired outcome (i.e. elk distribution and retention on NFS lands). Elk distribution is dynamic, and the FEIS identifies numerous factors that influence elk distribution and availability during hunting seasons. Goal FW-FWL-GO-01 ensures that the FS will work with MFWP to identify management issues and needs to help achieve the desired condition of retaining elk on NFS land during the hunting season. MFWP monitors elk numbers, distribution, hunter success, and other items that may be used to inform habitat and resource management on NFS lands related to desired conditions for elk.

D. 625-6: Refer to item C for discussion of monitoring relative to elk and big game security and distribution during hunting season. The monitoring plan has been updated to include measures of habitat connectivity in areas identified in the 2020 Forest Plan, measures of broad-scale habitat security, and measures of potential for disturbance (including measures of motorized access) in ungulate winter ranges. As directed by the 2012 planning rule, the forest took a coarse-filter approach to providing ecosystem integrity and wildlife habitat needs (refer also to comments regarding the coarse filter approach, and to wildlife species in general). The coarse filter plan components are largely found in the Terrestrial Vegetation section of the 2020 Forest Plan and provide for the key ecosystem characteristics required by most native and desired non-native wildlife species. Monitoring of these characteristics is identified in the vegetation sections of the monitoring plan.

E. 625-6: The Montana Cooperative Elk-Logging Study Recommendations, published in 1985, are not explicitly included in the 2020 Forest Plan.

F. 1041-117: The wildlife elements of the monitoring plan have been updated for the FEIS in consideration of internal and external comments.

CR73 Wildlife – Connectivity/migration

Supplemental Concern: Commenters thought that the draft forest plan should provide specific direction for and recognize the importance of wildlife migration corridors and connectivity needs across the landscape. These concerns were for both general and specific wildlife connectivity needs, and can be summarized as follows:

A. Plan and EIS general/overarching concerns
B. Connectivity for ungulate seasonal movement needs
C. Roles of specific areas in providing connectivity
D. Role of non-NFS lands in connectivity
E. Role of plan components for other (non-wildlife) resources in providing connectivity
F. Other concerns

Supplemental Responses: Please refer also to CR275: wildlife-grizzly bear connectivity and habitat, and to FEIS section 3.14.5 and 3.14.6 for details about connectivity on the HLC NF. That section of the FEIS, while specifically emphasizing grizzly bear habitat issues, also discusses the existing condition and effects of the plan and alternatives on habitat connectivity for most wide-ranging species that occur on the HLC NF. The FEIS has been updated to include discussion of plan components that were added as a result of comments, and to provide additional analysis.

A. The Forest considered where large areas of mostly undisturbed land were available to provide connectivity for multiple species when considering potential land designations and developing plan components to support connectivity. This analysis was largely qualitative but took into account published maps of key connectivity areas (e.g. (Montana Fish Wildlife and Parks, 2011; Peck et al., 2017). Section 3.14.5 (FEIS) describes literature on connectivity specific to grizzly bear, and section 3.14.6 describes how areas that serve as a corridor for this large and wide-ranging species also support connectivity for other wildlife. A similar description is included for lynx in sections 3.14.7 and 3.14.8.

B. One commenter suggested specific focus on ungulate habitat and migration needs. Forestwide desired condition FS-WL-DC-02 identifies the need to provide for the life history requirements, which includes access to seasonal habitats, of wildlife species on NFS lands, and FW-WL-DC-03 identifies the need for habitats to provide for movement of wildlife "within and between NFS parcels in response to seasonal habitat needs". The latter desired condition includes consideration of the need for wildlife to respond to long-term changes such as climate change. Guideline FW-WL-GDL-14 promotes consistency in management for wildlife across ownership boundaries, where possible; this guideline would contribute to connectivity between seasonal habitats, such as

between summer habitats on NFS lands and winter range on adjoining state or other lands. Specific consideration was given to connectivity between seasonal habitats for species such as elk, deer, bighorn sheep, and mountain goats in some GAs; HI-WL-DC-01 and LB-WL-DC-01 express a desire for connectivity along natural landscape features in the Highwoods GA and Little Belts GA. Forestwide plan components aimed at providing high quality forage for big game also contribute to habitat connectivity for these species.

C. Some commenters noted the importance of specific locations in providing wildlife connectivity, and these largely align with land allocations and plan direction designed to support connectivity. Designations that are not changed by forest plans (designated wilderness, WSAs, IRAs) contribute to connectivity in certain areas, including in places such as the Rocky Mountain Range GA, Big Belts GA, and the Little Belts GA (Middle Fork Judith River area). Identification of RWAs in some alternatives was based to the extent possible on published maps and literature (e.g. (Belote, Cooper, & Daniels, 2017; Montana Fish Wildlife and Parks, 2011; Peck et al., 2017) and other information regarding known or potential connectivity areas among NFS lands; for example the Nevada Mountain RWA included in some alternatives has been identified as having value to wildlife security and connectivity.

   Based in part on consideration for grizzly bear and lynx as well as other wildlife and in response to comments, the 2020 forest plan recognizes the Rocky Mountain Range GA, Upper Blackfoot GA, Elkhorns GA, Big Belts GA, Crazies GA, and Divide GA as being important for wildlife connectivity and includes desired conditions to support this role. Commenters mentioned the Rocky Mountain GA, the MacDonald pass area (part of the Divide GA), and the area south of Lincoln (part of the Upper Blackfoot GA); desired conditions UB-WL-DC-01, DI-WL-DC-01, and RM-WL-DC-01 support the important role that these areas play in providing habitat connectivity between northern Montana and the Greater Yellowstone Ecosystem. Guideline UB-WL-GDL-01 provides specific direction for maintaining connectivity in the area surrounding Highway 200. Guideline DI-WL-GDL-01 was updated in response to comments to provide additional direction for maintaining connectivity near Highway 12.

   Some recreation opportunity setting (ROS) categories, such as primitive and semi-primitive nonmotorized categories, contribute to connectivity at varying scales; these categories in most areas align with existing blocks of unroaded habitat with lower levels of human use that may support animal movement within and between NFS lands.

D. Because the HLC NF comprises widely separated island mountain ranges, connectivity is also greatly affected by management of non-NFS lands between those mountain ranges. Although in some areas the distance between patches of NFS land is very large (i.e., >60 miles), in other areas connectivity may be facilitated by interaction among the FS and other agencies and landowners. To address the role of non-FS land in connectivity, FW-RT-GO-03 promotes a collaborative approach to protecting wildlife movement corridors forest-wide through coordination with highway managers and other landowners, FW-WL-GO-04 promotes interagency coordination to facilitate movement between different national forest system parcels, DI-WL-GO-01 addresses acquiring additional land to enhance connectivity, and desired condition Z1-NCDE-DC-02 promotes efforts to reduce connectivity barriers associated with highways. Guideline FW-WL-GDL-14 promotes consistency in management for wildlife across ownership boundaries, where adjoining lands are managed to promote wildlife values.
E. Because connectivity is such an overarching concept, discussion of how various plan components contribute to habitat connectivity is included in multiple sections of the FEIS beyond just wildlife. For example, section 3.8.6 describes how the suite of vegetation desired conditions addresses connectivity by promoting habitat conditions across the forest that support a wide range of wildlife species. FW-VEGT-DC-04 is intended to promote connectivity for the expressed

purposes of allowing genetic interchange and allowing for range shifts in response to climate change. Section 3.5.6 of the FEIS describes how plan components associated with riparian management zones contribute to wildlife habitat connectivity. Desired condition FW-RZ-DC-02 was updated in response to comments reflecting the role that Riparian Management Zones play in providing connectivity for terrestrial wildlife species. Guideline FW-RMZ-GDL-12 constrains management activities in RMZs in order to protect several riparian features and processes, including "aquatic and terrestrial habitat connectivity".

F. One commenter requested the inclusion of connectivity standards and guidelines similar to those in appendix A of the Flathead NF Plan; these come from the Northern Rockies Lynx Management Direction and are also retained in the 2020 Forest Plan (appendix F). Direction promoting habitat connectivity for lynx will also benefit a variety of other wildlife species.

Some commenters expressed a desire for more standards and guidelines related to connectivity. The suite of plan components related to connectivity, including existing standards and guidelines as well as desired conditions, suitability, objectives, and land designations, is sufficient to provide for habitat security and connectivity at a wide range of spatial scales. The Forest added the desired condition FW-WL-DC-04 to have large, unroaded areas distributed and connected forestwide that would provide connectivity and security for many species at a broad scale.

Some commenters requested that maps be provided showing barriers to connectivity and/or identifying existing linkage areas or connectivity areas. The Forest relied on published maps and other information (e.g., (Montana Fish Wildlife and Parks, 2011; Peck et al., 2017); (Belote et al., 2016) and others to identify areas where connectivity needs may be greater or where opportunities exist to maintain or enhance existing connectivity. Connectivity is a broad need that exists across diverse scales from small local area patch connectivity to broad needs across large landscapes. Within a particular scale, such as the broad landscape, the needs of different species vary greatly, as displayed in documents such as the Montana Connectivity Project (Montana Fish Wildlife and Parks, 2011). Connectivity analyses and identification of barriers and potential linkage areas, such as those incorporated into the CGNF plan revision process (Williamson, Creech, Carnwath, Dixon, & Kelly, 2020) or discussed in efforts such as that of Peck et al. (2017) may indeed be useful, although they are limited by the need to make broad assumptions that may not be valid across all species or groups (Williamson et al., 2020), and in some cases may not be adaptable to landscape-level disturbances such as fire, climate change, etc. The 2020 HLC NF plan and alternatives provide direction for managers to identify and manage for connectivity in key areas, habitats, and for certain species; the process of implementing that direction could include use of models, maps, or other tools to identify specific areas to focus efforts or to analyze effects of actions during the planning of projects and activities.

CR119 Wildlife- Plan Components

Supplemental Concern Statements:

A. 410-17, 575-2, 586-17, 625-1, 625-25, 802-6, 1015-7, and 1090-57: There should be more defined and enforceable standards and other plan components for wildlife in the 2020 Forest Plan. The plan components presented for the DEIS, including those for vegetation and timber, are insufficient to provide for adequate wildlife habitat. There is a lack of specific/adequate wildlife direction for some GAs.

B. 625-35, 625-67, and 1090-61: The 2020 Forest Plan should address timing restrictions for human uses in wildlife habitats. A specific suggestion for timing limitations on mechanized trails in IRAs was provided. Another suggestion was made regarding limits on activities in bighorn sheep lambing and winter ranges.

C. 1010-5: The 2020 Forest Plan must emphasize weed and grazing management in order to achieve wildlife desired conditions.

D. 1041-32: More specific desired conditions should be developed for wildlife and wildlife habitat, so that the difference between existing and desired conditions can be disclosed. The plan needs more specific direction for wildlife overall.

E. Specific plan component edits are suggested as follows.

   a. 285-81: Re-word EH-WL-STD-01.

   b. 625-7: Clarify what "retained direction" is. Please retain wildlife standards 1 through 9 from the 1986 Forest Plan.

   c. 625-47: All wildlife plan components should be consolidated into one section.

   d. 791-1, 791-2, 791-3, 1081-105, 1081-111, 1084-3, and 1090-59: Please identify important wildlife linkages and includes standards/guidelines to protect and restore them. Coordinate this management with neighboring National Forests. Please apply DI-WL-DC-01 to the entire Forest.

   e. 791-5: Please apply FW-FAH-GO-05 to the wildlife section.

   f. 791-9: Additional guidelines are needed to reduce human-wildlife conflicts.

   g. 804-35: Plan components related to beaver should be expanded to address non-lethal management techniques and emphasize coordination across agencies.

   h. 1028-9, 1028-10: Add specific plan components related to grizzly bear.

   i. 1041-7: Please replace the "no net loss" phrasing with "maintain and/or enhance."

   j. 1041-25: FW-VEGT-DC-02 is worded too broadly - more specific direction is needed and should be targeted to groups of wildlife species.

   k. 1041-70: The USFS should add Guidelines for timber harvest that are compatible with the creation of wildlife habitat. Please reference literature related to leaving standing dead/cavity trees for cavity-nesting birds, and brush piles and downed woody debris for habitat for amphibian, reptiles, and small and mid-sized mammals.

   l. 1041-72: Guidelines should be added regarding timber harvest recommendations for tree roosting bats.

   m. 1041-41, 1041-44: There should be a guideline corresponding to FW-WL-DC-03 regarding wildlife movement within and between NFS parcels

   n. 1041-43: Suggestion to incorporate national and state guidelines for bald and golden eagle management as plan components.

   o. 1041-46: Recommendation that FW-WL-GDL-01 be a standard rather than a guideline

   p. 1041-47: Suggest re-writing guideline; minimizing risk of wildlife becoming habituated to human food should always occur, not just during management activities.

   q. 1041-56: Suggestions for plan components to address potential impacts of float planes or other recreational activities on wildlife in sensitive habitats.

   r. 1041-70: Include guidelines for timber harvest that are compatible with the creation of wildlife habitat.

   s. 1041-141: Concerns regarding inclusion of GA specific plan components for some but not all GAs, and regarding very few wildlife habitat issues.

t. 1081-65: Statements regarding habitat considerations applied at the project level are untrue unless supported by specific plan components requiring them.

u. 1081-86, 1081-87, 1081-11: Suggestions to add components to reduce/minimize conflicts between wolves and livestock, and grizzly bears and livestock.

v. 1081-93: Include specific components to reduce potential disturbance of wolves at den or rendezvous sites.

w. 1159-76: Include specific fine-filter plan components for flammulated owls beyond "optional" desired conditions.

x. 1159-81, 1159-82: Why does the plan include standards for species (e.g., western toad, harlequin duck, raptors) that are not focal, MIS, SCC, or otherwise designated as at-risk?

y. 1159-124, 1159-127: Include plan components for fisher habitat and for northern goshawk habitat and monitoring.

Supplemental Responses:

A. Refer to response to CR 136 (Wildlife - Coarse Filter/Fine Filter) and to CR 44 (Wildlife- Big Game Plan Components and Analysis). Coarse filter plan components include vegetation desired conditions that are clear, specific, and measurable and would provide for the habitat needs of native wildlife species in the plan area. Fine filter plan components are included where specific needs are not met by coarse filter components. Standards and guidelines are required constraints; guidelines differ only in that they allow departure from their terms, so long as the purpose of the guideline is met (36 CFR 219.7 (e)). Use of guidelines in the plan allows managers flexibility to use new science and recommendations for managing wildlife habitats and to adapt to changing conditions on the ground. Coarse filter plan components are included at the forestwide level and based on internal and public comments were also included at the GA level for some vegetation characteristics. These desired conditions and other plan components provide for the habitat conditions needed by most native and desired non-native wildlife species at the forestwide scale and by individual GA. Other plan components specific to wildlife species, groups of species, or habitats are included at the forestwide scale and therefore would apply in all GAs. Where needed, GA-specific plan components for certain species or habitats are included in the 2020 Forest Plan.

B. Refer to plan components FW-WL-DC-04, FW-WL-DC-06, FW-WL-GDL-05, and FW-WL-GDL-10. The plan allows managers flexibility to choose specific management actions or to restrict specific activities based on individual species' needs, season, location, and other factors.

C. The 2020 Forest Plan contains an array of plan components designed to minimize the extent and spread of invasive plants, as well as to manage livestock uses on the HLC NF.

D. Per the coarse filter/fine filter approach prescribed in the 2012 planning rule and associated directives, the habitat needs for most wildlife would be provided by the array of quantitative Terrestrial Vegetation desired conditions in the 2020 Forest Plan. The 2020 forest plan and coarse-filter analysis address key ecosystem characteristics, including composition, structure, function, and connectivity. As such, the vegetation analysis of desired conditions as compared to existing conditions would apply broadly to the habitat conditions that are needed to support native wildlife diversity. The species-specific analyses in section 3.15 of the EIS considered human alterations to the environment such as roads, and plan components placing limits on human alterations were included as needed to conserve at-risk wildlife species. See also response to CR 44, 1e, specifically regarding habitat security for elk and other big game species, response to CR 136 regarding the coarse filter/fine filter approach, and response to CR 277 regarding wildlife species viability.

E. Responses to specific suggestions regarding individual plan components:

a. The component has been reworded based on this and other comments. See also response A above, and response to CR145.

b. Language in the 2020 Forest Plan language has been edited to clarify that certain prior decisions, such as the 2007 Northern Rockies Lynx Management Direction, have been retained unchanged in the 2020 Forest Plan.

c. Most plan components pertaining to wildlife and habitats are within the "Wildlife" section of the 2020 Forest Plan. Some components would maintain or protect wildlife habitat by constraining specific activities commonly carried out as part of management of other resources, so those components are found within the sections that pertain to management of those other resources. Plan components that relate to management of secure habitat for elk are included specifically for the purpose of influencing elk distribution to provide for various types of human enjoyment (e.g. hunting and viewing) and are not related to viability of elk populations. Therefore, those components are appropriately found in the "Benefits to People" section of the plan, along with other plan components for management of resources for human use and enjoyment. See also response to CR44, 1c.

d. See also the response to CR73 and CR275 (connectivity), which discuss the information used to identify potential RWAs and primitive ROS areas in alternatives. The 2020 Forest Plan includes several components regarding identification and management of connectivity and linkage areas both forestwide and for specific GAs. Additionally, the amount and distribution of primitive and semi-primitive non-motorized ROS categories as well as RWAs would contribute to connectivity at varying scales. See also FEIS section 3.14.6 Terrestrial Wildlife Diversity Environmental Consequences. Refer to response to CR99 - Grizzly Bear Conservation Strategy and Amendment, item f, for discussion regarding suggestions to include plan components for grizzly bear linkage or connectivity in zones 2 and 3.

e. The 2020 Forest Plan includes components that address interagency collaboration for the purpose of identifying wildlife habitat concerns and developing management strategies for addressing those needs.

f. The plan includes several components that address the need to minimize conflicts between wildlife and humans. Guideline FW-WL-GDL-02 has been re-worded to better help managers achieve the purpose of reducing the risk of wildlife becoming habituated. In addition to those noted in the comment are a goal regarding public education and outreach, and several components in the Northern Continental Divide Ecosystem Grizzly Bear Habitat Management Direction section of the 2020 plan that would require implementation of food storage orders throughout the Rocky Mountain Range, Upper Blackfoot, Divide, Elkhorns, and Big Belts GAs.

g. See also the response to CR119 Wildlife-Beaver Habitat. See updated plan component FW-WTR-DC-09 and FW-WTR-GDL-01 and added guideline FW-WTR-GDL-03. The latter guides managers to use techniques that will sustain beaver presence when using management actions that reduce beaver threats to infrastructure. Goal FW-WTR-GO-04 was also added, directing managers to work cooperatively with MFWP regarding beavers to manage aquatic habitat quality.

h. Plan components for terrestrial vegetation and for at-risk plants address the desire for increases in presence and abundance as well as restoration of whitebark pine forestwide and in both the Rocky Mountain Range and Upper Blackfoot GAs, which are within the PCA and Zone 1 for grizzly bears. Plan components retained from the 2018 Forest Plan

Amendments to Incorporate Habitat Management for Grizzly Bears in the NCDE address desired conditions and management of vegetation needed to sustain recovery of grizzly bears. Plan components retained from those amendments into the 2020 Forest Plan also address management of minerals and energy exploration and development in the PCA and Zone 1 to reduce or mitigate potential impacts to grizzly bears.

i. Refer to 2020 Forest Plan; some components re-worded to include language such as "maintain or improve" (e.g. FW-WL-GDL-06) or similar.

j. Plan component referred to is now FW-VEGT-DC-03. The desired condition is not exclusive to wildlife, but also to plant, fish, and invertebrate species. Coarse filter plan components that would support species associated with various habitat types and characteristics are in the forested (VEGF) and non-forested (VEGNF) vegetation sections of the plan. Fine filter plan components are included where specific needs are not met by coarse filter components.

k. The Forest Plan contains Desired Conditions and Guidelines that provide for standing dead/cavity trees for cavity-nesting birds and downed woody debris for habitat for amphibian, reptiles, and small and mid-sized mammals (FW-VEGF-DCs; FW-VEGF-GDLs). The Forest Plan does not specifically address retention of brush piles during timber harvest activities; however, the Plan does not preclude use of such mitigation measures. Refer also to comments specifically regarding old growth, snags, and coarse woody debris, and to the FEIS sections in which those are discussed.

l. The Forest Plan contains guidelines to avoid disturbance to bat habitat, including roost trees, during management actions.

m. See responses to CR73 Wildlife Connectivity, and CR275 Grizzly Bear Habitat and Connectivity. The Forest considered where large areas of mostly undisturbed land were available to provide connectivity for multiple species when considering potential land designations and developing plan components to support connectivity. Specific consideration was given to connectivity between seasonal habitats for species such as elk, deer, bighorn sheep, and mountain goats in some GAs (HI-WL-DC-01 and LB-WL-DC-01). The 2020 forest plan recognizes the several GAs as being important for wildlife connectivity and includes desired conditions to support this role. Desired conditions UB-WL-DC-01, DI-WL-DC-01, and RM-WL-DC-01 support the important role that these areas play in providing habitat connectivity between northern Montana and the Greater Yellowstone Ecosystem. Guideline UB-WL-GDL-01 provides specific direction for maintaining connectivity in the area surrounding Highway 200. Guideline DI-WL-GDL-01 was updated in response to comments to provide additional direction for maintaining connectivity near Highway 12.

n. Law, regulation, and policy are not to be restated in land management plans. The plan includes goals to coordinate with other agencies regarding management of wildlife and habitats. Guidance in Appendix C provides information about how plan direction could be implemented, including reference to working with other agencies, using BASI, etc.

o. Under the 2012 planning rule and updated directives, guidelines are required constraints that allow departure from their terms so long as the purpose of the guideline is met. The purpose of this guideline can be met through a variety of potential management approaches.

p. Plan components cannot be written to compel action. Forest plans provide the framework by which NFS lands are managed, by allowing certain activities or constraining certain management actions to achieve desired outcomes. The desired condition FW-WL-DC-05

is for wildlife-human conflicts to be rare. FW-WL-GDL-02 has been reworded in the 2020 forest plan to clarify intent; it constrains management actions as one part of moving toward the desired condition.

q. This concern is addressed in FW-WL-DC-06 and FW-WL-GDL-05, 09, 10, and 12 regarding minimizing disturbance to wildlife in key seasonal habitats.

r. See also response to D above. This suggestion was not specifically incorporated; numerous plan components support maintenance and creation of wildlife habitat during vegetation management activities, including timber harvest. At a coarse filter level, desired conditions for vegetation that are based on NRV would maintain or move habitats toward conditions that provide the key ecosystem characteristics required by wildlife. In addition to vegetation desired conditions, the 2020 forest plan includes desired conditions to specifically provide for wildlife habitat through vegetation structure, composition and distribution (FW-WL-DC-02), to allow for wildlife movement (FW-WL-DC-03), and others. At a finer scale, the 2020 plan includes desired conditions to provide for cover on winter ranges (FW-WL-DC-07 and FW-WL-GDL-06), for Canada lynx habitat needs (FW-WL-DC-09). It also includes constraints on maximum opening size created by harvest (FW-TIM-STD-08 and 09), requires harvest activities to move the Forest toward achieving vegetation desired conditions (FW-TIM-GDL-01), and provide habitat for species associated with burned habitats (FW-TIM-GDL-03).

s. In response to this and other comments, and discussion with FWP Area Biologists, some GA-specific plan components were included where they were not already addressed by forestwide or other GA-specific components.

t. The 2020 Forest Plan is a framework programmatic action that provides the overall direction and constraints for management of NFS lands. The plan was developed in compliance with the 2012 Planning Rule, relying on coarse filter plan components that are clear, specific, and measurable and would provide for the habitat needs of native wildlife species in the plan area. Fine filter plan components are included where specific needs are not met by coarse filter components. Refer to response #1 above, and to CR 136 for additional information.

u. No component was added, refer to responses to CR99- Grizzly Bear Conservation Strategy and Amendments regarding plan components for grizzly bears and livestock; see also 2020 forest plan section: NCDE Grizzly Bear Habitat Management Direction for specific components regarding minimizing conflicts between grizzly bears and livestock.

Wolf-livestock conflicts are generally different in nature than grizzly bear-livestock conflicts. Grizzly bears rarely prey on livestock on NFS lands but are drawn to carcasses; no grizzly bears have been removed from the NCDE grizzly bear population as a result of conflicts with livestock on NFS lands (see FEIS grizzly bear section). Provisions in food storage orders in the PCA and Zone 1 require reporting of carcasses in order to promote public safety and minimize potential bear-human conflicts related to livestock carcasses on NFS lands. These provisions are not likely to affect the potential for wolves to prey on livestock, as wolves are opportunistic predators. The majority of wolf depredation incidents on livestock occur on private lands (Inman et al., 2019). Wolves are considered a "species in need of management" in Montana and are managed by the State of Montana according to the Montana Wolf Conservation and Management Plan (http://fwp.mt.gov/fishAndWildlife/management/wolf/management.html), which includes direction for minimizing and managing conflicts with livestock on both public and private lands.

v. This concern is addressed in plan components FW-WL-DC 06 that says key seasonal habitats, including nest and den sites, are relatively free of human disturbance.

w. Desired conditions are not optional but are descriptions of specific conditions toward which management of the land and resources should be directed. Individual management actions may not achieve desired conditions, but they must not preclude achieving them. Desired conditions for flammulated owl habitat in the 2020 forest plan, along with plan components for several vegetation characteristics, would require managers to work toward achieving conditions that provide habitat for flammulated owls. These components would be supported by a monitoring requirement (MON-WL-03) to assess the status of flammulated owl habitat so that management can be adjusted if needed.

x. Refer to the introduction to the Wildlife section of the 2020 Forest Plan. Some plan components are specific to individual species or groups of species for whom plan components may be necessary to address specific risks presented by management or other activities, regardless of species' status.

y. As discussed in the Assessment and in the documentation for SCC, the HLC NF does not have enough fisher habitat to support persistence of a fisher population in the plan area or to contribute to fisher populations within a larger area. The Assessment and documentation for SCC also provide information about the status of northern goshawk in the plan area. Coarse filter plan components would ensure that habitat for northern goshawks is maintained at levels that would sustain persistence of the species in the plan area.

CR261 Wildlife/Vegetation – Focal Species

Supplemental Concern Statement:

A. 410-37, 1159-102, 1159-104: The revision documents to not adequately provide rationale for the selection of focal species. Additional wildlife species would be suitable as focal species. It appears the selections were made to justify logging. The FS should include all current sensitive species, SCC, and TE&S and candidate species, as well as others whose habitat are not represented by those, as focal species.

B. 410-37: It is not clear why the indicator species for the HLC NF were deleted for the next planning period; or how these species fared during the previous planning period. Why are the no longer sensitive to forest management actions?

C. 13-7, 1159-102, 1159-332, 1159-345, and 1159-347: What is the purpose of having limber pine as a focal species rather than whitebark pine - or a species of economic importance? Why are we focusing on limber pine, and a xeric ecotone plant community? How does monitoring limber pine serve the purpose of understanding forestwide ecological sustainability, especially when the future modeling projects very little change between alternatives? The EIS does not provide a cumulative effects analysis of how past actions have impacted the abundance, distribution, and health of limber pine.

D. (1159-83) Concern regarding lack of information in DEIS evaluating "focal species" data on distribution, population status, and other factor

Supplemental Responses:

A. 410-37, 1159-102, 1159-104: Limber pine has been dropped as a focal species. The difficulty in monitoring a vast and diverse suite of wildlife species was considered in development of the coarse filter approach to habitat and ecosystem management (Schultz et al. 2013). In reviewing FS approaches to forest planning, a panel of experts concluded that "[s]cientifically valid and pragmatic management does not require that the status of all species be directly assessed", and

that the combination of coarse-filter and fine-filter approaches is "scientifically credible", particularly when supported by some level of population analyses for focal species and species at risk (Noon, Murphy, Beissinger, Shaffer, & DellaSala, 2003; Schultz, 2012). The planning rule requires selection a minimum of one focal species, the purpose of which is to "permit inference to the integrity of the larger ecological system to which it belongs and provides meaningful information regarding the effectiveness of the plan… Focal species would be commonly selected on the basis of their functional role in ecosystems." (Federal Register Vo. 77, N0, 68, Monday, April 9, 2012, p. 21271). The focal species for the HLC NF 2020 Forest Plan were selected in a manner consistent with FSH 1909.12, Chapter 30, Section 32.13c. Monitoring of key ecosystem characteristics, focal species, and specific fine-filter components of at-risk species habitat requirements as identified in the monitoring plan (Appendix B to the 2020 forest plan) would provide information regarding the effectiveness of the plan in providing the ecological conditions necessary to maintain the persistence of native species in the plan area.

B. 410-37: In past forest plans, identification of Management Indicator Species (MIS) was intended to provide information about the ecosystems on which they depend, and MIS were to serve as surrogates for the status of a broader suite of species that rely on similar habitats. Use of MIS is a concept no longer supported by current science and population trends of identified MIS are "difficult and sometimes impossible to determine within the lifespan of a plan." (Federal Register Vo. 77, N0, 68, Monday, April 9, 2012, p. 21175). Monitoring of key ecosystem characteristics, focal species, and specific fine-filter components of at-risk species habitat requirements as identified in the monitoring plan (Appendix B to the 2020 forest plan) would provide information regarding the effectiveness of the plan in providing the ecological conditions necessary to maintain the persistence of native species in the plan area. See also response to item 1 above.

   Information regarding the requirements, threats, and stressors for a variety of species considered in the planning process and the FEIS were discussed in the 2015 HLC NF Assessment. That information was supplemented by additional science or other information as available in order to develop plan components and the analysis included in the FEIS (sections 3.13 and 3.14.11). Additional information about terrestrial wildlife species' habitat needs considered in the planning process is in Appendix D of the FEIS and in the project file.

C. 13-7, 1159-102, 1159-332, 1159-345, 1159-347: In the DEIS, the xeric ecotone plant community was selected as an important ecosystem component for monitoring because it is a key feature on the HLC NF, representing the transition from forested to nonforested plant communities, which has experienced conifer recruitment during the era of fire exclusion, and for which future conditions given a changing climate are uncertain. Limber pine was selected as a focal species in the DEIS. However, based on public and internal discussions, limber pine was dropped as a focal species in the FEIS. This is because its presence alone is not necessarily an indication of ecotone health.

   The focal species for the HLC NF 2020 Forest Plan were selected in a manner consistent with FSH 1909.12, Chapter 30, Section 32.13c. It is not required that a focal species be selected to represent every element of ecological conditions. The focal species for the HLC NF are annual invasive grasses, collectively. Focal species are not selected to monitor economic sustainability; a commercial tree species is not required to be selected as a focal species.

D. (1159-83) It is unclear what the commenter means by "focal species". Refer to the response to CR261-Focal Species for how focal species were chosen and analyzed.

CR272 Wildlife – DEIS Analysis

Supplemental Concern Statements:

A. 162-1, 527-16: The EIS is insufficient in its analysis of a variety of factors related to wildlife, including but not limited to big game, other species including TES, connectivity, recent projects and travel plans, State and private actions, climate change, beetle-kill, livestock grazing, motorized use and elk, and superfund cleanup.

B. 625-69, 1041-71: Additional analysis should occur prior to allowing activities to occur that may impact wildlife; and the Forest Plan should include a guideline that requires activities to be consistent with National and State guidelines.

C. 1024-55, 1081-42: At-risk species should be addressed in more detail. The FEIS should disclose potential adverse effects as well as movement toward achieving desired conditions, for both T&E species and those that were formerly sensitive. For at-risk species, the EIS must clearly show the key ecosystem components that would be maintained.

D. 1081-13: Potential wildlife issues were not adequately addressed in the development of alternatives.

E. 1081-13, 1081-32, 1081-33, 1081-35, 1081-36, and 1081-37: Potential undesirable effects to wildlife have not been thoroughly analyzed or disclosed. The analysis must include a more thorough discussion of expected effects, mitigation measures, and effectiveness of that mitigation; the effects of plan components and other resource uses; as well as a meaningful comparison of alternatives.

F. 1081-13: There is not sufficient information provided to demonstrate that the requirements for BASI have been met with regards to the wildlife analysis and plan components.

G. 1081-31: Significant caves should be discussed in the affected environment section with respect to wildlife.

H. 1081-60, 61: Concern regarding DEIS analysis for flammulated owl habitat that appears to conflict with other results, and that it does not show habitat without management at all.

I. 1081-82: FW-WL-DC-02 is not a meaningful desired condition, and does not actually provide for the "composition, structure, and distribution" of vegetation.

J. 1081-195: The EIS and 2020 Forest Plan must incorporate previous USFWS project consultation results, because that direction is already known to be necessary to contribute to the recovery of listed species.

K. 1159-96: The limitations of vegetation modeling are not disclosed in the wildlife analysis; it is not clear what the level of uncertainty is in the results.

Supplemental Responses:

A. 162-1, 527-16: The EIS and 2020 Forest Plan address issues related to big game (please refer to the concern responses #44 and 74 for more detailed information), at-risk species (please refer to the concern responses 69, 99, 100, 271, and 277 for more detailed information) as well as connectivity (please refer to concern responses 73 and 275 for more detailed information). The potential influence of other factors such as climate change, natural disturbance processes, and plan components that guide various forest uses (e.g., livestock grazing and mining) is addressed in the wildlife section of the EIS. The Terrestrial Wildlife Diversity, Terrestrial Wildlife Species at Risk, and Elk sections of the EIS also addresses cumulative effects of other programmatic direction, including plans relevant to State and private lands, as appropriate. Project-specific cumulative effects would be addressed if and when future projects are proposed under the Forest

Plan. The results of recent project and travel plan conditions are reflected in the affected environment; see also concern response #276. The FS recognizes the impacts that motorized use has on elk and other big game, as discussed in the wildlife section of the EIS.

B. 625-69, 1041-71: The Forest Plan is a programmatic guiding document and does not authorize any specific activities on the ground. As per law, regulation, and policy, additional NEPA analysis and documentation would occur prior to authorizing activities. The FS is required to abide by all State and National regulations; additional plan components are not necessary to ensure this.

C. 1024-55, 1081-42: Please see Terrestrial Wildlife Species at Risk section for updates.

D. 1081-13: The FS recognizes the importance of wildlife issues in land management planning. However, it was determined that these issues did not drive differences across the alternatives, and therefore wildlife is not described as a key issue. The commenter correctly notes that big game plan components are the only wildlife elements that vary across alternative in the 2020 Forest Plan. This is in large part due to the body of law, regulation, and policy related to many wildlife species and issues which would be followed under any alternative. There is limited decision space in Forest Planning to include components that would cause substantially different outcomes for wildlife across alternatives.

E. 1081-13, 1081-32, 1081-33, 1081-35, 1081-36, and 1081-37: Please see the Terrestrial Wildlife Diversity section of the FEIS for updates.

F. 1081-13: The Terrestrial Wildlife Diversity, Terrestrial Wildlife Species at Risk, and Elk sections of the EIS include a brief description of the body of science used in the analysis and 2020 Forest Plan; this body of science is included in the bibliography. The project record also contains a detailed spreadsheet of all literature submitted by the public and the rationale for its inclusion or exclusion as BASI used in the analysis. This documentation is sufficient to demonstrate compliance with the requirements for BASI in the 2012 planning rule and associated directives.

G. 1081-31: Please see the Terrestrial Wildlife Diversity section of the FEIS for updates.

H. 1081-60, 61: The analysis in the FEIS has been updated, as has Appendix H, which provides details regarding vegetation and habitat modelling. The SIMPPLLE model estimates NRV, which is the range that would be expected without human manipulation of the landscape, as best as that can be modelled and estimated. Therefore, comparison of alternatives with NRV provides at least a rough idea of how flammulated owl habitat is affected by each alternative compared to the estimated 'natural range'. The existing condition is not the same as NRV, however, and the purpose of the FEIS is to compare the various management alternatives to disclose potential effects of each alternative and to assist the responsible official in making their decision. By comparing among alternatives with different levels and types of management, the resulting similarity among alternatives leads to the conclusion that it is not management that would drive habitat trend, but rather natural processes.

I. 1081-82: FW-WL-DC-02 references the array of vegetation conditions present in the NRV in a general way. This plan component is supported by a suite of Terrestrial Vegetation plan components that numerically describe the desired conditions for vegetation composition, structure, and distribution. These components collectively provide for the habitat conditions referenced in the analysis. The Terrestrial Wildlife Diversity section of the EIS has been updated to describe the connection between these plan components.

J. 1081-195: Recent project-level USFWS consultation efforts were reviewed during the development of wildlife plan components and the EIS analysis. The EIS analysis and 2020 Forest Plan components are consistent with and supportive of the outcomes of these consultations, to the

extent appropriate at the programmatic level. Specific project-level outcomes would be considered in future project-level consultation efforts, under the broad umbrella provided by the Forest Plan.

K. 1159-96: The SIMPPLLE vegetation modeling, and associated uncertainties, are discussed in detail in appendix H of the FEIS as well as the Terrestrial Vegetation and Terrestrial Wildlife Diversity, Terrestrial Wildlife Species at Risk, and Elk sections of the FEIS. The FEIS analyses also use additional BASI and professional knowledge to place the results into context when reaching analysis conclusions.

CR274 Wildlife Habitat/Vegetation

Supplemental Concern Statements:

A. 410-36: The 2020 Forest Plan should include a management strategy for ecotones, including protections for sagebrush habitat. Wildlife that depend on ecotones, and any potential benefits to wildlife from burning sagebrush, should be discussed and documented.

B. 410-42: The forest plan will not ensure persistence of moose, which are declining, and should do more to protect moose winter range. Negative effects to moose should be disclosed in the EIS.

C. 460-1: The Plan should promote early seral vegetation and forage for elk and other wildlife.

D. 625-44: How will adequate, functional habitats for wildlife be accommodated?

E. 1044-7: Promote active management in closed canopy systems by encouraging a balanced use of timber production and other fuel treatments to promote an early seral stage of vegetation and higher quality wildlife habitat.

F. 1081-34: Discussion of the effects of timber harvest on wildlife, and comparison across alternatives, is lacking.

G. 1159-100: The 2012 planning rule does not rely on BASI and plan components therefore fail to address all biological needs.

H. 1159-101: Plan components for vegetation will not assure wildlife viability.

I. 1159-103: Monitoring plan must include elements besides vegetation conditions.

J. 1159-131: The DEIS does not address how pre-fire logging affects the future suitability of forests for post-disturbance specialists such as the black-backed woodpecker.

Supplemental Responses:

A. 410-36: The FEIS describes several different types of ecotones that occur on the Forest and the types of locations where they are typically found. Effects of plan direction on xeric ecotones, where sagebrush is often a component, can be found in the "Nonforested vegetation, forest savannas, and xeric ecotones" section. This section describes how fire would historically have functioned as an important component of these ecosystems by limiting the encroachment of Douglas-fir trees. Wildlife species that rely on sagebrush shrublands and xeric ecotones are described, and fire exclusion is identified as a stressor that affects these types of wildlife habitat. To address this stressor, the 2020 Forest Plan includes a guideline (FW-VEGNF-GDL-01) to focus savanna and shrubland restoration treatments in areas historically dominated by nonforested vegetation such as sagebrush. Desired condition FW-VEGT-DC-01 describes a desire for sagebrush communities maintained by a natural disturbance regime within the xeric shrubland/woodland broad potential vegetation type. Additionally, desired conditions for these habitats occur specific to geographic areas.

B. 410-42: Numerous plan components are designed to support populations of moose and other native ungulates by protecting key habitat elements such as thermal cover. FW-WL-GDL-05,

FW-WL-GDL-06, and FW-WL-DC-01, 02, 03, and 07 are designed to protect winter ranges and thermal cover, and FW-WL-GDL-14 promotes a landscape-scale approach through consistency with other land management agencies. Moose would also benefit from plan components designed to retain beaver complexes and associated wetland habitat. These wildlife-specific plan components complement the full suite of vegetation components designed to maintain vegetation conditions that support all native species.

C. 460-1, 1044-7, and 625-44: Numerous plan components exist that will provide the direction and guidance the Forest will use to implement management actions that are either aimed directly at benefiting wildlife species, or that will be designed to achieve those goals ancillary to other reasons. These actions will work to allow progress towards achieving the desired conditions for all resources within the NRV.

D. 1081-34: The effects of plan components associated with timber harvest are described under the heading "Effects common to all action alternatives" because the plan components remain the same across alternatives. Potential effects are described generally due to the programmatic nature of this analysis, which examines effects of plan components rather than specific timber harvest activities. The effects of timber harvest are site-specific and will be analyzed at the project scale.

E. 1159-100,101: The forest plan relies on a coarse-filter/fine-filter approach to conserving biodiversity. Maintaining key ecosystem characteristics is expected to support the persistence of most native species, and additional species-specific plan components were added as needed to address specific threats. This approach is consistent with the 2012 Planning Rule.

F. 1159-103: Appendix B of the 2020 Forest Plan includes numerous wildlife-associated or specific monitoring items, some not limited to vegetation conditions.

G. 1159-131: The forest is expected to continue to provide abundant habitat for snag-dependent and disturbance-depended wildlife under all alternatives. The EIS states in Effects common to all alternatives, that because the majority of the HLC is in wilderness, recommended wilderness, or IRAs, there are large areas where timber harvest would be prohibited or greatly limited, and these provide abundant burned forest conditions. Any localized effects due to timber harvest would be analyzed at the project scale.

CR277 Wildlife – Species Viability

Supplemental Concern Statements:

A. The FS must maintain viable populations of diverse plant and animal species. The 2012 Planning Rule and/or the 2020 Forest Plan for the HLC NF do not ensure viable populations of wildlife would be maintained or reached. There is a body of science that does not agree that a management focus on habitat (vegetation conditions) would ensure wildlife viability. The draft plan and EIS do not identify BASI to make quantitative minimum viable population determinations for the wildlife on the HLC NF.

B. Monitoring for wildlife is inadequate because no species population trends are to be monitored. Because no terrestrial wildlife focal species are identified, the HLC NF cannot show compliance with NFMA's diversity requirements.

C. Species viability for current Region 1 sensitive species will not be provided, because most are not considered as management indicator species, sensitive, or SCC in the 2020 Forest Plan. Viability of current management indicator species cannot be assured because monitoring of populations trends (as per the 1986 Forest Plans) was not conducted.

D. Viability requirements and/or threats for specific species are not adequately disclosed in the EIS, including marten, black-backed woodpecker, and western toad. The EIS does not adequately disclose the age and reliability of the data used to support the species viability analysis (Samson).

Supplemental Responses:

A. Refer also to CR136- coarse filter. The 2020 Forest Plan is consistent with the 2012 planning rule and associated directives with respect to ensuring wildlife species viability. The Federal Register (volume 77, number 68, p. 21212) states that "The premise behind the coarse-filter approach is that native species evolved and adapted within the limits established by natural landforms, vegetation, and disturbance patterns prior to extensive human alteration. […] These ecological conditions should be sufficient to sustain viable populations of native plant and animal species considered to be common or secure within the plan area. These coarse-filter requirements are also expected to support the persistence of many species currently considered imperiled or vulnerable across their ranges or within the plan area." Issues related to the adequacy of the 2012 planning rule are beyond the scope of the HLC NF revision.

   The 2020 Forest Plan as a whole is an integrated management plan for diverse habitats that support over 300 terrestrial animal species. The FEIS, section 3.13, first discusses the effects of a variety of coarse-filter plan components on ecosystems or key ecosystem characteristics, organized by broad habitat groups, and then discusses the effects on specific species, including but not limited to federally listed species, species listed as sensitive under the 1986 Forest Plan, and species of conservation concern as identified by the Regional Forester. Additional details on the habitat needs of particular species can be found in appendix D. Most species are addressed by coarse-filter plan components that are tied to key ecosystems and ecosystem characteristics, such as certain cover types and structural components (e.g., mixed conifer habitats with very large trees, or riparian areas and adjacent hardwood forest, etc.). Plan components in the aquatic ecosystems and terrestrial ecosystems and vegetation sections of the plan maintain the key ecosystems and characteristics required to maintain the diversity of plant and animal communities (36 CFR 219.9). Fine-filter, or species-specific components are "intended to provide a safety net for those species whose specific habitat needs or other influences on their life requirements may not be fully met under the coarse filter provisions." (Federal Register Vo. 77, N0, 68, Monday, April 9, 2012, p. 21175). Species-specific plan components for some at-risk species provided in the 2020 forest plan provide additional assurance that the plan will provide the ecological conditions that will contribute to recovery of federally listed species and maintain viable populations of species of conservation concern per the 2012 planning rule (36 CFR 219.9 b). Other species-specific or group-specific plan components are included where there are specific needs, usually reflecting potential impacts of certain management actions or human activities that are not effectively addressed by coarse-filter plan components.

   By focusing on the ecological conditions needed to support the diversity of native wildlife species, the 2012 planning rule does not require identification of nor management for minimum viable populations. Published literature regarding the concept of population viability analysis and minimum viable population size provides widely varying opinions on use and validity of these concepts and processes (e.g. (Reed, O'Grady, Brook, Ballou, & Frankham, 2003; Shoemaker, Breisch, Jaycox, & Gibbs, 2014) and many others). Analyses of the planning rule and its development has recognized the unfeasibility of monitoring the status of all species and of demonstrating population viability within the management, economic, and political frameworks in which the FS functions (Schultz, 2012).

B. Population trend monitoring is not required by the 2012 planning rule and associated directives, nor is trend monitoring possible for most wildlife species. It is expected that "monitoring key ecosystem and watershed conditions along with monitoring the status of a set of well-chosen focal species will provide timely information regarding the effectiveness of plan components

related to plant and animal diversity." (Federal Register Vo. 77, N0, 68, Monday, April 9, 2012, p. 21176). The difficulty in monitoring a vast and diverse suite of wildlife species was considered in development of the coarse filter approach to habitat and ecosystem management (Schultz, 2012). In reviewing FS approaches to forest planning, a panel of experts concluded that "[s]cientifically valid and pragmatic management does not require that the status of all species be directly assessed", and that the combination of coarse-filter and fine-filter approaches is "scientifically credible", particularly when supported by some level of population analyses for focal species and species at risk (Noon et al., 2003; Schultz, 2012). The planning rule requires selection a minimum of one focal species, the purpose of which is to "permit inference to the integrity of the larger ecological system to which it belongs and provides meaningful information regarding the effectiveness of the plan… Focal species would be commonly selected on the basis of their functional role in ecosystems." (Federal Register Vo. 77, N0, 68, Monday, April 9, 2012, p. 21271). The focal species for the HLC NF 2020 Forest Plan were selected in a manner consistent with FSH 1909.12, Chapter 30, Section 32.13c. (see also item 3, below).

The 2020 Forest Plan includes a monitoring plan (appendix B of the 2020 Forest Plan) that includes comprehensive requirements for monitoring the full array of aquatic and terrestrial ecosystem characteristics that comprise wildlife habitats on the HLC NF. The monitoring plan has also been expanded to include requirements for measuring and reporting key habitat characteristics for grizzly bear, Canada lynx, flammulated owls, connectivity, and habitat security.

C. The terrestrial wildlife diversity section (3.13) and a biological evaluation (see project file) provide evaluation of impacts of the 2020 Forest Plan on current Regional Forester Sensitive Species (RFSS). Implementation of the 2020 Forest Plan would support persistence of all current RFSS in the plan area and would not result in a trend toward federal listing for any current RFSS. In past forest plans, identification of management indicator species was intended to provide information about the ecosystems on which they depend, and management indicator species were to serve as surrogates for the status of a broader suite of species that rely on similar habitats. Use of management indicator species is a concept no longer supported by current science and population trends of identified management indicator species are "difficult and sometimes impossible to determine within the lifespan of a plan." (Federal Register Vo. 77, N0, 68, Monday, April 9, 2012, p. 21175). Monitoring of key ecosystem characteristics, focal species, and specific fine-filter components of at-risk species habitat requirements as identified in the monitoring plan (appendix B of the 2020 Forest Plan) would provide information regarding the effectiveness of the plan in providing the ecological conditions necessary to maintain the persistence of native species in the plan area.

D. Information regarding the requirements, threats, and stressors for a variety of species considered in the planning process and the FEIS were discussed in the 2015 HLC NF Assessment. That information was supplemented by additional science or other information as available in order to develop plan components and the analysis included in the FEIS (sections 3.13 and 3.14.11). Additional information about terrestrial wildlife species' habitat needs considered in the planning process is in appendix D of the FEIS and in the project file.

The DEIS wildlife analysis indicates that impacts on viability outcomes was determined by vegetation modeling: The analyses discussed in the terrestrial vegetation section rely on two analytical models, SIMPPLLE and PRISM, which are described in that section and in appendix B. Those models "use numerous assumptions to simplify ecosystem processes as well as treatment implementation". The assumptions that are a part of the vegetation analysis are inherently part of the analysis of impacts to wildlife species using those vegetation systems. (1159-95 in C/R 252 modelling). Refer also to the discussion in items a and b above regarding viability.

Terrestrial wildlife species at risk

CR69 Wildlife Wolverine

Supplemental Concern Statement:

Commenters thought that the 2020 Forest Plan should include scientifically-based direction to protect wolverine and provide for habitat connectivity. The FEIS should include a more detailed analysis of how forest management and recreation would impact wolverine and should use the most recent available data.

Supplemental Response:

As stated in the FEIS section 3.15.9, the vast majority (>90%) of wolverine habitat is already in a conservation management area, IRA, or designated wilderness. This minimizes human disturbance and means that forest plan direction is unlikely to impact the recovery or persistence of wolverine in the plan area. The largest area of wolverine habitat on the HLC NF is in designated wilderness and provides connectivity to habitat on the Flathead National Forest and in Glacier National Park. Because of this, all alternatives would contribute to wolverine conservation. The action alternatives also include several desired conditions for specific geographic areas that contribute to wolverine habitat connectivity (DI-WL-DC-01, RM-WL-DC-01, and UB-WL-DC-01; see also the comment and response under connectivity/migration). These plan components contribute to the high level of wolverine protection and habitat connectivity that is already provided by existing land designations.

In the preferred alternative, over 80% of primary wolverine habitat and over 93% of maternal habitat is in a primitive or semi-primitive non-motorized recreation setting (Section 3.14.10 of the FEIS), and this will limit the impacts of recreation as well as the potential for incidental trapping of wolverine in traps set for other species. Wolverine will be monitored at the Regional level as part of the Multispecies Mesocarnivore Monitoring Program. One commenter suggested that wolverine should be identified as a species of conservation concern (SCC), but because wolverine is proposed as threatened under the ESA, it cannot be identified as an SCC. Another commenter suggested including an alternative that protects all wolverine habitat; this would not result in noticeable difference in effects due to the high percentage of habitat that is already protected.

The wolverine section of the FEIS has been updated to correct a typo in the % of primary habitat that is in the Conservation Management Area. The correct amount is 7%. The cumulative effects section was also updated in the FEIS.

The FEIS was updated to clarify that more recent wolverine observations have occurred in other parts of the Crazy Mountains outside of the plan area than what has been recorded in the plan area. The FEIS remains the same as the DEIS in stating there have been no wolverine observations in the Castles GA, because the FS is still not aware of any records, even after consulting with the MFWP Carnivore and Furbearer Coordinator (C. Staab USFS pers. comm. with Bob Inman MFWP) and the Montana Natural Heritage Program dataset.

In response to the comment that the EIS "does not address the obligation of the forest plan to actually contribute to recovery": The planning rule requires the plan to provide plan components to conserve (not recover) proposed species such as the wolverine. Recovery is specific to listed species. Regardless, as disclosed in the biological assessment, the plan will not contribute to the identified primary or secondary threats to the wolverine DPS (climate change, inadequate regulation of climate change, harvest, and small population size). It also adds plan components designed to maintain or increase connectivity within and among wolverine habitats. Further, the plan does not change the amount of designated wilderness, IRAs or Conservation Management Areas, which are substantial in the plan area and provide large areas of relatively undisturbed habitats that have high connectivity to wolverine habitats on the Flathead NF and Glacier NP. Also, the plan maintains or increases the proportion of wolverine habitats overlapped by

RWA and non-motorized recreation settings, with associated plan components that minimize human presence and impacts in those areas. Collectively, these components would conserve the wolverine.

CR99 Wildlife – Grizzly Bear Conservation Strategy and Amendment

Supplemental Concern Statements: Changes, recommendations, or issues include the following:

A. Concern that the NCDE Grizzly Bear Amendments relied on the Draft NCDE Conservation Strategy rather than on a final product.

B. Lack of clarity regarding management, implementation, and potential effects of motorized route density standards for grizzly bear habitat.

C. The plan standards for grizzly bears do not rely on the current BASI.

D. Plan components for minimizing the risks to grizzly bears associated with livestock grazing should be added, strengthened, and/or expanded to additional areas on the HLC NF.

E. Plan components for various resource management and recreation activities (e.g., snowmobiling, ski area developments, vegetation management, and others) are not sufficient to protect grizzly bears.

F. The HLC NF should include additional plan components to ensure connectivity between grizzly bear populations.

G. The HLC NF should expand identified management zones, such as the primary conservation area, and/or apply primary conservation area and Zone 1 plan components over larger areas.

H. Analysis in the DEIS is inadequate to display potential impacts of plan components, and to demonstrate that plan components would contribute to recovery of the grizzly bear population.

Supplemental Responses:

A. The NCDE Grizzly Bear Conservation Strategy is now final. It has been reviewed and there are no significant changes from the draft that formed the basis for the Grizzly Bear Amendments, nor are there inconsistencies with the amendments.

B. Information in the 2020 Forest Plan has been updated to clarify measures and methodology. The standards (e.g., PCA-NCDE-STD-03) included in the 2020 Forest Plan from the Grizzly Bear Amendments require that there shall be "no net decrease to the baseline (see 2020 Forest Plan glossary) for secure core and no net increase to the baseline for open motorized route density…". The glossary has been updated to include an entry for 'baseline' that provides an exact reference point for the baseline; information about the establishment of the baseline is available in the NCDE Grizzly Bear Conservation Strategy and in the supporting documentation for the Grizzly Bear Amendments. The glossary also now explains that open and total motorized route density are reported as the percent of a Bear Management Subunit that is above 1 mi/mi^2 (open route density) or 2 mi/mi^2 (total route density), that secure core is reported as the percent of a subunit meeting the established criteria, and that all those measures are to be calculated using moving windows methodology. This means that although the location of motorized routes could change, the amount of area within each Subunit that exceeds the specified densities for open or total motorized routes must not increase above the established baseline, and the amount of area that meets the criteria for secure core must not decrease below the established baseline. The reporting measures and methods described here and in the 2020 Forest Plan glossary are the same as those used throughout the NCDE prior to adoption of the NCDE Grizzly Bear Amendments, including to report compliance on the Flathead NF with their former Amendment 19.

   Standard PCA-NCDE-STD 04 allows for temporary increases in open or motorized route density or decreases in secure core for "projects", which for the purposes of implementing grizzly bear

related standards are defined as "… any temporary activity requiring the construction of new roads, temporary roads, reconstruction or opening of restricted roads… if such use exceeds administrative use levels [also defined in the glossary]". Temporary increases are allowed under constraints that are clearly defined in the standard, are based on past practices within the NCDE that received consultation with the USFWS and occurred during a period in which the NCDE grizzly bear population increased in both numbers and distribution. Details regarding development of those constraints are in the NCDE Grizzly Bear Conservation Strategy and in the supporting documentation for the Grizzly Bear Amendments. Any projects that propose use of temporary roads would be planned in compliance with all forest plan standards and guidelines, and impacts would be analyzed based on the specific location, proposed activities, and other factors unique to each project. Projects would also undergo ESA section 7 consultation with the US FWS as long as grizzly bears remain listed under the ESA.

The potential impacts to bears of implementing these standards, including allowing temporary increases in motorized route density or decreases in secure core were analyzed and consulted on prior to implementation of the Grizzly Bear Amendments in late 2018. Briefly, that analysis found that the continued presence and use of motorized routes in the primary conservation area and Zone 1 and the allowed temporary increases associated with management projects may adversely affect individual bears, but the Biological Opinion for the Grizzly Bear Amendments determined that implementation of the amendments would not jeopardize the continued existence of grizzly bears, and will "result in conditions that support grizzly bear use of NFS lands in the NCDE", and "will not appreciably reduce the likelihood of both the survival and recovery of the NCDE grizzly bears" (U.S. Department of the Interior, 2017). Analysis in the 2020 forest plan EIS (section 3.15.6) and BA supports this conclusion, and further discusses how motorized access restrictions associated with designated wilderness, IRAs, and recreation opportunity settings would contribute to providing habitat security.

One commenter raised a question about how motorized route density could be the same across alternatives. As described in the FEIS, section 5.15.6, under "Effects common to all alternatives", the mileage, location, and timing of public motorized travel across the HLC NF is determined by travel plans, which are in place across the HLC NF, and will not change under the 2020 Forest Plan or any of the alternatives. Furthermore, all alternatives incorporate the Grizzly Bear Amendments, including plan direction that will limit motorized route density in the primary conservation area and Zone 1. The FEIS and planning record describe in detail how open and total motorized route density was calculated, and the reasons for displaying motorized route density at the GA scale.

C. The 2020 Forest Plan standards for grizzly bears are based on the NCDE Grizzly Bear Conservation Strategy, which relied on the BASI as well as on input from researchers, biologists, and managers from multiple agencies and tribes. The final EIS for the NCDE Grizzly Bear Amendments contains a thorough discussion of the science used in developing plan components related to motorized route density and in analyzing their effects. The FEIS (section 3.14.5) includes a thorough review of the BASI, including recent research and recommendations regarding influences on grizzly bear individuals, population trend, and distribution. The review in the FEIS provides support for plan components and informs analysis of their potential effects.

D. PCAZ1Z2-NCDE-GDL-01 and 02 are designed to minimize the risk of conflict related to activities allowed by permit, including livestock grazing; these guidelines apply in the primary conservation area and Zones 1 and 2. Standard PCAZ1-NCDE-STD-01 requires that livestock grazing permits and plans include measures to reduce the risk of human-grizzly bear conflicts in the primary conservation area and Zone 1, and indicate actions that may be taken if conflicts occur. Standards PCAZ1-NCDE-STD-03 and 04 are designed to minimize conflicts between grizzly bears and livestock by prohibiting an increase in the number of active sheep allotments and ensuring that temporary grazing permits do not increase bear-small livestock conflicts in the

primary conservation area and Zone 1. Guidelines PCA-NCDE-GDL-09 and 10 provide further guidance for the primary conservation area on reducing active sheep allotments and protecting key grizzly bear food production areas from conflicting and competing use by livestock. Section 3.15.6 of the FEIS discusses how plan direction related to livestock grazing is likely to affect grizzly bears, and notes that the risk of depredation is minimal. Section 6.5.5 of the Grizzly Bear Amendment EIS (U.S. Department of Agriculture, 2017) further notes that existing livestock grazing on the forest has been compatible with an increasing grizzly bear population.

Unlike the primary conservation area, which is expected to function as a source population with continual occupancy by grizzly bears (refer to the 2020 Plan NCDE section and the NCDE Grizzly Bear Conservation Strategy), Zones 2 and 3 are not expected to have continual occupancy by grizzly bears. Therefore, plan components related to grizzly bears are focused on the primary conservation area and Zone 1, with food and attractant storage components extended into Zone 2 in order to facilitate potential movement of bears between the NCDE and GYE grizzly bear ecosystems.

E. The FEIS provides extensive review of and references to peer-reviewed scientific literature that documents the status, habitat relationships and responses to management activities of grizzly bears. The approach taken in the forest plan revision and amendments, which were informed by the NCDE Grizzly Bear Conservation Strategy, is to maintain on-the-ground habitat conditions in the recovery zone/primary conservation area that have been in place during the time period that the NCDE grizzly bear population has been stable to increasing (Costello & Roberts, 2016). The analysis of effects in the final EIS and the biological assessment for the amendments considered the effects of vegetation management on the grizzly bear to the degree possible in a programmatic document. As required by NEPA, additional analysis will occur as site-specific vegetation management projects are proposed. Site-specific analysis at the project level, supported by the necessary science, is the appropriate place to determine whether grizzly bear habitat in a specific location would or would not benefit from treatment. Refer also to response to comments regarding the coarse filter approach required by the 2012 planning rule.

   PCA-NCDE-STD-09 states that there can be no net increase in the area or trails open for motorized over-snow vehicle use in grizzly bear denning habitat within the primary conservation area. PCA-NCDE-STD-08 requires permits for activities occurring at ski areas during the non-denning season include provisions to limit the risk of grizzly bear-human conflicts. Discussion of the impacts of winter motorized over-snow use has been added to the FEIS (section 3.14.5 and 3.14.6).

F. Many of the connectivity plan components that commenters suggested are already included in the 2020 forest plan and alternatives as part of habitat management direction in the NCDE Grizzly Bear Amendment, which is retained in full. The goal for zone 2 is to maintain the potential for genetic connectivity between adjacent ecosystems. As stated in the Grizzly Bear Conservation Strategy on page 100, (Northern Continental Divide Ecosystem Subcommittee, 2019), management direction in current FS and Bureau of Land Management land management plans has not precluded bears from occurring in zone 2 at low densities. This suggests that existing management activities are not presenting a barrier to bear movements.

   The 2020 Forest Plan provides additional direction aimed at promoting connectivity in this and other areas on the HLC NF. Forestwide desired conditions FW-WL-DC-03 and 04 address connectivity by directing managers to achieve vegetation conditions that "allow wildlife to move within and between NFS parcels", and large, unroaded areas that are "distributed and connected forestwide, providing for species with large home ranges". Both of these plan components will maintain or enhance connectivity at a forestwide scale. At the scale of GAs, plan components (e.g., UB-WL-GDL-01 and DI-WL-GDL-01) provide additional protection in key areas for connectivity by limiting the effects of recreation and ensuring that vegetation management does

not diminish hiding cover. Desired conditions in several GAs guide managers to provide "habitat connectivity for wide-ranging species" such as grizzly bears.

Plan components associated with other resource areas, notably vegetation, will further contribute to habitat conditions that support the movement of grizzly bears. For example, FW-VEGT-DC-02 promotes habitat for threatened and endangered species, while FW-VEGT-DC-03 states a desired condition for vegetation conditions that would contribute to genetic connectivity. Collectively, these plan components promote connectivity for grizzly bear, and additional standards or guidelines are not needed. See also CR 73 wildlife - connectivity-migratory linkage.

One commenter suggested that the EIS should identify suitable habitat and discuss the effects of management in these specifically identified areas. Plan direction is designed to broadly support grizzly bear habitat on the forest, but the location and condition of habitat within zone 2 or any other area will vary over time as a result of natural vegetation disturbances (e.g., fire, insects, disease), succession, and forest management. Potential effects of management on grizzly bear habitat in zone 2 or other specific areas would be analyzed at the project level and would be based on site-specific conditions.

G. The NCDE Grizzly Bear Conservation Strategy (Northern Continental Divide Ecosystem Subcommittee, 2019) acknowledges that grizzly bears may sometimes be found in zone 3. However, by definition, zone 3 does not have enough suitable habitat to contribute meaningfully to the long-term survival of the NCDE population. NFS lands in Zone 3 are entirely island mountain ranges separated by large expanses of private land; consequently Zone 3 is less likely to contribute to linkage with other recovery areas than the primary conservation area and Zones 1 and 2 (refer to discussion in the FEIS section 3.14.5 regarding habitat connectivity). As discussed in the FEIS for the NCDE Amendments section on alternatives considered but eliminated from detailed study (section 5.6.5), food/attractant storage orders or other habitat protections are not needed in Zone 3, where long-term occupancy of grizzly bears is not a management goal. Nevertheless, the FS has implemented food storage orders across the entire HLC NF, including Zone 3.

   Additional plan components limiting developed recreation in zones 1 and 2 are not needed because grizzly bear occupancy is expected to be lower than in the primary conservation area and these zones do not serve as the source for supporting and maintaining recovery of the NCDE or other grizzly bear populations. According to the Grizzly Bear Conservation Strategy, "Storing attractants in a manner that prevents bears from accessing them is effective in limiting grizzly bear mortality, grizzly bear/human encounters, and grizzly bear/human conflicts" (p. 47). The FS monitors and enforces compliance with its regulations, including the food and attractant storage orders. The NCDE Amendment FEIS (section 6.5.5) further notes that there is no history of grizzly bear-human conflict associated with developed recreation sites on the Helena - Lewis and Clark NF.

H. The information and analysis in the FEIS have been substantially expanded and updated, in part to include additional information used in the Biological Assessment for ESA section 7 consultation with the US FWS. Refer to section 3.14.5, which includes a list of changes from the DEIS, and to section 3.14.6; note also that the 2020 forest plan has been updated with information regarding the methods to be used to measure and report open and total motorized route density and secure core in the primary conservation area, as well as Grizzly Bear Analysis Unit based measures of secure habitat in Zones 1-3. For additional information regarding motorized route density and secure habitat, refer to Response B above.

   The effects of implementing plan components in the NCDE Grizzly Bear Amendments were discussed in detail in the EIS associated with the NCDE amendments, would remain the same under the 2020 forest plan and alternatives, and was therefore incorporated by reference into this FEIS as noted in section 3.14.6. Conclusions from this analysis are summarized, and additional

detail on the science used to develop those plan components and support conclusions about their efficacy can be found in the FEIS for the NCDE amendments as well as in this FEIS for the 2020 HLC NF plan and alternatives (e.g., refer to section 3.15.5, "Key drivers and stressors", "Habitat security", etc.). The amendment FEIS provides extensive review of and references to peer-reviewed scientific literature that documents the status, habitat relationships and responses to management activities of grizzly bears, as does the updated FEIS for the 2020 HLC NF plan and alternatives. As required by NEPA, the Forest reviewed and discusses scientific consensus as well as opposing scientific information.

The approach taken in the amendments and retained in the 2020 forest plan and alternatives, as informed by the NCDE Grizzly Bear Conservation Strategy, is to continue on-the-ground habitat conditions and practices in the recovery zone/primary conservation area that have been in place during the time period that the NCDE grizzly bear population has been stable to increasing (Costello & Roberts, 2016). Grizzly bear distribution across the NCDE continues to be assessed using a systematic, unbiased method that can be updated frequently (ibid). As noted in the FEIS section 3.15.6 under "Connectivity", the potential movement routes identified by Peck and others (Peck et al., 2017) were used to inform plan components that support genetic connectivity between the Northern Continental Divide Ecosystem and the Greater Yellowstone Ecosystem. The FEIS for the NCDE Grizzly Bear Amendments contains a discussion of how the plan components would support the grizzly bear metapopulation (section 6.5.5, "Cumulative effects on grizzly bear"). This discussion is supported by updated analysis in the 2020 forest plan FEIS regarding habitat connectivity.

CR271 Wildlife – Lynx

Supplemental Concern Statements:

A. 410-34, 1041-121, 1159-115, 1159-116, 1159-117, 1159-118, 1159-119, 1159-120, and 1159-121: It is not appropriate to use the NRMLD to guide lynx management on the HLC NF, because it is not consistent with BASI regarding the conservation and recovery of lynx; and project-level analysis often determines mapped habitat to not meet habitat requirements. Lynx habitat requirements should only be a consideration in unoccupied habitat; and not preclude managing for other wildlife as well in occupied habitat.

B. 1081-45 through 52, 54, 220, 219, and 1159-121: Additional analysis or clarification related to lynx is requested, including clarification of terminology (potential and suitable lynx habitat); disclosure of potential effects to critical habitat PCEs; define, identify, and analyze effects to core areas; description of how fire would be managed (inside and outside the WUI) and the effects of fire to lynx habitat, as compared to the NRV condition; disclose the acreage of prescribed burning and discuss the effects to lynx; more information regarding the potential for timber harvest and associated effects within lynx habitat should be disclosed; present the changes in lynx habitat based on the difference between lynx habitat and potential lynx habitat; include desired conditions based on the NRV amounts of lynx habitat; clarify the trend of available snowshoe hare habitat over time, based on model results; clarify the desired conditions and NRV as compared to the expected trends of the spruce/fir cover type; disclose the amount of grazing expected to occur in lynx habitat; consider the cumulative impacts on lynx from trapping and use of the road and trail networks on the HLC NF.

Supplemental Responses:

A. The HLC NF is required to abide by the NRMLD until such time that new direction is issued. Lynx management direction does not preclude the potential to provide for a variety of other wildlife species on the landscape. The NRLMD is to be applied to areas occupied by lynx and to be considered in areas unoccupied by lynx. Presently, only 3 of 10 geographic areas are considered occupied. In areas where lynx may be present or are resident, the Forest is required by the ESA to work towards recovering

lynx, assessing potential impacts to lynx and/or lynx designated critical habitat through the consultation process, and avoiding adverse effects where possible. Hence, projects planned, implemented, analyzed, and assessed through the consultation process need to consider scientific information to manage lynx habitat. The consideration of that science will be done at the project level, where direct effects can result and site-specific information is available to inform those decisions and analyses; however, the BASI was considered or incorporated in the 2020 Forest Plan, as directed by the 2012 planning rule.

B. Where possible and appropriate, additional analysis and explanation was added to the wildlife section of the FEIS to address these concerns. There is no need for an explicit desired condition for lynx habitat because there are desired conditions for vegetation composition and structure based on NRV that would encompass those habitat conditions. The vegetation modeling was re-done between the DEIS and FEIS, based on key model improvements as discussed in the Terrestrial Vegetation section and appendix H of the FEIS. The lynx section of the FEIS was updated to incorporate the revised model outputs and clarify the expected trends of the spruce/fir cover type. The modeling has uncertainties, however, in no small part due to the difficulty in predicting if and when natural disturbances will occur. Therefore, there are multiple plan components in place to ensure adequate lynx habitat is maintained over time, as discussed in the lynx section (see lynx FEIS and biological assessment). These plan components have considered the BASI. Since the 2020 Forest Plan is a framework programmatic action, it will not result in direct effects to lynx or lynx habitat. Thus, the analysis provides broad, general effects discussions based on programmatic level considerations, rather than effects determinations made with site-specific information that is generated at the project level. Hence, future projects carried out under the 2020 Forest Plan will be planned, assessed, and analyzed using site-specific information.

CR275 Wildlife – Grizzly Bear

Supplemental Concern Statements:

A. The HLC NF should coordinate with other NFs to the south (Custer-Gallatin NF and Beaverhead-Deerlodge NF) to ensure consistent grizzly bear management in connectivity or linkage areas. The FEIS should include information about potential impacts of the proposed plan and alternatives on other grizzly bear populations.

B. The HLC NF should do more to protect bears moving through the Blackfoot Divide area.

C. Some plan components from the primary conservation area and Zone 1 should be extended into Zones 2 and 3.

D. Information in the plan and FEIS should place greater emphasis on the importance of the HLC NF for connectivity, including possibly identifying certain areas as "Genetic Connectivity Areas'.

E. The HLC NF should limit increases in recreation in order to reduce potential bear-human conflicts.

Supplemental Responses:

A. The FEIS for the NCDE Grizzly Bear Amendments contains a discussion of how the plan components would support the grizzly bear metapopulation (section 6.5.5, "Cumulative effects on grizzly bear"). That subsection also discusses how management direction on neighboring forests, including the Beaverhead-Deerlodge and Custer Gallatin NFs, complements the direction in the Helena Lewis and Clark 2020 Forest Plan and contributes to connectivity across the broader landscape. 2020 Forest Plan components to maintain both habitat security and connectivity, as discussed in the FEIS (sections 3.14.5 and 3.14.6) would allow for individual bears to move between the NCDE and GYE populations, potentially increasing genetic variability in both populations (refer also to response to item b, below, and to CR99). In response to received

comments, plan components were added to several GAs about providing habitat for and connectivity among populations of wide-ranging species such as grizzly bears. The cumulative effect of these plan components, along with the pattern of designated areas, recreation settings, and management of other resources is that the HLC NF will continue to support the presence and movements of grizzly bears in and among currently separate grizzly bear populations in Montana.

B. Desired condition Z1-NCDE-DC-02 promotes efforts to reduce connectivity barriers associated with highways, and goal FW-WL-GO-04 guides managers to work with other agencies to identify linkage areas. The plan identifies the areas near Highway 12 and Highway 200 as important for wildlife connectivity and includes plan components (DI-WL-GDL-01, and UB-WL-GDL-01) designed to manage those lands in a way that promotes connectivity by improving habitat security on NFS. Some commenters suggested development of crossing structures; those or other means of enhancing connectivity would be developed as site-specific projects. Planning of site-specific projects would include consideration of site-specific needs and opportunities, appropriate interagency and public involvement, and appropriate analysis and consultation. Refer also to item D, below.

C. Please refer to the response to CR99, item g.

D. The 2020 forest plan section on "Distinctive roles and contributions" notes that portions of the Helena- Lewis and Clark NF may help provide connectivity between the GYE and the NCDE. Discussion of grizzly bear management zone 2 in the 2020 plan and in the FEIS clearly identifies its role in maintaining genetic connectivity between the NCDE and the GYE, per the NCDE Grizzly Bear Conservation Strategy and the NCDE Grizzly Bear Amendments. In response to comments, a guideline (DI-WL-GDL-01) was added regarding management for connectivity in the central portion of the Divide GA, and new desired conditions were added to promote wildlife connectivity in the Elkhorns, Big Belts, and Crazies GAs. New guidelines were also added explicitly stating that wildlife habitat is the management priority (EH-WL-GDL-01) and vegetation management should maintain or improve wildlife habitat (EH-WL-GDL-04). Text was also added in the descriptions of GAs to note when that GA is part of a grizzly bear management zone, as delineated by the FWS.

   One commenter suggested that guidelines designed to ensure habitat connectivity should be strengthened by making them standards, but the 2012 planning rule requires projects to be consistent with both standards and guidelines. Consistency with a standard is determined by strict adherence to the specific terms of the standard, while consistency with a guideline allows for either strict adherence to the terms of the guideline, or deviation from the specific terms of the guideline if the purpose for which the guideline was included in the plan is met at the project level (FSH 1909.15, chapter 22). Existing guidelines such as DI-WL-GDL-01 and UB-WL-GDL-01 will help ensure that the forest moves towards desired conditions for habitat connectivity, benefiting a variety of different wildlife species.

E. The 2020 Forest Plan and alternatives include plan components to reduce human-bear conflict, and human-wildlife conflicts overall. The FEIS sections (3.14.5 and 3.14.6) analyzing impacts to grizzly bears have been updated and expanded to include more thorough discussion regarding potential impacts to grizzly bears of various recreational activities.

Recreation settings

CR113 ROS – Recommended Plan Component Changes

Supplemental Concern Statements:

A. 128-12: The final EIS should explain how management direction across each forest, for each use, fits within the ROS setting for any particular area.

B. 128-14:

   a. In Table 19, Recreation site development scales: (a) Development Scale 2 should be modified to clarify that motorized access is only permitted or provided in semi-primitive motorized areas.

   b. How are backcountry cabin and lookout rental facilities being handled in this table and how does their development relate to ROS.

   c. The definition for Development Scale 5/Urban ROS may only be applicable to the Forest Supervisors office and perhaps the District offices on the HLC but the ROS map shows a far more extensive Urban setting on the forest.

   d. How does this table fit with the winter ROS?

C. 128-16

   a. The FS should consider the following changes to plan components in Recreation Settings: Re-phrasing FW-ROS-GDL-09 to "Dispersed recreation activities must (instead of should) be compatible with desired recreation opportunity spectrum settings" and having this plan component as a standard instead of a guideline.

   b. The FS should remove the word "backcountry" from FW-ROS-SUIT-32, since backcountry trails are seldom found in urban settings.

D. 128-17

   a. Groomed snowmobile trails are suitable in winter semi-primitive motorized areas but groomed backcountry ski trails are not. This appears inconsistent.

   b. Neither groomed snowmobile, nor groomed ski trails are appropriate in semi-primitive non-motorized.

   c. The FS should revise its ROS settings and characteristics, and related plan components, to eliminate the Urban ROS settings.

E. 128-18: The FS should re-write FW-ROS-SUIT-31 to read "Plowed roads and groomed trails are suitable in desired winter Rural and Roaded Natural ROS settings."

F. 128-25: In order to ensure that the Continental Divide corridor remains wild and undeveloped, supporting wildlife movement as well as recreation opportunities, the majority of National Forest land between Stemple and Lewis and Clark passes should be managed as "semi-primitive non-motorized backcounty."

G. 174-6: The FS should use Semi-primitive non-motorized recreation settings where the plan allows mountain bikes but does not allow motorized uses.

H. 285-42: The FS should include Alt. A in Table 17, ROS pg. 52-57 so it can be easily compared.

I. 346-5

   a. Please add Alt A into discussion to establish existing baseline (table 59).

   b. Are the maps provided in appendices existing conditions? Are they final?

   c. Please add Design Criteria (DC) in ROS - regarding mechanical vs. non-motorized use vs. motorized.

   d. Add Forest Wide Proposed Action: IRA Desired Conditions 04 "IRAs provide remote primitive and semi primitive recreation opportunities in a natural setting"

   e. Add "For ROS definitions see glossary on page 212" at end of paragraph.

f. Please establish plan or projections for 15 -20yrs of increase of human use and impacts.

J. 517-2

a. The FS should consider that FW-ROS-SUIT-07 ought not apply along the CDNST in these settings where bicycle travel would substantially interfere with hiker and horseback use owing to impacts on the trail surface or conflicts along narrow (and steep) pathways, or otherwise.

b. The FS should clarify that "designated" routes refers to routes in designated areas (e.g., along the CDNST) or to routes designated administratively as in travel plans.

K. 517-3: FW-ROS-SUIT-16 [and FW-ROS-SUIT-20]: "In winter, motorized vehicles, other than those designed for over-snow use, are not suitable in desired semi-primitive motorized settings [Roaded Natural ROS settings]." This should be clarified to make it clear that helicopter-supported skiing activities are not suitable in these settings. (We have not proposed a similar clarification of FW-ROS-SUIT-10, with respect to semi-primitive non-motorized settings because the statement there refers more broadly, to "motorized recreation travel," which should be — and we believe would be—interpreted as extending to helicopter travel and landing in the areas under consideration.) Unless reference to heliskiing is specifically included in the plan components, the decision notice should confirm our interpretation.

L. 553-24

a. The FS should include alt A in Table 17 (ROS, pgs 52-57) so it can be easily compared.

b. The FS should not allow mechanized recreation transport in Primitive settings outside of Wilderness and Recommended Wilderness and should clarify the definition in Table 17.

M. 664-13: The FS should clarify the definition for Primitive ROS in the DEIS so that it matches that in the Table 17 in the Draft Forest Plan.

N. 724-11: The FS should fix an error in the ROS maps around Rickard Coulee. All of the Recreational Opportunity Spectrum maps show a road corridor leading into Rickard Coulee as semi-primitive motorized. But there is no public access to the road, and it is closed under the current travel management plan. A trail does exist on the ground, but the travel plan map does not show it as open to motorized vehicles or even as a system trail.

O. 736-2: The FS should put a maximum speed limit on trails that pass through Semi-primitive non-motorized ROS settings in WSAs.

P. 802-7: As dispersed camping along forest system roads in summer and during hunting season is the largest recreation category, the FS should not reduce the amount of semi-primitive motorized ROS in any of the alternatives.

Q. 970-13: The FS should define ROS for the Sweeney Creek Wild Area, Jericho and Lazyman Roadless Conservation Areas as Semi-Primitive Non-Motorized Recreation ROS with motorized uses prohibited. ROS boundaries for the purpose of suitability shall extend to the edge of open forest system and/or county roads.

R. 1016-20: The FS should fix an error in the ROS maps around Rickard Coulee. All of the Recreational Opportunity Spectrum maps show a road corridor leading into Rickard Coulee as semi-primitive motorized. But there is no public access to the road, and it is closed under the current travel management plan. A trail does exist on the ground, but the travel plan map does not show it as open to motorized vehicles or even as a system trail.

S. 1048-23: The FS should base desired ROS settings based on legal and practical suitability of the desired conditions for those lands, rather than relying on existing conditions to establish its ROS

settings. The FS's approach to creating plan components for ROS settings here fails to comply with the planning directives.

Supplemental Responses:

A. 128-12: The National Recreation Opportunity Spectrum (ROS) Inventory Mapping Protocol, April 2018, provides guidance for not only how ROS categories are mapped but also what activities are appropriate in each ROS setting. Adherence to this national protocol contributes to the consistent application of ROS settings across NFS lands.

B. 128-14

   a. Language has been added to clarify that motorized access is permitted in semi-primitive motorized ROS settings.

   b. Backcountry cabins are permitted in all ROS settings. Please see FW-ROS-DC-02 and FW-ROS-DC-04.

   c. The desired ROS maps were developed from a national protocol that projected ROS settings using the location and relationship of constructed features such as roads, housing developments, utilities, etc. Several areas on the forest met the criteria for "Urban" ROS. The Lewis and Clark National Historic Interpretive Center is the best example on the Forest of a developed recreation site that meets the Urban ROS category. This site has a number of developed features, such as elevators and flush toilets, and is accessed from paved roads and highways. It is beyond the scope of the Forest Plan to change the national ROS protocol and eliminate the Urban ROS setting.

C. 128-14: There is not a direct correlation between the development scale of recreation sites and recreation opportunity spectrum. To eliminate confusion, the column showing ROS setting has been removed from the development scale table.

D. 128-16

   a. FW-REC-GDL-09 provides direction for dispersed recreation in meeting desired recreation opportunity spectrum settings.

   b. The word "backcountry" was removed from FW-ROS-SUIT-32, since backcountry trails are seldom found in urban settings.

E. 128-17

   a. (a) FW-ROS-DC-05 states that trails in semi-primitive nonmotorized settings are ungroomed. FW-ROS-SUIT-20 was added to roaded natural winter ROS settings to allow for plowed roads and groomed trails in that ROS setting.

   b. See the response for (a).

   c. (129-17) (c) Urban ROS settings are appropriate in highly developed recreation areas and where development near population centers is most dense. While limited on the HLC NF, there are a few areas that qualify as Urban ROS and need direction to be managed appropriately.

F. 128-18: Plowed roads and groomed trails were added to the suitability statements in both winter Rural and winter Roaded Natural ROS settings.

G. 128-25: Between Stemple Pass and Lewis and Clark Pass, the CDNST is primarily located within primitive, semi-primitive non-motorized and semi-primitive motorized settings. The CDNST also passes through Roaded Natural settings when it crosses Highway 200 (Rogers Pass), Highway

279 (Flesher Pass), in the area surrounding FS Road 601 (Stemple Pass). See also FW-CDNST-DC-03.

H. 174-6: The National ROS Inventory Mapping Protocol, April 2018, provides guidance for not only how ROS categories are mapped but also what activities are appropriate in each ROS setting. Adherence to this protocol contributes to the consistent application of ROS settings across NFS lands. In accordance with this National protocol, mechanized means of transportation (including mountain bikes) are suitable in all ROS settings, unless those areas are specifically closed due to legislative action, such as Congressionally designated wilderness, or by closure order at the Forest or District levels.

   During the formation of the Proposed Action, the HLC NF misinterpreted the National direction for Primitive ROS settings and stated that mechanical means of transportation (including mountain bikes) would not be suitable within these Primitive ROS settings. This is incorrect and not congruent with the national direction.

   The HLC NF corrected this error in the DEIS and the FEIS. The Final Forest Plan will follow national direction and will allow all forms of non-motorized recreation uses within Primitive ROS settings, including mountain bikes, unless this use is specifically prohibited by Congressional law or Forest closure order.

   Clarifying language was added to the Forest Plan and the FEIS to clearly describe the National direction of non-motorized recreation in Primitive ROS settings.

I. 285-42: The Forest Plan contains the plan components for the preferred alternative, alternative F. Please see the FEIS for a comparison of the alternatives

J. 346-5

   a. See the response for (I).

   b. The maps to establish recreation opportunity spectrum settings for both summer and winter may be found in Appendix A. When the FEIS is finalized, these maps will also be finalized.

   c. The desired ROS settings establish were specific recreation activities may occur. Mechanized recreation activities are allowed in all ROS settings across the forest, unless prohibited by Congressional law or by Forest or District closure order. Motorized recreation activities are allowed in ROS settings that allow motorized use but that use is only authorized through existing travel plans. Please see Table 18 for more information about the recreation uses allowed in each ROS setting.

   d. Please see FW-IRA-DC-04.

   e. Reference to the glossary is made in the introduction to Recreation Settings.

   f. Projections for the increase in human use and occupancy is beyond the scope of the Forest Plan.

K. 517-2

   a. The responsible official considered all points of view and strived for an appropriate mix of multiple uses for the Forest when making his decision. Conflict resolution between user groups is often a site-specific issue that could be addressed in future site-specific projects and is beyond the scope of the Forest Plan revision.

   b. Replaced the word "designated" with "FS authorized".

L. 517-3: Motorized vehicles are allowed on authorized route and acres in semi-primitive motorized settings. This includes the authorized use of helicopters for heli-skiing activities.

M. 664-13: Language was added to the definitions of ROS in the FEIS to ensure they are the same as those identified in the Forest Plan.

N. 724-11: This error to the ROS map has been fixed.

O. 736-2: Establishing a speed limit for trail is site-specific and beyond the scope of the Forest Plan.

P. 802-7: Dispersed camping along forest system roads occurs in the Roaded Natural ROS setting.

Q. 970-13: Roaded natural ROS settings are located along the open forest system roads.

R. 1016-20: This error to the ROS map has been fixed.

S. 1048-23: The HLC NF used the ROS Inventory Mapping Protocol, April 2018, for mapping ROS settings.

Recreation opportunities

CR213 Recreation Plan Components

Supplemental Concern Statements:

A. 128-8: The FS should consider including the following plan components:

   a. DC: Non-Motorized recreation is promoted, allowed, and welcomed across the Forest in places where it is sustainable, through the activities that are sustainable, and to the extent that it is sustainable

   b. STD: Foot travel, including skiing, is allowed for cross-country travel unless area is administratively closed to public access

   c. DC: Forest settings reflect healthy and resilient landscapes, provide a diverse sense of place for community residents and visitors, and enhance high quality sustainable recreation opportunities.

   d. DC: A full range of recreation settings is available, ranging from primitive, unroaded and challenging "backcountry" areas to roaded "front country" settings which are easily travelled and convenient for connecting communities to the forest

   e. GDL: Front-country areas provide initial contact points for forest users and developed recreation settings where people can engage in a variety of recreation activities including scenic driving, rock climbing, hiking, camping, picnicking, fishing, and boating

   f. GDL: Back-country areas are mostly undeveloped places where people engage in a variety of more primitive recreation activities. Visitors rely on their outdoor skills and self-reliance as they engage in recreation activities. - Guideline: Main access corridors to NFS lands and contact points such as developed trailheads and observation points have information available and provide a transition and orientation place for forest users as they enter back-country areas. Visitor use in these areas is moderate and disperses from these points.

   g. DC: Resources, skills, energy, and enthusiasm of partners and communities are engaged to maintain or enhance recreation settings on the forest.

   h. GDL: The FS will work with local and national partners to educate users on best practices for reducing conflict and to sign shared use trails with information on trail etiquette and to promote responsible behavior. -

i. GDL: Wherever possible, the FS will prioritize the development of partnerships with non-profit organizations and local government entities whose missions complement the FS's mission and desired objectives.

j. STD: Campground hosts and other private partners who interact with the public will be trained to provide interpretive services in addition to maintenance and administrative duties.

k. DC: Recreation settings retain their natural character as development and populations in the region continue to grow and new forms of recreation emerge

l. STD: Design and construction of new projects must follow the assigned Recreation Opportunity Spectrum (ROS) classification for the specific management or geographic area location.

B. 285-45: The FS should consider adding mechanized equipment to the definition portion of Table 19, REC pg. 58-60.

C. 285-62: The FS should consider an objective for Citizen monitoring in support of professional staff, under Benefits to People: FW -CONNECT-OBJ 4.

D. 553-25

a. The FS should consider adding mechanized equipment to the definition portion of Table 19, REC pg. 58-60.

b. The numbers described in FW-REC-OBJ 01 and 02 seem very low for implementation forest wide over 15 years.

c. The FS should consider re-wording FW-REC-GDL 7 since most plant species attract some species of mammals.

E. 727-15: The FS should consider the following plan components for Recreation Access:

a. DC: Non-motorized recreation is promoted, allowed, and welcomed across the Forest in places where it is sustainable, through the activities that are sustainable, and to the extent that it is sustainable.

b. STD: Foot travel, including skiing, is allowed for cross-country travel unless area is administratively closed to public access

c. DC: Forest settings reflect healthy and resilient landscapes, provide a diverse sense of place for community residents and visitors, and enhance high quality sustainable recreation opportunities.

Supplemental Responses:

A. 128-8

a. The desired ROS settings establish were specific recreation activities may occur. Non-motorized recreation activities are allowed in all ROS settings across the forest. Please see Table 15 for more information. Sustainability is discussed in the Introduction to the Recreation Opportunity, Settings, Special Uses, Access and Scenery section.

b. The desired ROS settings establish were specific recreation activities may occur. Foot travel, including skiing, is allowed in all ROS settings across the forest. Please see Table 15 for more information.

c. Please see FW-ROS-DC-01. Additionally, sustainability recreation is discussed in the introduction to the Recreation Opportunity, Settings, Special Uses, Access and Scenery section.

d. Please see FW-ROS-DC-01 and FW-ACCESS-DC-01.

e. The HLC did not establish "front-country" areas as a part of this Forest Plan. The desired ROS plan components establish where motorized and non-motorized activities may occur. Please see Table 15, recreation opportunity spectrum plan components. Additionally, guidance for access for all areas of the Forest is provided by FW-ACCESS-DC-01.

f. The HLC did not establish "back-country" areas as a part of this Forest Plan. The desired ROS plan components establish where motorized and non-motorized activities may occur. Please see Table 15, recreation opportunity spectrum plan components. Additionally, guidance for access for all areas of the Forest is provided by FW-ACCESS-DC-01.

g. There are a number of Goals that provide direction for using the "resources, skills, energy, and enthusiasm of partners and communities." Please see the Goals in the Public Information, Interpretation, and Education section under Benefits to People. There is no need to restate these goals in the Recreation Settings section.

h. Direction of working with local and national partners to educate users on best practices for reducing conflict and to sign shared use trails with information on trail etiquette and to promote responsible behavior may be found under Goals in the Public Information, Interpretation, and Education section under Benefits to People. There is no need to restate these goals in the Recreation Settings section.

i. The FS is interested in any and all partnership opportunities. See also FW-CONNECT-GO-01, 02, 03, 04, 05, 06, 07, 08, and 09.

j. Establishing guidance for campground hosts is beyond the scope of the Forest Plan.

k. Establishing desired recreation opportunity spectrum (ROS) settings provides direction for future development and management of these lands. Emerging recreation activities would need to follow the direction established by the ROS settings.

l. Recreation opportunity spectrum settings provide direction for recreation activities. Other plan components have been developed to address other resource issues.

B. 285-45: Mechanized equipment is allowed everywhere on the HLC NF unless specifically prohibited by law, closure order, or the 2020 Forest Plan components. The presence and/or absence of mechanized recreation uses and/or equipment is not used to define the recreation site development scales in Table 16.

C. 285-62: Please see FW-CONNECT-GO-04.

D. 553-25

a. Mechanized equipment is allowed everywhere on the HLC NF unless specifically prohibited by law, closure order, or 2020 Forest Plan components. The presence and/or absence of mechanized recreation uses and/or equipment is not used to define the recreation site development scales in Table 16. Please see plan components for ROS settings, Table 15.

b. Objectives are concise, measurable, and time-specific statements of a desired rate of progress toward a desired condition or conditions. Objectives represent what the forest can reasonably accomplish given existing and projected limitations on budget and time.

c. Please see FW-REC-GDL-07.

E. 727-15:

a. The desired ROS settings establish were specific recreation activities may occur. Non-motorized recreation activities are allowed in all ROS settings across the forest. Please see Table 15 for more information. Sustainability is discussed in the Introduction to the Recreation Opportunity, Settings, Special Uses, Access and Scenery section.

b. The desired ROS settings establish were specific recreation activities may occur. Foot travel, including skiing, is allowed in all ROS settings across the forest. Please see Table 15 for more information.

c. Please see FW-ROS-DC-01. Additionally, sustainable recreation is discussed in the introduction to the Recreation Opportunity, Settings, Special Uses, Access and Scenery section.

Recreation special uses

CR90 Permits and Special Uses

Supplemental Concern Statements:

A. 136-3: There are enough outfitting permits on the HLC NF. No additional permits are needed.

B. 153-7: No motorized permits for special events should be allowed on the CDNST.

C. 243-6: No exceptions should be allowed for permitted special events on the CDNST.

D. 285-69: Please add "while meeting other resource desired conditions" to FW-SU-DC-01.

E. 286-2: The FS should address the conflict between Forest Plan components and special use permit requirements and if there is a conflict, then the special use permit requirements should prevail. This is especially relevant to ski area permits.

F. 286-4

a. The FS, through its' special use permits, should not block and ham-string permittees from providing the activity of their special use (i.e. developed ski area).

b. The FS should manage unique and designated use of the permitted land as a recreation setting and this should take priority over the forest-wide plan standards, objectives, and guidelines that will be applied to the forest in general.

c. The FS should not force ski areas to continually mitigate conflicts or jump through unnecessary and expensive compliance that ultimately thwarts development/growth of the ski area, limiting ski areas in serving and benefiting the public; and threatening the viability of ski area business & the positive economic impact.

d. The FS should modify FW-RSUP-GDL-01 by adding the following language: "Recreation operations, under (or being considered for) special use authorizations, should mitigate conflicts with other uses and resources. The Forest Plan should address head on the issue of conflict between Forest-wide, Forest Plan standards, objectives, and guidelines; and special use permit management standards, objectives, and guidelines - like developed skiing. Should a conflict remain, the special use permit management area goals and objectives will prevail. This should include permit measures that address

potential conflicts such as, but not limited to: location of the event, timing of the event, party size, and education on the reduction of human-wildlife conflict."

G. 316-2: Draft forest plan, page 11: Rights and interests "The plan will not change existing permits and authorized uses." Does this mean when, i.e., cabins sell, O & G permits sell, ranches go out of cattle grazing, and utilities add or drop services nothing will change? Permits change frequently and should be evaluated on a case by case bases.

H. 316-8: The FS should consider HNF Manual Supplement 18, 7/86, 2720 Special Uses Administration 2721.53 Outfitter and Guide Policy for the Helena National Forest and should make this direction a standard in the 2020 Forest Plan. In particular, page 2, item 1, "No new permits for outfitter and guide services will be issued for hunting or fishing activities."

I. 489-13: The FS should adopt a standard stating that no additional hunting outfitter permits will be granted by the Forest.

J. 553-39: Please add "while meeting other resource desired conditions" to FW-SU-DC-01

K. 586-5: The FS should limit the total number of outfitter permits at their current level and allow no increases of addition permits.

L. 625-65: The FS should keep the total number of outfitter permits at the level identified in the 1986 Forest Plans.

M. 625-68: The FS should not issue permits for organized races (foot, bike, horse) in Primitive Areas or Wilderness area.

N. 664-96: The FS should not issue or approve outfitter and guide permits beyond the existing days established in the HLC National Forest 1986 plans.

O. 724-22: Supports outfitter Vic Anderson having a special use permit to take clients by wagons into the Deep Creek RWA area.

P. 777-14: The FS should keep the total number of outfitter permits at the level identified in the 1986 Forest Plans.

Q. 922-4: The FS should allow some management flexibility for long term permittees that serve large user bases, such as Showdown Ski area. Example: Permittees should be allowed, without extensive review process, to drop trees that are adjacent to lift routes, ski slopes, power lines and access roads.

R. 959-15: The FS should limit the number of hunting and fishing outfitter permits to the current number (68) as stated in the 1986 Forest Plan.

S. 1081-122: The FS should include the following Guideline: FW-GDL-REC-05. To reduce the risk of conflicts between wildlife and event participants as well as with other recreationists, authorizations for recreation events, group use, and commercial activities should include permit measures that address potential conflicts such as, but not limited to, location of the event, timing of the event, party size, and education on reduction of wildlife-human conflicts. Grizzly bear-human conflicts are monitored by MFWP and would continue to be monitored in the future so that adaptive changes could be made, if warranted.

T. 1081-123: FW-GDL-REC-05 is very similar to the proposed FW-RSUP-GDL-01 which states, "Recreation operations, under (or being considered for) special use authorizations, should mitigate conflicts with other uses and resources. This should include permit measures that address potential conflicts such as, but not limited to: location of the event, timing of the event, party size, and education on the reduction of human-wildlife conflict." (HLC draft plan, p.61)

U. 1090-16: The FS should thoroughly analyze voluntary permit retirement in the DEIS or any other related documents.

Supplemental Responses:

A. 136-3: Decisions regarding the specific number and kinds of outfitter and guide permits will be determined outside of the Forest Planning process.

B. 153-7: Please see FW- CDNST-DC-01, FW-CDNST-GDL- 01, and FS-CDNST-GDL-04

C. 243-6: The preferred alternative, alternative F, allows for permitted special uses and events to occur on the CDNST. Prior to allowance, these uses would be analyzed and found to meet the plan components providing direction for the CDNST in the 2020 Forest Plan.

D. 285-69: Authorization for special uses require that other resource desired conditions are considered. The 2012 planning rule requires that other resource desired conditions are met.

E. 286-2: In the preferred alternative, alternative F, all special use permits will comply with the 2020 Forest Plan direction.

F. 286-4

   a. Plan components in the 2020 Forest Plan provide direction and guidance for recreation special use permits through Forest-wide desired conditions, and guidelines. In addition to forest plan direction, all special use permits are required to meet applicable laws, regulations, and policies.

   b. The FS has recognized ski areas as having rural ROS settings. This ROS setting provides for the continual development of these sites allowing for changes over time. Plan components in the 2020 Forest Plan (including those for Rural ROS settings) provide direction and guidance for recreation special use permits through Forest-wide desired conditions, and guidelines. Beyond forest plan direction, all special use permits are required to meet applicable laws, regulations, and policies.

   c. See the response for (a).

   d. Please see FW-RSUP-GDL-01. All plan components for recreation special uses in the 2020 Forest Plan provide direction for recreation operations within special use permits. No additional language is necessary.

G. 316-2: The following language was added to the Rights and Interest Section of Chapter 1 to clarify changes to special use permits: When permits are reauthorized or changed, applicable plan components will be implemented.

H. 316-8: Specific and prescriptive direction (as described by HNF Manual Supplement 18, 7/86, 2720 Special Uses Administration 2721.53 Outfitter and Guide Policy for the Helena National Forest) would not be in compliance with the 2012 Planning Rule. Decisions regarding the specific number and kinds of outfitter and guide permits will be decided outside of the Forest Planning process.

I. 489-13: Please see the response for (A).

J. 553-39: Authorization for special uses require that other resource desired conditions are considered. Additionally, the 2012 planning rule also requires that other resource desired conditions are met.

K. 586-5: Please see the response for (A).

L. 625-65: Please see the response for (A).

M. 625-68: Please see the response for (A).

N. 664-96: Please see the response for (A).

O. 724-22: In the preferred alternative, the Deep Creek area would be assigned a primitive ROS setting and would not be identified as an RWA. Special user permits would continue to be allowed according to law, regulation, and FS policy.

P. 777-14: Please see the response for (A).

Q. 922-4: All actions on the HLC National Forest must meet law, regulation, and policy. Hazard tree removal for the protection of the public is standard operating procedure and is included in recreation special use permits.

R. 959-15: Please see the response for (A).

S. 1081-122: Please see FW-RSUP-GDL-01.

T. 1081-123: Please see FW-RSUP-GDL-01.

U. 1090-16: Voluntary permit retirements are not included in FSH 2209.13 direction. Voluntary waivers of term permits may be accepted at any time by grazing permittees. Site-specific decisions will determine future management of suitable rangeland and authorization of grazing permits within grazing allotments. Please see concern response #163 in Livestock Grazing-Wildlife, part E for more information regarding closing grazing allotments.

Administratively designated areas

CR40 IRAs – Recommended Plan Components

Supplemental Concern Statements:

A. 284-3: The FS should provide clear definitions of the scenic integrity levels for the IRAs and what they mean.

B. 285-51: The FS should explain whether the scenic integrity level of high would be compatible with planned ignitions in IRAs.

C. 285-52: FW-IRA -GDL "Restoration activities (such as management ignited fires, active weed management) may be used in IRAs to protect and/or enhance the inherent characteristics of these areas."

D. 517-8: FW-IRA-SUIT-02. "IRAs are suitable for motorized and mechanized means of transport on roads ("classified roads") that are managed as part of the forest transportation system."

E. 553-29: The FS should explain whether the scenic integrity level of high would be compatible with planned ignitions. Please add "restoration activities (such as management ignited fires, active weed management) may be used in IRAs to protect and/or enhance the inherent characteristics of these areas".

F. 586-22: FW-IRA-SUIT "IRAs should universally be classed "unsuitable" for timber."

G. 801-6: FW-IRA-SUIT "Roadless lands are largely not suitable for road building, timber harvesting, and other resource extraction due to their rugged terrain and because their value is much more important to Montanans for hiking, backpacking, horseback riding, camping, hunting, and fishing."

H. 959-4: The HLC NF should include a Management Area for lands comprised of IRAs.

I. 959-10: Mechanized equipment should be restricted in the Lazyman IRA.

J. 1048-47

   a. FW-IRA-STD "A road shall not be constructed or reconstructed, unless the responsible official determines that a road is needed according to the circumstances allowed in the Roadless Area Conservation Rule (66 FR 3244). FW-IRA-STD Timber shall not be cut, sold, or removed, unless the responsible official determines that activities meet the circumstances provided in the Roadless Area Conservation Rule (66 FR 3244).

   b. FW-IRA-GDL When developing the proposed action for a NEPA project, consider conducting restorative activities such as road decommissioning and mine reclamation within the project area to move towards desired conditions.

   c. FW-IRA-SUIT Not suitable for commercial timber activities.

   d. FW-IRA-SUIT Not suitable for road building.

Supplemental Responses:

A. 284-3: Additional language and cross referencing was added to help clarify the meaning of scenic integrity levels.

B. 285-51: Wildfire is a natural process on the landscape and would be considered within the normal ecological functioning of these landscape. Therefore, it would meet the scenic integrity level of high.

C. 285-52: Suitability statement FW-IRA-SUIT-03 was added to provide direction for restoration activities within IRA's.

D. 517-8: In alternative F, motorized and mechanized uses will be prohibited within RWAs. Motorized and mechanized uses within IRA's, outside of RWAs, have been established by summer and winter travel management plans for these areas.

E. 553-29

   a. Wildfire is a natural process on the landscape and would be considered within the normal ecological functioning of these landscape. Therefore, it would meet the scenic integrity level of high.

   b. Suitability statement FW-IRA-SUIT-03 was added to provide direction for restoration activities within IRA's.

F. 586-22: The 2020 Forest Plan FW-IRA-SUIT-01 states: "IRAs are unsuitable for timber production, however, timber harvest is suitable outside of WSAs and RWAs for other resource benefits consistent with the 2001 planning rule."

G. 801-6: See the response for (F).

H. 959-4: The 2020 Forest Plan for the HLC NF does not include Management Areas. Management direction for IRAs may be found under forest-wide direction in the designated areas section, under Inventoried Roadless Areas.

I. 959-10: Motorized and mechanized means of transportation on the forest are determined by the recreation opportunity spectrum (ROS). Alternatives in the EIS analyzed a variety of ROS for IRAs, including the Lazyman IRA. The preferred alternative allocates a semi-primitive non-motorized ROS to the Lazyman IRA. This allocation will allow mechanized uses to continue to use this area.

J. 1048-47

a. All pertinent laws, regulations, and policies will be followed. They do not need to be repeated within the Forest Plan.

b. Suitability statement FW-IRA-SUIT-03 was added to provide direction for restoration activities within IRA's.

c. See the response for (a).

d. See the response for (a).

CR49 RWA Boundary Adjustments

Supplemental Concern Statements:

The FS should consider boundary adjustments recommendations for a number of RWAs:

A. 47-7, 283-5, 586-10: Recommendations for the Middle Fork Judith RWA in alternative D.

B. 47-15, 1015-5, and 1016-7: Baldy-Edith RWA should be much larger and match recommendations by High Country Trails.

C. 492-8, 505-5, 507-1, 508-2, 509-2, 512-3, 578-3, 583-2, and 603-7: Adjust Arrastra and Silver King RWAs away from roads to allow firewood gathering and historic camping.

D. 600-7, 1184-8: Adjust northern boundary of the Nevada Mountain RWA to buffer private lands along Poorman Creek Road but that includes the Helmville-Gould road.

E. 603-6: Adjust the boundary of the Red Mountain RWA to accommodate a historic turnaround point of motorized users at the switchback on train 485 at the head of Copper Creek drainage.

F. 750-4: Supports the Middle Fork Judith RWA in alternative D and recommends expanding it to include the Lost Fork as well as 18,617 acres in the north portion.

G. 959-8: Suggested updates the Colorado Mountain RWA in alternative D.

H. 1054-61: Requesting Silver King RWA boundary reach all the way to Lewis and Clark Pass, allowing for mountain biking south and not north of Lewis and Clark Pass.

I. 1054-62: Adjust the boundary of the Arrastra Creek RWA to include a trail-less wild area in Stonewall Creek.

J. 1054-63: Adjust the southern boundary of the Red Mountain RWA to follow the watershed divide between Red Creek and North Fork Copper Creek.

Supplemental Response Statements:

A. 47-7, 283-5, 586-10: The preferred alternative (alternative F) does not identify any part of the Middle Fork Judith WSA for a RWA.

B. 47-15, 1015-5, and 1016-7: The preferred alternative (alternative F) identifies Mount Baldy as a RWA. The boundary for the RWA was located on easily identifiable features on the landscape to the extent possible. This was done to provide for better manageability of the RWA boundary.

C. 492-8, 505-5, 507-1, 508-2, 509-2, 578-3, 583-2, and 603-7: The preferred alternative (alternative F) identifies Silver King as an RWA. The boundary of this RWA stays 300 feet from all open roads which will allow for dispersed camping and firewood gathering. The preferred alternative does not identify Arrastra Creek as an RWA.

    a. 512-3: The boundary of the Red Mountain RWA follows the watershed divide between Red Creek and North Fork Copper Creek. The switchback on Trail #485 at the head of Copper Creek drainage is not within the RWA boundary. The Red Mountain RWA lies approximately 1.5 miles north of Trail 485 and 1 mile north of the switchback created by

Forest System Roads 771A1 and 330. Since both of these areas are located outside of the Red Mountain RWA, designation of this RWA will not affect recreation activities along these routes.

D. 600-7, 1184-8: The preferred alternative (alternative F) includes the Nevada Mountain RWA. The northern boundary of this RWA lies 150 feet to the south of the Gould-Helmville trail (Trail 467), thereby allowing the trail to remain outside of the RWA.

E. 603-6: See the response for (C-a).

F. 750-4: The preferred alternative (alternative F) does not identify any part of the Middle Fork Judith WSA, north the Lost Fork drainage, for a RWA.

G. 959-8: The HLC NF followed the process outlined in FSH 1909.12, Chapter 70 in the inventory, analysis, and mapping of RWA boundaries for the FEIS. Recommended Wilderness boundaries do not always directly follow IRA boundaries, although they are often in the same area. In this specific case, the undeveloped nature of the lands in the Colorado Mountain polygon stretch outside of the Lazyman Gulch IRA southwest toward Chessman Reservoir. The wilderness inventory and evaluation process must look at all lands that are undeveloped and have potential to be included in the National Wilderness preservation system. These lands qualify for that deeper look and were considered in alternative D in the FEIS as having potential for inclusion as an RWA. The Colorado Mountain RWA was not included in the preferred alternative.

H. 1054-61: In the preferred alternative (alternative F), the northern boundary of the Silver King RWA remains 150 feet south of the Continental Divide trail (Trail 440) from where it intersects the East Fork Falls Creek trail (Trail 219) south to Lewis and Clark Pass. This allows for a mountain biking connection between East Fork Falls Creek and Rogers Pass and would change the current travel plan direction for the trails in this area.

I. 1054-62: The preferred alternative (alternative F) does not identify Arrastra Creek as an RWA. Instead this area will be managed for a Primitive ROS.

J. 1054-63: In the preferred alternative, alternative F, the southern boundary of the Red Mountain RWA has been altered to follow the watershed divide between Red Creek and North Fork Copper Creek.

CR146 Wilderness Evaluation Process

Supplemental Concern Statements:

A. 68-6 and 7: The FS needs to describe the use of today's wilderness areas verses non- wilderness areas.

B. 517-19

   a. The FS should add the National Trails System Act (NTSA) to Criterion 5 in all parcels traversed by a segment of the CDNST.

   b. The FS should analyze existing motorized uses on the CDNST as "relevant to availability of the area for wilderness;" they should be recognized as such in evaluating the suitability of such areas as RWAs.

C. 959-9: The FS should consider modifying the proposed Colorado Gulch RWA in alternative D to exclude the two mining claims on the border of the Lazy Man IRA boundary.

D. 997-3

   a. The boundary description for the Colorado Mountain RWA is inaccurate. The Lazy Man IRA does not border the Chessman Reservoir as stated in the description.

b. The current uses description indicates 1,240 acres of the Colorado Mountain RWA are open for motorized over the snow uses. This area is not part of the Lazy Man IRA and should not be a deciding factor rating the wilderness qualities of the Colorado Mountain RWA.

E. 1034-7: The proposed alternative effectively converts multiple-use lands to defacto wilderness lands which circumvents congressional law and the wilderness designation process.

F. 1035-8

a. A number of rationales for excluding areas from the Draft Plan (and DEIS alternatives) suggest the FS misapplied the evaluation criteria in Chapter 70. In particular, there is heavy reliance on the presence of motorized activity (either inside or outside the unit) that supposedly impacts solitude as the primary rationale for not recommending areas in the Draft Plan.

    i. For example, the evaluation of Hogback/BB2 states that it is non-motorized with good opportunities for solitude and unconfined rec, but it is not recommended for wilderness due to "presence of motorized system roads and trails that affect solitude".

b. The FS uses improper reliance on outside sights and sounds from adjacent highways, motorized activity outside the polygon, proximity to private lands or population centers, activities on surrounding private land, etc.

    i. Examples: Grassy Mountain/BB8, Sweeney Creek/D2, Colorado Mountain/D5, Sun Mountain/BL3, Peterson Mountain/LB5, Taylor Mountain/LB6, Anaconda Hill/UB4.

c. For some areas, the evaluation states that opportunities for solitude within the unit are good, but then the rationale for excluding the area from the Draft Plan and DEIS alternatives is that activities on surrounding lands affect opportunities for solitude.

    i. Example: Peterson Mountain (also Taylor Mountain) simply states private lands surround much of the unit, but it does not address what activities on those lands might impact opportunities for solitude. Furthermore, there are opportunities for primitive recreation throughout the polygon, so lack of opportunities for solitude should not be disqualifying (App. F, p. 160).

d. There are also instances where entire large areas have been excluded from further analysis because of motorized use in a portion of the area. The Chapter 70 directives do not require opportunities for solitude everywhere for an area to be considered suitable for wilderness recommendation. Furthermore, boundary adjustments should be considered, but evidently they were not.

    i. In the 56,002-acre Teton Blackleaf/RM2 area, only the northern portion of the area is affected by motorized use, but the entire area is not recommended.

    ii. The 71,106-acre Sun Canyon Willow/RM3 area is excluded because solitude is affected around the edges of the polygon due to outside activities.

e. We also have concerns about the co-mingling of opportunities for solitude or primitive/unconfined recreation. The Chapter 70 directives do not require both solitude and primitive recreation, just one or the other.

    i. For example, in the Continental Divide North/D13 area, communication sites, adjacent roads, and groomed snowmobile trails affect solitude in the entire area, but no information is provided about opportunities for primitive recreation.

ii. In Black Mountain/UB3, cross-country snowmobiling impacts solitude, but the area provides opportunities for primitive/unconfined recreation in summer and winter (App. F, p. 255); thus, even if there are no opportunities for solitude, the unit should not be disqualified.

f. There appears to be improper consideration of management tradeoffs in the evaluation of areas that were not recommended because of the "need to maintain ability to carry out other resource management inconsistent with wilderness characteristics."

i. For some areas (e.g., Camas Creek/BB6 and Colorado Mountain/D5), the evaluation does not clarify what these management activities might be, yet this rationale is used to exclude these areas from the Draft Plan and DEIS alternatives. Certainly, management tradeoffs is an important consideration in the analysis stage of the four-stage Chapter 70 process in the EIS. Areas with management (or motorized recreation) conflicts that still satisfy the wilderness evaluation criteria should be included in the range of alternatives and should not be improperly disqualified from NEPA analysis.

G. 1035-9

a. It is important that the public have the opportunity to provide feedback on both the methodology used (e.g., the questions and metrics) and the results of the evaluation as applied to particular units. For instance, both the Gila and the Grand Mesa - Uncompahgre-Gunnison National Forests provided draft inventory and evaluation protocols for public review as well as draft inventory and evaluation maps for public review. The FS should then adjust the evaluation accordingly, make necessary adjustments to the rationales for excluding areas, and utilize the corrected evaluation and public input to develop a robust range of alternatives for the EIS.

b. Consistent with the Wilderness Act, the Chapter 70 directives require evaluation of an area's "apparent naturalness." Yet, some questions/metrics in Appendix F focus too heavily on objective ecological conditions or the presence or extent of improvements or activities (e.g., presence of non-native species, proportion of area without past timber harvest), rather than the appearance of those conditions to the average visitor or the effect of those improvements or activities on the area's appearance.

i. For example, Hogback Area/BB2 has 73 acres associated with invasive plant inventories, but the evaluation does not mention how that would affect the average visitor's perception of the area's naturalness; indeed, the average visitor generally would not recognize the presence of many invasive plant species.

ii. Improvements question 1c properly focuses on departure from apparent naturalness, but the information included in the table on the "presence and extent of departure from naturalness" does not apply the average visitor standard and instead focuses on the presence of improvements, including improvements located outside the polygon that are visible from within. The proper criterion is whether improvements located inside the polygon are substantially noticeable to the average visitor and detract from the area's apparent naturalness; indeed, there are many recommended and designated wilderness areas that are immediately adjacent to large urban areas, major highways, etc.

iii. "Lands adjacent to development or activities that impact opportunities for solitude" are improperly included in the apparent naturalness evaluation; here again, adjacent lands and activities are irrelevant to apparent naturalness, which

is judged based on the average visitor standing on the boundary looking into the polygon.

c. Regarding the evaluation of opportunities for solitude or primitive/unconfined recreation, Question 2a asks what impacts are pervasive and influence a visitor's opportunity for solitude. However, this does not explicitly acknowledge that opportunities need not be present throughout the entire unit, and it focuses on impacts (many of them based on outside sights and sounds) that might degrade opportunities, rather than whether opportunities are present within the unit. In general, Appendix F does not evaluate the extent of listed impacts, their effect on opportunities for solitude, and any mitigating factors; instead, it just lists the presence of motorized uses and developed recreation sites within and adjacent to the unit.

d. The evaluation of the Stonewall Inventory Area (UB2) is missing some key information about adjacent lands. The evaluation of the Stonewall Inventory Area mentions several times that it is adjacent to the Scapegoat Wilderness Area, but it never mentions that it is also adjacent to a proposed wilderness area in the Lolo National Forest.

H. 1041-101: The FS should consider the dispersed camping use in Swimming Woman, Careless Creek, and Timber Creek canyons during the fall hunting season.

I. 1093-1: The FS appears to be weighing the wilderness evaluation process heavily toward more wilderness. The process doesn't appear to be in accordance with the principles of the Multiple-Use, Sustained-Yield Act of 1960.

J. 1159-284

a. The FS rejects including an alternative that recommends all WSAs and roadless areas for wilderness from the DEIS.

b. The process the FS used to evaluate roadless lands for potential wilderness recommendation as not used properly.

c. The FS fails to consider and implement BASI.

Supplemental Responses:

A. 68-6 and 7: The HLC NF followed the wilderness evaluation process to determine which lands should be included in the National Wilderness Preservation System. To accomplish this, the Forest used the four steps outlined in the 2012 FS Planning Rule and Chapter 70 of the NFS Land Management Planning Handbook 1909.12. These steps, and the results are documented in Appendix E of the FEIS.

B. 517-19

a. The National Systems Trails Act (CDNST) has been added to Criteria 5 for all parcels that the CDNST passes though.

b. Please see the response for (A).

C. 959-9: Based on public comment to the Proposed Action, both Camas Creek and Colorado Mountain were included as RWAs in Alternative D and analyzed in the FEIS. The preferred alternative, alternative F, does not include Camas Creek or Colorado Gulch as RWAs.

D. 997-3

a. All boundary descriptions have been assessed for accuracy and re-written where adjustments were necessary.

b. Please see the response for (A).

E. 1034-7: Please see the response for (A)

F. 1035-8

   a. Please see the response for (A).

   b. Please see the response for (A).

   c. Please see the response for (A).

   d. Please see the response for (A).

   e. Please see the response for (A).

   f. Please see the response for (C).

G. 1035-9

   a. The HLC NF provided multiple opportunities for the public to provide input on the wilderness inventory and evaluation process. Opportunities included public workshops, fax, email, mail, verbal or provide comments using the Talking Points Collaborative Map on the website.

      The HLC NF followed the wilderness evaluation process to determine which lands should be included in the National Wilderness Preservation System. To accomplish this, the Forest used the four steps outlined in the 2012 FS Planning Rule and Chapter 70 of the NFS Land Management Planning Handbook 1909.12. Each of the 4 steps of the inventory and evaluation process require public involvement.

      On January 29, 2016, the identification and inventory of areas that may be suitable for inclusion in the National Wilderness Preservation System was complete. On February 1, 2016, the HLC NF made the inventory available for review to the public. A series of public workshops were held February 29 through March 7, 2016 whereby the results of the inventory and methodology were presented. Comments from the public were received at the workshops and via the Talking Points Collaborative Mapping tool through March 11, 2016.

      The evaluation and listing of RWAs were released with the proposed action on December 1, 2016. The process for the evaluation was taken directly from Chapter 70 of the 2012 FS Planning Rule. A series of community meetings were held from January 23 to February 2, 2017 to provide additional information and address questions related to the revision proposed action, of which the wilderness inventory was a part. The proposed action and wilderness evaluation criteria and process were posted on forest website during this time. The HLC NF took comments through March 30, 2017.

   b. Please see the response for (A).

   c. Please see the response for (A).

   d. The HLC NF will take this into consideration in the evaluation.

H. 1041-101: Please see the response for (A). The HLC NF followed the wilderness evaluation process to determine which lands should be included in the National Wilderness Preservation System. Existing dispersed recreation were considered in that process

I. 1093-1: Please see the response for (A). The HLC NF followed the wilderness evaluation process to determine which lands should be included in the National Wilderness Preservation System. Multiple uses were considered in this process.

J. 1159-284

a. Please see the response for (A).

b. Please see the response for (A).

c. Please see the response for (A). All references cited in the DEIS are considered BASI. All additional references cited by the public have been reviewed and evaluated and the results can be found in the response to comments.

CR149 South Hills Recreation Area – Recommended Plan Components

Supplemental Concern Statements:

A. 346-12

a. The FS should add objectives, standards, and guidelines for the SHRA similar to those found in the Recreation Opportunities section, pages 58-60 of the Draft Forest Plan.

b. The FS should elaborate on the collective member, representation meetings, MOU, etc. in the Goals section.

c. The FS should add a discussion of past and future mining action and impacts on the SHRA.

d. The FS should add how wildlife will be protected in the SHRA. What are the impact to winter and calving/nesting areas? What is the precedent for management concerns in the SHRA, wildlife or recreation?

B. 625-58

a. The FS should provide non-mechanized recreation options within walking distance of Helena.

b. The FS should have a DC to provide high quality, sustainable non -motorized recreation (non-mechanized within the IRAs) and to conserve wild lands, fish, and wildlife habitat with the SHRA.

c. The FS should clearly prohibit new roads and off-road motor vehicle and mechanized vehicle use where not presently allowed.

C. 791-17

a. The FS should include the following recommended plan components for the South Hills Recreation Area: (a) The SHRA is not suitable for oil and gas leasing.

b. The SHRA is not suitable for timber harvest, however vegetation management can be used as a tool for restoring natural habitat conditions.

c. New permanent roads in the SHRA are prohibited.

d. Unauthorized trails and routes in the SHRA are prohibited and will be reclaimed in a timely manner.

e. Timing, road construction limitations, and best management practices within the SHRA are required for any mining activities.

Supplemental Response Statements:

A. 346-12

a. The plan components developed for forest-wide recreation opportunities apply throughout the planning area including the SHRA. They do not need to be repeated within the SHRA portion of the plan.

b. The intent is to present a goal that is broad enough to accommodate both the active partners currently aiding the FS as well as any potential future partnership groups, volunteers, etc.

c. Impacts to the SHRA from mining are discussed in the FEIS. Forest Plan direction for mining activities is found in FW-EMIN-DC's, FW-EMIN-STD's, and FW-EMIN-GDL's.

d. Forest-wide plan components for wildlife apply throughout the planning area including the SHRA. They do not need to be repeated within the SHRA portion of the plan.

B. 625-58

a. The 2020 Forest Plan identifies much of the SHRA as semi-primitive non-motorized ROS settings. Specific non-mechanized recreation options are beyond the scope of the Forest Plan Revision and may be addressed outside of the Forest Planning process.

b. A variety of ROS settings was analyzed in the FEIS. The preferred alternative identifies semi-primitive nonmotorized and roaded natural for lands within the SHRA.

c. Semi-primitive non-motorized settings are planned for much of the SHRA. New permanent roads would not be allowed in these settings. See FW-ROS-STD-03. DI-SHRA-SUIT-02 provides direction for off-road mechanized uses.

C. 791-17

a. The suitability for oil and gas leasing is beyond the scope of the Forest Plan Revision.

b. Vegetation management within the SHRA is described by DI-SHRA-GDL-01 and DI-SHRA-SUIT-01.

c. Semi-primitive non-motorized settings are planned for much of the SHRA. New permanent roads would not be allowed in these settings. See FW-ROS-STD-03.

d. Direction for unauthorized trails is found in FW-ACCESS-GDL-01.

e. Direction for mining activities is found in FW-EMIN-DC's, FW-EMIN-STD's, and FW-EMIN-GDL's.

CR210 RWA – Plan Components

Supplemental Concern Statements:

A. 285-50

a. FW-WILD-DC 10: Please add "restoration activities (such as management ignited fires, active weed management) are used in wilderness areas to protect and/or enhance the wilderness characteristics of these areas."

b. FW-WILD-DC-11: Please add Non-native invasive species are nonexistent or in low abundance and do not disrupt ecological functions.

B. 346-8

a. Put Alt A (status quo) in table 62 for comparison.

b. Under each Resource Area under Planned Components please bring in more info from the FW area.

C. 567-2

a. Overlapping of plan components for different designations on the same piece of land is confusing. The FS should not have plan components for different kinds of designations overlap.

b. RWAs have not yet been designated as wilderness by Congress and should not appear in 3.23 in the DEIS. The same is true for WSR's.

D. 802-2: Multiple designations is very confusing to the public. The FS should eliminate either the RWA or WSA designation in order to simplify management of these lands since these designations appear to be very similar.

E. 1016-12

a. The following plan components specific to the Middle Fork Judith area should be included in the Forest Plan: Foot and horse use are suitable throughout the MFJSMA.

b. Consistent with the current travel plan, Mountain bikes and motorcycle activities are suitable within the MFJSMA on Roads 825, 6531, 6399, 6418, 6541, and Trails 443, 444, 435.

c. Consistent with the current travel management plan, vehicles less that 50 inches would be suitable on Roads 825, 6531, 6399, 6418, 6541, Trails 444 and 435. Vehicles greater than 50 inches are suitable for all system roads.

d. Consistent with the current travel plan, snowmobile use is suitable for the Middle Fork Road. Additional snowmobile use could be accommodated between Yogo Peak and Weatherwax where the WSA boundary does not conform to topography and use has been established.

e. MFJSMA is unsuitable for timber production, but some fuel reduction activities (removal of downfall, thinning) may be conducted to create more defensible space where vegetation from National Forest land is encroaching and increased the fire risk to cabins on private property.

f. Excavation equipment necessary for stream restoration work is suitable.

g. Chainsaws are suitable in both zones.

h. Livestock grazing is suitable in both zones where is currently exists.

Supplemental Responses:

A. 285-50

a. Both FSM 2320 and FSM 5140 direct what can/cannot be done in wilderness. There is no need to repeat law, regulation, and policy in the Forest Plan.

b. Plan components for invasive plants are in the invasive plant section of the 2020 Forest Plan and do not need to be repeated in the wilderness section. Please see FW-INV-DC-01.

B. 346-8

a. The Forest Plan contains the plan components for the preferred alternative, alternative F.

b. Plan components for recommended wilderness are found in the section of forest-wide plan components. There is no need to repeat them here.

C. 567-2

a. A designated area is defined as an area or feature identified and managed to maintain its unique special character or purpose. Some categories of designated areas may be designated congressionally, and some may be established administratively. Examples of congressionally designated areas include, but are not limited to, designated wilderness areas, wild and scenic rivers, national scenic trails, and wilderness study act areas.

Examples of administratively designated areas include, but are not limited to, RWAs, eligible wild and scenic rivers, research natural areas, scenic byways, experimental forests, recreation areas, and cultural areas. Typically, these areas are not suitable for timber production, but in some cases timber harvest may be appropriate to achieve desired conditions that address recreational values, public safety, or ecological restoration.

Where multiple designations overlap, the plan components associated with the most restrictive designation apply.

b. The analysis for both RWAs and eligible wild and scenic rivers has been relocated into the Administratively Designated section of the FEIS.

D. 802-2: The following language was added to the introduction of designated areas to provide clarity regarding overlapping designations: "Where multiple designations overlap, the plan components associated with the most restrictive designation apply".

E. 1016-12

a. Suitable recreation activities are determined by the desired ROS settings. See Desired ROS maps, Appendix A of the 2020 Forest Plan. Desired ROS settings are identified for both summer and winter.

b. Forest plan direction and current travel plans establish where motorized uses are allowed. Mechanized uses are allowed in all ROS settings on the forest unless they are prohibited by designation such as wilderness and recommended wilderness, by forest plan components, or by current travel plans.

c. Forest plan direction and current travel plans establish where motorized uses are allowed.

d. See the response for (c).

e. FW-RECWILD-SUIT-04 states that RWAs are not suitable for timber production or timber harvest.

f. FW-RECWILD-SUIT- 02 and FW-RECWILD-SUIT-03 provide direction for the use of equipment within RWAs for restoration work.

g. See the response for (f).

h. FW-RECWILD-SUIT-08 provides direction for livestock grazing within RWAs.

Congressionally designated areas

CR117 Monitoring – Continental Divide National Scenic Trail

Supplemental Concern Statements:

A. 517-17

a. FW-CDNST-DC-02: Is the foreground naturally appearing, and apparently unaltered by human activities? What effects on scenic integrity and trail experience have resulted from activities outside the foreground?

b. FW-CDNST-DC-05: What conflicts among CDNST users have been observed? How are conflicts reviewed, both as to nature and frequency, and what findings have been recorded?

c. FW-CDNST-GO-01: What partnerships and cooperative relationships have been engaged in the conservation of valuable natural, wild land, scenic, historic, and cultural resources

along the CDNST? What measures of cooperation (e.g. hours of volunteer trail maintenance) are available)?

d. FW-CDNST-OBJ-01: Within the life of the plan, what segments have been maintained to applicable standards? For other segments, what plans have been made for maintenance? Within the life of the plan, what segments of the CDNST have been rerouted or selected for reroute to improve scenic viewing opportunities, reconstruct trail to standard, and/or provide for a nonmotorized experience?

e. FW-CDNST-OBJ-02: What is the status of the unit plan? What actions have been taken to implement the unit plan?

B. 664-11: Monitoring of the CDNST should also include (1) visitor experience opportunities and settings, and (2) the conservation and protection of scenic, natural, historical, and cultural qualities of the corridor.

C. 860-3: The plan needs specific language pertaining to the implementation of the LAC (limits of acceptable change) with regards to RWAs which allow mountain biking. The plan needs specific indicator, and a process specified with the plan for changing indicators or developing new indicators.

Supplemental Responses:

A. 517-17

a. Scenery integrity along the CDNST will be monitored at the site-specific project level and is beyond the scope of the Forest Plan.

b. Monitoring along the CDNST is already included in the monitoring requirements of the CDNST Comprehensive Plan. It is not necessary to repeat this already existing monitoring in the 2020 Forest Plan.

c. See the response for (b).

d. See the response for (b).

e. The FS must follow all laws, regulations, and policies that provide direction for the CDNST. FSM 2353.44b directs the FS to complete a CDNST Unit Plan for those segments of the trail that cross the HLC NF. Since the unit plan is mentioned in the FS Manual there is no need to repeat this direction in the Forest Plan. Since the unit plan will be tracked in other ways, it will not need to be monitored as a part of the 2020 Forest Plan.

B. 664-11: Monitoring along the CDNST is already included in the monitoring requirements of the CDNST Comprehensive Plan. It is not necessary to repeat this already existing monitoring in the 2020 Forest Plan.

C. 860-3: In the preferred alternative, alternative F, mechanical means of transportation (including mountain bikes) will not be allowed within RWAs. LAC monitoring is very site specific and is not appropriate at the Forest Planning scale.

CR124 Wilderness – Plan Components

Supplemental Concern Statements:

A. 625-27: The FS should clarify that mechanized transportation is not allowed in Primitive designations.

B. 664-15

a. The DEIS is deficient by not identifying wilderness protective plan components.

b. The environmental consequences discussion fails to describe the effect of the proposed action and alternatives on wilderness character. Disclosing the effects on wilderness character needs to be corrected in a Supplement DEIS.

C. 664-31

a. The inclusion of the phrase, "any other features of value to the wilderness" is vague and must be deleted. In addition, it is not clear what is intended by commingling wilderness character with public purposes in the statement that, "[t]hese key qualities of wilderness character contribute to the public purposes for which the wilderness areas were designated," which I also recommend deleting.

b. FW-WILD-DC-03 and 04 are inconsistent with the Wilderness Act and should be deleted.

c. FW-WILD-DC-07 and 08 appear to be redundant with FW-WILD-DC-05.

d. Suggest modifying the language of FW-WILD-DC-09 with language from the Wilderness Act by describing that, "Commercial services may be performed within the wilderness to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas."

D. 664-32: The BWMC Recreation Management Plan is out of date and needs to be revised. The FS should develop an objective that state that "Wilderness Implementation Plans will be developed or revised through NEPA processes within five years."

E. 664-34: The FS should add Wilderness plan components for the BMWC that reflect the current recreation management direction as summarize in submitted Notice of Intent comments on pages 13 through 17.

F. 664-83: The FS should include the wilderness character definition in the glossary.

G. 664-84: The FS should include the wilderness character definition of "untrammeled" in the glossary: Untrammeled-The Wilderness Act states that wilderness is "an area where the earth and its community of life are untrammeled by man," and "generally appears to have been affected primarily by the forces of nature." In short, wilderness is essentially unhindered and free from modern human control or manipulation. This quality is degraded by modern human activities or actions that control or manipulate the components or processes of ecological systems inside the wilderness.

H. 664-85: The FS should include the wilderness character definition of "natural" in the glossary: Natural-The Wilderness Act states that wilderness is "protected and managed so as to preserve its natural conditions." In short, wilderness ecological systems are substantially free from the effects of modern civilization. This quality is degraded by intended or unintended effects of modern people on the ecological systems inside the wilderness since the area was designated.

I. 664-86

a. The FS should include the wilderness character definition of "undeveloped" in the glossary: Undeveloped-The Wilderness Act states that wilderness is "an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation," "where man himself is a visitor who does not remain" and "with the imprint of man's work substantially unnoticeable." This quality is degraded by the presence of structures, installations, habitations, and by the use of motor vehicles, motorized equipment, or mechanical transport that increases people's ability to occupy or modify the environment.

b. The FS should include the wilderness character definition of "solitude" or a "primitive and unconfined" type of recreation-The Wilderness Act states that wilderness has "outstanding opportunities for solitude or a primitive and unconfined type of recreation." This quality is about the opportunity for people to experience wilderness; it is not directly about visitor experiences per se. This quality is degraded by settings that reduce these opportunities, such as visitor encounters, signs of modern civilization, recreation facilities, and management restrictions on visitor behavior.

J. 1041-57: FW-WILD-GO-01; p. 65: MFWP is not sure what this Goal means or what this implies.

Supplemental Responses:

A. 625-27: The National Recreation Opportunity Spectrum (ROS) Inventory Mapping Protocol, April 2018, provides guidance for not only how ROS categories are mapped but also what activities are appropriate in each ROS setting. Adherence to this protocol contributes to the consistent application of ROS settings across NFS lands.

In accordance with this National protocol, mountain bikes are allowed in all ROS settings, unless those areas are specifically closed due to legislative action, such as Congressionally designated wilderness, or by closure order at the Forest or District levels.

During the formation of the Proposed Action, the HLC NF misinterpreted the National direction for Primitive ROS settings and stated that mountain bikes would not be suitable within these Primitive ROS settings. This is incorrect and not congruent with the national direction.

The HLC NF corrected this error in the DEIS. The 2020 Forest Plan will follow national direction and will allow all forms of non-motorized recreation uses within Primitive ROS settings, including mountain bikes, unless this use is specifically prohibited by Congressional law or Forest closure order.

Clarifying language was added to the 2020 Forest Plan and the FEIS to clearly describe the National direction of non-motorized recreation in Primitive ROS settings.

B. 664-15

a. The 2020 Forest Plan identifies a number of plan components that protect wilderness values. See FW-WILD-DC's, FW-WILD-GO's, FW-WILD-GDL's, and FW-WILD-SUIT's.

b. The effects of the proposed action (Draft Forest Plan) on the wilderness character of existing designated wilderness was considered in the FEIS.

C. 664-31

a. The plan component for designated wilderness were rewritten to provide clear direction and to eliminate repetitive or redundant direction without repeating law, regulation, or policy.

b. See the response for (a).

c. See the response for (a).

d. The Forest Plan should not repeat law, regulation, or policy.

D. 664-32: The Forest Plan cannot direct the forest to do additional planning.

E. 664-34: Please see the plan components for designated wilderness. Specific direction for the Bob Marshall Wilderness Complex, such as the development of opportunity class indicators, will occur outside of the forest planning process.

F. 664-83-86: Definitions were added to the glossary.

G. 1041-57: This goal is a repeat of FS policy. As there is no need to repeat policy in the plan, this plan component has been deleted.

CR130 LCHNT – Recommended Plan Alternatives

Supplemental Concern Statements:

A. 517-14: The FS should consider a plan component to highlight the significance of the crossing point of the LCNHT and the CDNST. Recommended for consideration: "FW-LCIC-GO-03: Lewis and Clark Pass should be marked with interpretive and educational information about the Lewis and Clark Expedition, along with information regarding the national trails system with particular attention to the CDNST and the LCNHT."

B. 1035-17: The FS should do more with the plan components to recognize the unique contributions of the trail particularly as it passes through grizzly bear habitat and is only one of a couple places along the route "where modern visitors can experience the landscape in a roadless and relatively wild condition."

C. 1035-32: The FS should include protective standard and guidelines to better protect the wildland values along the trail, particularly in the Alice Creek area. There should also be additional suitability standards in this remote area prohibiting uses incompatible with primitive settings (motorized recreation, resource extraction, etc.

Supplemental Responses:

A. 517-14: Clarifying language was added to FW-LCNHT-GO-01 to include language regarding the intersection of the LCNHT and the CDNST.

B. 1035-17: The HLC-NF identified plan components to protect grizzly bears in the wildlife section of the Plan. The issue of primitive and wild lands is addressed by recreation settings. See plan components for recreation opportunity settings (ROS).

C. 1035-32: See the response for (B).

CR186 Continental Divide National Scenic Trail – Recommended Plan Components

Supplemental Concern Statements:

A. 210-10: The FS should classify all wild lands around the CDNST as unsuitable for oil and gas leasing.

B. 517-5: The commenter recommended a number of additions to the plan components of alternatives A and C related to the allowance of motorized and mechanized means of transportation within RWAs.

C. 517-9, 517-10: The FS should develop an objective that requires the development of a unit plan for the CDNST. Details for what to include in the unit plan were also provided.

D. 517-11

   a. The FS should re-write FS-CDNST-STD-03 to state "prohibit motor vehicle use by the general public, subject to exceptions provided in Sections 5 and 7 of the National Trails System Act, should be included as a plan component in the HLC plan. Or the FS could rewrite as follows: FW-CDNST-STD-03. Motor vehicle use by the general public is prohibited on the CDNST, unless that use is consistent with this land management plan and is within one of the exceptions listed in Section IV.B.6.b. of the 2009 CDNST Comprehensive Plan.

b. The FS should rewrite the existing FS-CDNST-STD-04 as follows: "New motorized events shall not be permitted on the Continental Divide National Scenic Trail. Exceptions may be allowed along sections of the trail where and when motorized travel is currently allowed, provided that such events do not substantially interfere with the nature and purposes of the Trail."

E. 517-12

a. The FS should amend FS-CDNST-GDL-02 to read: "To protect or enhance the scenic qualities of the CDNST, management activities should be consistent with, or make progress toward achieving scenic integrity objectives of high or very high within the foreground of the trail *and mitigating the effects on scenic integrity and trail experience given the seen area from the trail segments."*

b. The FS should consider an additional Guideline: FW-CDNST-GDL-11: "Special use authorizations should not be granted for races or other activities that detract from desired conditions in nonmotorized segments of the CDNST."

F. 517-13: The FS should add FW-CDNST-DC-08: "Mechanized transport is not suitable in summer in designated routes and areas on desired Semi-primitive non-motorized settings if such use will substantially interfere with the nature and purposes of the Trail."

G. 517-15: The FS should include specific notation of interpretation of the CDNST and its intersection with the LCNHT.

H. 517-18: The FS should include as an objective the preparation of a unit plan for the CDNST.

I. 664-37: The FS should include plan components that provide for the nature and purposes of the CDNST and should recognize, as envisioned in the Study Report, hiker and equestrian activities as the primary recreational use. Plan components should also protect the NST corridor as intended by the National Trails System Act (NTSA) and Executive Order 13195 - Trails for America.

J. 664-38

a. The FS should locate the CDNST in more primitive Recreation Opportunity Spectrum (ROS) classes where available and once located the management of the CDNST corridor should provide for a Primitive or Semi-Primitive Non-Motorized experience where on Federal lands.

b. The FS should establish a trail corridor that is least one mile in width to encompass resources, qualities, values and associated settings and the primary use or uses that are present or to be restored along the desirable (existing and potential) CDNST travel route.

K. 664-39: The FS should re-write the desired conditions to add value to the official nature and purposes definition. The modifier "where possible" is inconsistent with the construction of a desired condition statement.

L. 664-40: The 2020 Forest Plan needs to accomplish the task of ensuring the CDNST rights-of-way/management corridor has been located in an optimum location.

M. 664-41: The FS should consider the following wording change on FW-CDNST-DC-03: "Use the ROS system in delineating and integrating recreation opportunities in managing the CDNST. Where possible, locate the CDNST in primitive or semi-primitive non-motorized ROS classes; provided that the CDNST may have to traverse intermittently through more developed ROS classes to provide for continuous travel between the Canada and Mexico borders."

N. 664-42: FW-CDNST-DC-04 is inconsistent with the CDNST Comprehensive Plan and fails to support the nature and purposes of the CDNST. This guideline should be deleted.

O. 664-43: The proposed direction refers to the CDNST travel route and not the management corridor. Management activities are subject to not substantially interfering with the nature and purposes of the CDNST.

P. 664-44: The FS should add that "trailside interpretation should not be the norm in Primitive and SPNM allocations" to FW-DCNST-DC-07.

Q. 664-45

   a. The FS should include the following objective: "Complete CDNST land acquisitions within five years from willing sellers and cooperators."

   b. The FS should include the following standard: FW-CDNST-STD-04: The CDNST corridor may contain campsites, shelters, and related-public-use facilities. Other uses that could conflict with the nature and purposes of the CDNST may be allowed only where there is a determination that the other use would not substantially interfere with the nature and purposes of the CDNST (16 USC 1246(c)).

   c. The FS should include the following standard: FS-CDNST-STD-05: Manage the CDNST to provide high-quality scenic, primitive hiking and pack and saddle stock opportunities. Backpacking, nature walking, day hiking, horseback riding, nature photography, mountain climbing, cross-country skiing, and snowshoeing are compatible with the nature and purposes of the CDNST (CDNST Comprehensive Plan, Chapter IV(B)(5), FSM 2353.42 and FSM 2353.44b(8)).

   d. The FS should include the following standard: FW-CDNST-STD-06: Manage the CDNST travel way as a concern level 1 travel route. Resource management actions must meet a Scenic Integrity Level of Very High or High (CDNST Comprehensive Plan, Chapter IV (B)(4)).

   e. The FS should include the following standard: RW-CDNST-STD-07: Resource management actions and allowed uses must be compatible with maintaining or achieving Primitive or Semi-Primitive Non-Motorized ROS class settings.

   f. The FS should include the following standard: FS-CDNST-STD-08: Public motorized and mechanized use may only be allowed where such use is in accordance with the CDNST Comprehensive Plan, Chapter IV(B)(5)&(6) and FSM 2353.44b(10) and (11).

R. 664-47

   a. FW-CDNST-GDL-01: The forest plan revision process is the appropriate place to establish desired Primitive and SPNM ROS classes along the CDNST corridor, while addressing the management of setting inconsistencies within those allocations.

   b. FW-CDNST- GDL-02: Deviating to a lower scenic integrity level would not enhance scenic qualities. The FS should propose this guideline as a standard.

   c. FW-CDNST-GDL- 02: To protect CDNST values, the Scenery Management System processes must not be constrained to only the foreground.

   d. FW-CDNST-GDL-03: The FS should delete this guideline because it has several issues including the unconstrained assumption that forest health project will be allowed to degrade existing scenic integrity for some undefined short- term period.

S. 664-48: The FS should identify existing utility corridors and address them in the 2020 Forest Plan.

T. 664-49: FW-CDNST-GDL-08 should read "The CDNST corridor should be managed for Primitive and semi primitive nonmotorized settings with road and motorized trail locations managed to not substantially interfere with the nature and purposes of the CDNST."

U. 664-50: Timber management actions along the CDNST travel route should be consistent with SPNM settings and not substantially interfere with the nature and purposes of the CDNST.

V. 664-51: The FS should consider adding the phrase: "Where congressionally designated areas overlap, apply the management direction that best protects the values for which each designated area was established-the most restrictive measures control."

W. 664-52

a. The FS should consider the following suitability plan components: FW-CDNST-SUIT-01 Mechanized recreation transport is not suitable along the CDNST corridor within in established ROS Primitive settings.

b. FW-CDNST-SUIT-02: The CDNST corridor in is not suitable for timber production.

X. 664-53: The following are standalone recommendations for CDNST plan component desired conditions, objectives, standards and guidelines to be applied to a described Management Area (aka National Trail Management Corridor) for the NEPA proposed action or for developed alternatives.

Y. 664-54

a. The FS should consider the following language for a desired condition for the CDNST: Consistent with the CDNST Comprehensive Plan, the MA provides high-quality scenic, primitive hiking and horseback riding opportunities and conserves natural, historic, and cultural resources (CDNST Comprehensive Plan, Chapter IV (A)).

b. The CDNST corridor provides panoramic views of undisturbed landscapes in a tranquil scenic environment. The corridor encompasses national trail resources, qualities, values, associated settings and the primary use or uses. This includes vistas, campsites, water sources, and other important resource values.

c. Desired conditions are principally characterized by Primitive and Semi-Primitive Non-Motorized ROS settings-see the glossary for ROS class descriptions. Desired ROS class inconsistencies are managed to protect CDNST values.

d. Furthermore, to provide for the conservation purposes of a National Scenic Trail the MA provides for natural ecological processes and not just the visual appearance of naturalness.

Z. 664-55

a. The FS should consider the following objectives for the CDNST: FW-CDNST-OBJ-02 Complete the CDNST unit plan (FSM 2353.44(b)(2)) within 3 years.

b. FW-CDNST-OBJ-03 Complete the CDNST travel route through the MA within 5 years.

c. FW-CDNST-OBJ-04 Acquire remaining rights-of-way or easements to protect the CDNST within 3 years.

AA. 664-56: Commenter provided a definition of a Land Management Plan Management Area Standard.

BB. 664-59: The FS should consider the following Standard: FW-CDNST-STD- 04 Activities, uses, and events that would require a permit must not be authorized unless the activity, use, or event

contributes to achieving the nature and purposes of the CDNST (CDNST Comprehensive Plan, Chapter IV(B)(7)).

CC. 664-60: The FS should consider the following Standard and Guideline: FW-CDNST-STD: Mineral leases are to include stipulations for no surface occupancy. Standard: Permits for the removal of mineral materials are not to be issued. FW-CDNST-GDL Mineral withdrawals should be enacted in areas with a history of locatable mineral findings. The purpose of this guidance is to help ensure that CDNST values are not degraded by mining activities.

DD. 664-61: The FS should consider the following Standard: FW-CDNST-STD Timber harvest is not scheduled and does not contribute to the allowable sale quantity.

EE. 664-62

a. The FS should consider the following Standard and Guidelines for vegetation management: FW-CDNST-GDL: Vegetation may be managed to enhance CDNST nature and purposes values, such as to provide vistas to view surrounding landscapes and to conserve natural resources. The purpose of this guidance is to allow for limited vegetation management for CDNST purposes.

b. FW-CDNST-GDL Vegetation may be managed to maintain or improve threatened, endangered, and sensitive species habitat. The purpose of this guidance is to recognize the conservation purposes of the CDNST.

c. FW-CDNST-STD Rangelands where affected by livestock use must be maintained in a Proper Functioning Condition.

FF. 664-63: Please consider the following Cultural and Historic Resources Management Standard: FW-CDNST-STD Provide for land acquisitions to protect the nature and purposes of the National Trail. Prohibit land disposals.

GG. 664-64

a. The FS should consider the following Guidelines: FW-CDNST- GDL Segments of the CDNST travel route should fall into Trail Class 2 or 3 and have a Designed Use of Pack and Saddle Stock, except where a substantial safety or resource concern exists, the travel route may have a Designed Use of Hiker/Pedestrian. The purpose of this guidance is to provide for a high-quality hiking and equestrian travel route.

b. The FS should consider the following standard: FW-CDNST-STD Road construction and reconstruction is prohibited; excepted are motor vehicle use circumstances described in the 2009 CDNST Comprehensive Plan Chapter IV(B)(6) and FSM 2353.44b(11).

c. The FS should consider the following standard: FW-CDNST-STD. The CDNST travel route may not be used for a livestock driveway.

HH. 664-65: Please consider the following Fire Suppression Guideline: FW-CDNST-GDL Fire suppression activities should apply the Minimum Impact Suppression Tactics Implementation Guidelines. The purpose of this guidance is to protect the CDNST nature and purposes from suppression activities.

II. 664-66: Please consider the following Motor Vehicle Use Standard: FW-CDNST-STD. The use of motorized vehicles by the general public is prohibited; excepted is motor vehicle use that is in accordance with the 2009 CDNST Comprehensive Plan provisions as detailed in Chapter IV(B)(6).

JJ. 664-67

a. Please consider the following Other Uses Considerations: FW-CDNST-STD National scenic or national historic trails may contain campsites, shelters, and related- public-use facilities. Other uses that could conflict with the nature and purposes of the CDNST may be allowed only where there is a determination that the other use would not substantially interfere with the nature and purposes of the CDNST (16 USC 1246(c)).

b. FW-CDNST-GDL Where congressionally designated areas overlap, apply the management direction that best protects the values for which each designated area was established-the most restrictive measures control. The purpose of this guidance is to protect the values for which all congressionally designated areas are established.

KK. 664-68: Please consider the following Suitability- FW-CDNST-SUIT Lands are not suitable for timber production.

LL. 664-69

a. The FS should consider the following "guidance": FW-CDNST-GO Partnerships and volunteers are sustained or sought to lead and assist in CDNST programs. Volunteer and cooperative agreements will be developed with those volunteers and private organizations that are dedicated to planning, developing, maintaining, and managing the CDNST in accordance with Sections 2(c), 7(h)(1), and 11 of the NTSA.

b. The direction in the NTSA, 2009 CDNST Comprehensive Plan, FSM 2310, FSM 2353.4, and FSM 2380 are used to guide the development and management of the Trail.

MM. 664-72: The FS should consider the following definition to be included in the glossary: CDNST Corridor. A CDNST corridor is referred to on maps published in 1978 as part of the establishment of this National Scenic Trail. The selected rights-of-way and management corridor extent must be of sufficient width to encompass National Trail resources, qualities, values, and associated settings. (FSM 2353.44b and FSH 1909.12 Part 24.43)

NN. 664-73: The FS should consider the following definition to be included in the glossary: CDNST Designated Area. The CDNST designated area is the extent of the selected rights-of-way. Land management plans may describe the CDNST designated area as that of a management area or national trail management corridor.

OO. 664-75: The FS should consider the following definition to be included in the glossary: CDNST Travel Route. The CDNST travel route is normally a standard terra trail that has a surface consisting predominantly of the ground and that is designed and managed to accommodate use on that surface. A National Scenic Trail travel route is located within an established management area or national trail management corridor.

PP. 664-91

a. The following Objectives should be considered: FW-CDNST-OBJ Complete the CDNST unit plan (FSM 2353.44(b)(2)) within three years FW-CDNST-OBJ Complete CDNST land acquisitions within five years from willing sellers and cooperators.

b. The following Standard should be considered: FW-CDNST-STD - The CDNST corridor may contain campsites, shelters, and related-public-use facilities.

QQ. 702-3: The FS should establish a corridor at least a mile wide protecting the CDNST from motorized use.

RR. 1160-1: The FS should add additional information to the "Historical Context" portion Forest Planning document, so that readers have the opportunity to understand the significance of the Continental Divide National Scenic Trail within the National Forest. "Congress designated the Continental Divide National Scenic Trail (CDNST) in 1978 as a unit of the National Trails

System. The CDNST traverses the Continental Divide for more than 3,100 miles between Mexico and Canada. It travels through 25 National Forests, 21 Wilderness areas, 3 National Parks, 1 National Monument, 8 BLM resource areas and through the states of Montana, Idaho, Wyoming, Colorado and New Mexico. The vision for the CDNST is a primitive and challenging backcountry trail for the hiker and horseman on or near the Continental Divide to provide people with the opportunity to experience the unique and incredibly scenic qualities of the area. [1] ([1] CDT Leadership Council Vision and Guiding Principles) National Scenic Trails, like the CDNST, are created to conserve the nationally significant scenic, historic, natural and cultural qualities of the area. In addition, these trails are designed for recreation and the enjoyment of these very special places. The CDNST Experience is defined in the Continental Divide National Scenic Trail Study Report as an "intimate one, where one can walk or ride horseback across vast fields of wildflowers and contemplate a story dating from the dawn of earth's history…along the way the tranquility of the alpine meadows, verdant forests and semi-desert landscape overwhelms anyone who passes that way. The Trail would provide the traveler his best encounter with the Continental Divide—its serenity and pure air—and would supply for every trail traveler some of the world's most sublime scenes."[2] ([1] CDNST Study Report Page 18)

SS. 1160-2: The FS should include language that describes the Comprehensive Management Plan in both the Forest Plan and the EIS.

TT. 1160-3: The FS should map the CDNST trail and corridor.

UU. 1160-5: The FS should make the CDNST trail/corridor a special management area.

VV. 1160-6: The FS should create a CDNST unit plan. Commenter provided a number of suggestions to be included in this plan.

WW. 1160-7

a. The FS should consider the following wording corrections to the DCs: DC-CDNST-1: Viewsheds from the CDNST have high scenic values. The foreground of the trail is naturally appearing, and generally appears unaltered by human activities. The potential to view wildlife is high and evidence of ecological processes such as fire, insects and diseases exists.

b. DC-CDNST-2: The CDNST is a well-defined trail that provides for high-quality primitive hiking and horseback riding opportunities, and mechanized trail activities, in a highly scenic setting along the Continental Divide. Mechanized use shall not interfere with the nature and purposes of the CDT as a National Scenic Trail. The significant scenic, natural, historic, and cultural resources along the trail corridor are conserved. Where possible, the trail provides visitors with expansive views of the natural landscapes along the Continental Divide.

c. DC-CDNST-3: The setting of the CDNST corridor is consistent with or complements a primitive or semi primitive nonmotorized setting. The Trail may intermittently pass through more-developed settings to provide for a continuous route.

d. DC-CDNST-4: The CDNST is accessible from access points that provide opportunities to select the type of terrain, scenery, and trail length, ranging from long-distance to day use, that best provide for the compatible outdoor recreation experiences being sought. Wild and remote backcountry segments of the route provide opportunities for solitude, immersion in natural landscapes, and primitive outdoor recreation. Front-country and more easily accessible trail segments complement local community interests and needs and help contribute to a sense of place. DC-CDNST-5: Use conflicts among CDNST users are infrequent.

e. DC-CDNST-6: The CDNST is well maintained, signed, and passable. Alternative routes are made available in the case of temporary closures resulting from natural events, such as fire, flood or land management activities. We generally agree with the Plan's DC #7 regarding Trail interpretation to enhance visitor appreciation of the Trail; however, we suggest this be moved to an implementation item in Appendix C and be completed within the next five years.

XX. 1160-8

a. The FS should move the FW-CDNST-OBJ-01 to the standards section.

b. The FS should consider the following objectives: OBJ-CDNST-1: Complete Trail location, including surveys for the corridor within the National Forest. This should be included in the Plan's implementation strategy within the next five years.

c. OBJ-CDNST-2: Encourage trail partners and volunteers to assist in the planning, development, maintenance, and management of the CDNST, where appropriate and consistent with the CDNST Comprehensive Plan. (We note that the Draft Plan/EIS includes similar language as a Goal; however, we suggest it be included as an Objective.)

d. OBJ-CDNST-3: Coordinate trail management and activities across unit and jurisdictional boundaries.

YY. 1160-9

a. S-CDNST-1: Congressionally designated national scenic trail corridors are not suitable for oil and gas or geothermal energy development, or other leasable mineral activities within .5 miles of the Trail corridor).

b. S-CDNST-2: No common variety mineral extraction (e.g. limestone, gravel, pumice, etc.) shall occur on or within .5 miles of the Trail corridor.

c. S-CDNST-3: Motorized events and motorized special use permits shall not be permitted on nonmotorized segments of the CDNST.

d. S-CDNST-4: Management activities in the congressionally designated trail corridor shall be consistent with or make progress toward achieving high or very high scenic integrity objectives to protect or enhance scenic qualities.

e. S-CDNST-5: Management of the CDNST shall comply with the most recent version of the CDNST Comprehensive Plan. BASI can be used in lieu of the Comprehensive Plan if the plan is more than 15 years old.

f. S-CDNST-6: To retain or promotes the character for which the trail was designated, new or relocated trail segments should be located primarily within settings consistent with or complementing primitive or semi-primitive nonmotorized recreation opportunity spectrum classes. To the extent possible, avoid road and motorized trail crossings and other signs of modern development.

g. S-CDNST-7: To protect or enhance the scenic qualities of the CDNST, management activities should be consistent with, or make progress toward achieving scenic integrity objectives of high or very high within the foreground of the trail (up to 0.5 mile on either side). (We believe that the term "trail landscape" should be used to avoid confusion between the terminology used in the Plan, i.e., "trail foreground:" "adjacent to the Trail;" "reduce scenic impacts adjacent to the Trail;" etc.)

h. S-CDNST-8: If forest-health projects result in short-term impacts to the scenic integrity of the trail, mitigation measures should be included, such as screening to reduce short-term impacts to the scenic integrity from management activities adjacent to the trail.

i. S-CDNST-9: In order to promote a nonmotorized setting, the CDNST should not be permanently relocated onto routes open to motor vehicle use.

j. S-CDNST-10: Provide adequate trail facilities, including access to water resources, to accommodate the amount and types of use anticipated on any given segment to provide for visitor health and safety. Facilities provided should be minimal in order to preserve or promote a setting that appears natural.

k. S-CDNST-11: New communication sites, utility corridors, and renewable energy sites should not be allowed within the visible foreground (up to one half mile) and middle ground viewshed (up to 4 miles) to protect the scenic values of the trail.

l. S-CDNST-12: Limit linear utilities and rights of way to a single trail crossing per special use authorization unless additional crossings are documented as the only prudent and feasible alternative.

m. S-CDNST-13: New temporary or permanent roads or motorized trail construction across or adjacent to the CDNST should be avoided unless needed for resource protection, private lands access, or to protect public health and safety. This provides for a naturally appearing setting while avoiding visual, aural and resource impacts from motorized use.

n. S-CDNST-14: The use of the CDNST for landings or as a temporary road for any purpose should not be allowed to provide for a naturally appearing setting while avoiding visual, aural and resource impacts.

o. S-CDNST-15: Allow hauling or skidding along the trail only when the trail is collocated with an open road and no other options are available. Apply design criteria to minimize impacts to trail infrastructure.

p. S-CDNST-16: Manage unplanned fires in the foreground (up to one-half mile) of the trail using minimum impact suppression tactics, or other appropriate tactics, for the protection of the congressionally designated trail values. Allow heavy equipment line construction within the corridor only when necessary for emergency protection of life and property.

q. S-CDNST-17: Mange wildfires and prescribed fires within 0.5 mile of trails using strategies and tactics that will minimize impacts and emphasize protection of the congressionally designated trail.

r. S-CDNST-18: Side trails to the CDNST enhance the experience along the main trail. Side trails are short trails that encompass adjacent attractions.

s. S-CDNST-19: Protect the CDNST scenic values, consider special-use authorizations for new communication sites, utility corridors, and renewable energy sites that would not be visually apparent within the visible foreground (up to 0.5 mile) and middle ground viewshed (up to four miles).

ZZ. 1160-10:

a. The following Management approaches should be considered in Appendix C: (a) MA-CDNST-1: Develop appropriate measures to protect high-potential sites and segments from deterioration due to natural forces, visitor use, vandalism and other impacts.

b. MA-CDNST-2: Evaluate proposed relocations or new segment locations for the CDNST by using defined optimal location criteria (USFS, 11/17).

c. MA-CDNST-3: Identify and pursue opportunities to acquire lands or rights-of-way in or adjacent to the CDNST corridor.

d. MA-CDNST-4: Consider how activities outside the visible foreground may affect viewsheds and user experiences and mitigate potential impacts to the extent possible. (We believe there is a need for consistent language regarding visual impacts. We suggest the most protective language should be consistently used—i.e., Activities impacting the Trail landscape (up to 4 miles) shall not be permitted in order to protect the "high to very high" scenic integrity of the Trail.

e. MA-CDNST-5: Provide consistent signage along the trail corridor at road and trail crossings to adequately identify the trail and provide interpretive signs at key trail end points and limited historic and/or cultural sites to orient visitors and enhance the visitor experience.

f. MA-CDNST-6: Ensure incident commanders are aware of the CDNST as a resource to be protected during wildfire suppression activities and clearly identify fire suppression rehabilitation and long-term recovery of the trail corridor as high priorities for incident commanders, Burned Area Emergency Rehabilitation team leaders, and post-fire rehabilitation efforts. (We believe it would be helpful to have all forest fire provisions under Standards, rather than mixing language between MA's and Standards.)

g. MA-CDNST-7: Establish appropriate carrying capacity for specific segments of the CDNST, monitoring use and conditions, while taking appropriate management actions to maintain or restore the nature and purposes of the trail if the results of the monitoring or other information indicate a trend away from desired conditions.

Supplemental Responses:

A. 210-10: Direction for surface occupancy for oil and gas or geothermal energy leasing activities is captured in FW-CDNST-STD-01. The determination of locations appropriate for oil and gas leasing is beyond the scope of the Forest Plan Revision process.

B. 517-5: Alternatives A and C were not chosen as the preferred alternative. The preferred alternative, alternative F, motorized and mechanized means of transportation will be unsuitable within the 7 RWAs identified in this alternative.

C. 517-9 and 517-10: Forest Plan direction is in addition to law, regulations, and policies. The FS must follow all laws, regulations, and polies that provide direction for the CDNST. FSM 2353.44b directs the FS to complete a CDNST Unit Plan for those segments of the trail that cross the HLC NF. Since the unit plan is mentioned in the FS Manual there is no need to repeat this direction in the Forest Plan.

D. 517-11:

   a. Motorized vehicle uses along the CDNST are determined by ROS, current travel plans, and by plan components in other designated areas, such as wilderness and RWAs.

   b. Both the 2009 CDNST Comprehensive Management Plan and FSM 2350 address special uses along the CDNST. All special use permits go through a screening process and must comply with law, regulation, and policy. Therefore, there is no need to repeat this direction in the Forest Plan.

E. 517-12

   a. Please see FW-CDNST-GDL-02.

   b. Please see the response for (D-b).

F. 517-13: Suitability for recreation uses on the CDNST is established by ROS, plan components in other designated areas, and by current travel plans.

G. 517-15: To emphasize the unique intersection of the CDNST with the LCNHT, additional language was added to Appendix C, Potential Management Approached and Possible Management Actions, and as well as FW-LCNHT-GO-01.

H. 517-18: Please see the response for (C).

I. 664-37: Desired condition, FW-CDNST-DC-01 specifically provides for the "nature and purposes" of the CDNST, including the language regarding hiking and horseback riding opportunities along the trail.

J. 664-38

    a. Approximately, 240.5 miles of the CDNST are located on the HLC NF. In the preferred alternative, alternative F, 110.9 miles are located within designated Wilderness and 20.6 miles are located within recommended wilderness, both of which identified for desired primitive ROS settings. Outside of wilderness and RWAs, the ROS is determined by the existing winter and summer travel plans on the forest.

    b. In the preferred alternative, alternative F, the CDNST trail corridor (0.5 miles either side of the trail tread) is mapped and displayed on designated area maps in Appendix A of the FEIS and Appendix A of the 2020 Forest Plan. Forest Plan direction for the trail corridor is described in the CDNST plan components as forest-wide plan components.

K. 664-39: FW-CDNST-DC-01 describes the nature and purposes of the CDNST.

L. 664-40: Direction for locating the CDNST in the optimum location and for rights of way management are included in Appendix C, Potential Management Approached and Possible Management Actions.

M. 664-41: Forest Plan direction for recreation settings along the CDNST corridor is provided in FW-CDNST-DC-03.

N. 664-42: FW-CDNST-DC-04 describes the desired condition for access along the CDNST corridor. It further articulates the desired conditions for access for both the wild, remote backcountry segments, as well as the more easily accessed front country segments of the trail.

O. 664-43: Please see the response for (J-b).

P. 664-44: The preferred alternative provides direction for signing for both primitive and semi-primitive non-motorized settings. There is no need to repeat that direction in FW-CDNST-DC-07. See also FW-ROS-DC-02, FW-ROS-DC-03, and FW-ROS-DC-04.

Q. 664-45

    a. Direction for land acquisitions is included in Appendix C, Potential Management Approached and Possible Management Actions.

    b. Setting inconsistencies will be identified during monitoring of the desired recreation opportunity spectrum settings

    c. FW-CDNST-DC-01 describes the primary nature and purposes of the CDNST as "a well-defined trail that provides for high-quality, primitive and/or semi-primitive hiking and horseback riding opportunities". All other recreation activities that are allowed within primitive or semi-primitive ROS settings are allowed along the CDNST.

    d. Please see the response for (C).

e. Please see the responses for (Q-b).

f. Motorized and mechanized uses along the CDNST are determined by ROS, current travel plans, and by plan components in other designated areas, such as wilderness and RWAs.

R. 664-47

a. The recreation opportunity spectrum (ROS) describes where uses are allowed and where they are not. ROS descriptions may be found in the recreation settings section of the 2020 Forest Plan. There is no need to repeat that information in the CDNST section of the Forest Plan. Setting inconsistencies will be identified during monitoring of the desired recreation opportunity spectrum settings.

b. Direction for scenery along the CDNST is located in FW-CDNST-DC-02, FW-CDNST-GDL-02, FW-CDNST-GDL-03, and FW-CDNST-GDL-06. These plan components, along with the mapped trail corridor, provide direction for scenery beyond the foreground viewing distance of 0.5 miles either side of the CDNST.

c. Please see the response for (R-b).

d. FW-CDNST-GDL-02 establishes the desired scenic integrity objectives along the CDNST as high and very high. The HLC NF used the procedures outlined in FS Manual 2380 and the Landscape Aesthetics - Scenery Management System to conduct a visual resource inventory and determine scenic integrity objectives. The CDNST was identified as a Concern Level 1 in this process and contributed to the determination for High and Very High desired scenic integrity objectives along the CDNST trail.

S. 664-48: The FS used existing utility corridors in the Wilderness Evaluation and Timber Suitability processes in development of the 2020 Forest Plan. This information is proprietary and cannot be shared by the FS.

T. 664-49: Direction for new temporary and /or permanent road or motorized trail construction is provided in FW-CDNST-GDL-08. Recreation settings along the CDNST are mapped within the CDNST corridor, provide direction for the desired ROS along the trail, and are established in FW-CDNST-GDL-01.

U. 664-50: The vast majority of the CDNST passes through lands that are unsuitable for timber production. In areas where the trail corridor overlaps lands that are suitable for timber production and other areas where harvest is allowed, timber harvest activities would be constrained by all the plan components for the CDNST

V. 664-51: Additional language was added to the introduction of the designated areas section of the 2020 Forest Plan to clarify the hierarchy of plan components in designated areas that overlap one another.

W. 664-52

a. Mechanized means of transportation is allowed in all ROS settings, including primitive ROS settings. Limitations on mechanized means of transportation are set by plan components in other designated areas, such as wilderness and RWAs or by Forest or District closure orders. Mechanized means of transportation are allowed along the CDNST in all locations except within designated wilderness and RWAs in the preferred alternative.

b. Please see the response for U.

X. 664-53: The Forest Plan provides direction for the recreation settings, scenery, and facilities along the trail along the CDNST in FW-CDNST-DC-01, FW-CDNST-DC-02, FW-CDNST-DC-

03, FW-CDNST-DC-04, FW-CDNST-DC-07, FW-CDNST-GDL-01, as well as FW-CDNST-GDL's 01 through 10.

Y. 664-54

a. Please see the response for (C).

b. Please see the response for X.

c. The desired conditions for recreation settings along the CDNST are provided in FW-CDNST-DC-01 and FW-CDNST-DC-03.

d. Where the CDNST is located within wilderness and/or RWAs, natural ecological processes will predominate the vegetative condition. FW-CDNST-DC-02 provides direction for the viewing of natural ecological processes within the CDSNT corridor.

Z. 664-55

a. Please see the response for (C).

b. Completion of the CDNST travel route through the HLC NF is included in Appendix C, Potential Management Approached and Possible Management Actions.

c. The acquisition rights of way and easements along the CDNST is included in Appendix C, Potential Management Approached and Possible Management Actions.

AA. 664-56: The definitions for standards and guidelines may be found in the glossary.

BB. 664-59: Both the 2009 CDNST Comprehensive Management Plan and FSM 2350 address special uses along the CDNST. All special use permits go through a screening process and must comply with law, regulation, and policy. Therefore, there is no need to repeat this direction in the Forest Plan.

CC. 664-60: Please see FW-CDNST-STD-02.

DD. 664-61: The vast majority of the CDNST passes through land that are unsuitable for timber production. In areas where the trail corridor overlaps lands that are suitable for timber production, and other areas where harvest is allowed, timber harvest activities would be constrained by all the plan components for the CDNST. Please also see FW-CDNST-GDL-01, FW-CDNST-GDL-02. FW-CDNST-GDL- 03, and FW-CDNST-GDL-09.

EE. 664-62

a. These recommendations were added to Appendix C, Potential Management Approaches and Possible Actions.

b. Please see the response for (EE-a).

c. Forest-wide grazing plan components cover rangelands along the CDNST. Where rangeland condition concerns exist along the CDNST, management adjustments would be proposed under site specific analysis.

FF. 664-63: The future acquisition of lands along the CDNST is included in Appendix C, Potential Management Approached and Possible Management Actions.

GG. 664-64

a. Forest Plans provide broad, overall direction for forest and resource management. Site specific direction for trail segments, as recommended by the commenter, may be incorporated into future site-specific plans.

b. FW-CDNST-GDL-08 provides guidance for road construction and reconstruction within the CDNST corridor. All management along the CDNST must comply with law, regulation, and policy, such as the 2009 CDSNT Comprehensive plan. There is no need to repeat or reference this direction in the Forest Plan.

c. There are no designated livestock driveways on the HLC NF portion of the CDNST, therefore, there is no need to include additional plan components addressing this issue.

HH. 664-65: FW-CDNST-GDL-10 provides direction to use minimum impact suppression tactics for unplanned fire within the CDNST corridor.

II. 664-66: Motorized recreation uses and mechanized means of transportation along the CDNST are determined by ROS, current travel plans, and by plan components in other designated areas, such as RWAs

JJ. 664-67

a. FW-CDNST-GDL-05 provides guidance for trail facilities within the CDNST corridor.

b. A clarifying statement was added to the introductory statement for designated areas that states, "Where multiple designations overlap, the plan components associated with the most restrictive designation apply."

KK. 664-68: The vast majority of the CDNST passes through lands that are unsuitable for timber production. In areas where the trail corridor overlaps lands that are suitable for timber production, and other areas where harvest is allowed, timber harvest activities would be constrained by all the plan components for the CDNST. Please also see FW-CDNST-GDL-01, FW-CDNST-GDL-02. FW-CDNST-GDL- 03, and FW-CDNST-GDL-09.

LL. 664-69

a. Please see FW-CDNST-GO-01.

b. Forest Plan direction is in addition to law, regulations, and policies. There is no need to repeat these within the Forest Plan.

MM. 664-72: Please see the response for (C).

NN. 664-73: Please see the response for (C).

OO. 664-75: Please see the response for (C).

PP. 664-91

a. Please see the response for (C).

b. Please see the response for (R-a).

QQ. 702-3: Please see the response for (J-b).

RR. 1160-1: Additional language was added to the 2020 Forest Plan to provide the historic context requested.

SS. 1160-2: Please see the response for (C).

TT. 1160-3: Please see the response for (J-b).

UU. 1160-5: In the preferred alternative, the responsible official had determined that appropriate protection and direction can be provided to the CDNST through Forest-wide plan components. Therefore, specific management area direction is not included in the 2020 Forest Plan.

VV. 1160-6: Please see the response for (C).

WW. 1160-7

a. Please see FW-CDNST-DC-02.

b. The wording in the 2020 Forest Plan components protect the nature and purposes of the CDNST. Mechanized means of transportation along the CDNST are determined by plan components in other designated areas, such as RWAs and/or by Forest or District closure order.

c. Please see FW-CDNST-DC-03

d. Please see FW-CDNST-DC-04 and FW-CDNST-DC-05.

e. Please see FW-CDNST-DC-07. It is appropriate for this plan component to be listed as a desired condition.

XX. 1160-8

a. Objectives are measurable and time sensitive. It is appropriate for this plan component to be listed as an objective rather than a standard.

b. Please see Appendix C, Potential Management Approached and Possible Management Actions.

c. Please see FW-CDNST-GO-01.

d. Please see the response to (XX-c).

YY. 1160-9

a. The Forest Plan will not be making leasing decisions for oil, gas, geothermal, or mineral leases. Please see FW-CDNST-STD-01 and FW-CDNST-STD-02. These plan components provide direction for surface occupancy to address surface impacts.

b. Please see FW-CDNST-STD-02.

c. Regulations do not allow motorized use on non-motorized trails.

d. Please see FW-CDNST-GDL- 02.

e. Please see the response for (C).

f. Please see FW-CDNST-GDL- 01.

g. Please see FW-CDNST-GDL- 02.

h. Please see FW-CDNST-GDL- 03.

i. Please see FW-CDNST-GDL- 04.

j. Please see FW-CDNST-GDL- 05.

k. Please see FW-CDNST-GDL- 06

l. Please see FW-CDNST-GDL- 07.

m. Please see FW-CDNST-GDL- 08.

n. Please see FW-CDNST-GDL- 09.

o. Please see FW-CDNST-GDL- 09.

p. Please see FW-CDNST-GDL- 10.

q. Please see FW-CDNST-GDL- 10.

r. Please see FW-CDNST-DC-04.

s. Please see FW-CDNST-GDL- 06.

ZZ. 1160-10 (a through g): Please see the response for (XX-b).

CR188 Continental Divide National Scenic Trail – DEIS Comments

Supplemental Concern Statements:

A. 664-1 and 517-22: In the area of the CDNST between the boundary of the Scapegoat Wilderness and Lewis and Clark Pass, the FS should consider the following language: "Motorized and mechanized means of transport in RWAs, where currently authorized, would continue to be allowed."

B. 664-8: The DEIS did not address reasonable plan components to protect the values for which congressionally designated areas were established. Providing for plan components that protect Wilderness Character and National Scenic and Historic Trail nature and purposes is within the scope of the EIS and must be addressed in the proposed action and/or alternatives.

C. 664-10: The proposed management direction for the CDNST does not protect CDNST nature and purposes values. The establishment of a CDNST corridor with supporting plan components was not evaluated in the DEIS. The FS should reissue the DEIS as a supplement to address the omissions.

D. 664-12: The FS should establish a 1-mile wide CDNST corridor with appropriate plan components to provide for the nature and purposes of this National Scenic Trail.

E. 664-16: The discussion of the affected environment fails to address visitor experience opportunities and settings, and the conservation and protection of scenic, natural, historical, and cultural qualities of the national trail corridor. “The affected environment discussion needs to be expanded to describe the existing corridor uses (e.g., timber production and mining), roads and trails, ROS classes along the CDNST travel route, and motor vehicle and bicycle use. Recognizing the nature and purposes is important to understanding that protecting a National Scenic Trail corridor through protecting wildlife linkage/connectivity areas and wilderness characteristics of roadless areas is beneficial to conserving landscapes.

F. 664-17

a. The desired condition must describe the nature and purposes of the CDNST: The CDNST Management Area (MA) provides high-quality scenic, primitive hiking and horseback riding opportunities and conserves natural, historic, and cultural resources (CDNST Comprehensive Plan, Chapter IV(A)).

b. The desired conditions fail to recognize the importance of protecting middle ground views and to recognize the need to protect the trail setting when passing through areas with evidence of current and past incompatible management activities.

c. Standards fail to protect against a wide array of activities that may degrade Primitive and Semi-Primitive Non-Motorized settings.

d. Guidelines allow for "short-term" deviations from meeting Scenic Integrity Objectives without limiting the extent and duration of any deviation. Assumptions should provide a general description of the effects periods: Is it intended that long-term is greater than 50 years and short-term is less than 10 years? Short-term effects of timber harvest activities and related road construction and use could substantially interfere with the CDNST nature and purposes if inappropriately scheduled and not limited in scope. Deviation from

the Landscape Aesthetics Handbook must meet the requirements of 40 CFR 1502.24 - Methodology and scientific accuracy.

G. 664-18: The assessment only addresses the effects of the CDNST travel route and not that of establishing a protected national trail management corridor. Establishment a corridor with Primitive or SPNM setting characteristics would significantly alter the effects analyses. The analyses and disclosure should be corrected in a Supplement DEIS.

H. 664-19: The FS should adjust that analysis to show that there will be effects to the CDNST due to timber harvestings in the Granite Butte, Greenhorn Mountain, and O'Keefe Mountain areas due in part to allocating much of the area for timber production resulting in a Roaded Natural (or better described as a Roaded Modified subclass) condition. The conclusion should describe that the CDNST management corridor would not be protected in vicinity of Granite Butte, Greenhorn Mountain, and O'Keefe Mountain as identified in Appendix B.

I. 664-20: The FEIS fails to identify plan components that provide for the protection of the nature and purposes of the CDNST. Limited timber harvest during each planning period may be appropriate in some areas along the CDNST corridor. However, timber production practices do not contribute to protecting CDNST nature and purposes values due to the cumulative effects of travel route closures, road construction, reoccurring stand maintenance, and harvest operations. Timber harvest effects on scenic integrity and ROS settings are evaluated using the Scenery Management System and ROS planning frameworks. Applying these planning frameworks would lead to the conclusion that the proposed action and alternatives if implemented would substantially degrade CDNST values and as such should not have been developed in detail. Scenic Integrity Levels of Very High and High contribute to the nature and purposes of the CDNST. Scenic Integrity Level of Moderate may degrade CDNST values. Scenic Integrity Levels of Low and Very Low are inconsistent with CDNST values and landscapes along the CDNST at these levels of integrity need rehabilitation. "Short-term" effects that last for several years would also substantially interfere with the nature and purposes of the CDNST.

J. 664-21:

   a. The FEIS fails to identify the consequences associated with establishing ROS RN class desired conditions within the CDNST corridor, which would promote actions that would substantially interfere with the nature and purposes of the CDNST.

   b. The environmental consequences of the DEIS did not evaluate the effect of more than one set of CDNST plan components, which limited the range of alternatives.

   c. The FS failed to consider plan components recommended in scoping comments that would provide for a substantial higher level of protection than those adopted for the draft plan. These suggested plan components should be analyzed following NEPA processes.

   d. The FS should establish a CDNST MA corridor with Primitive or Semi-Primitive Non-Motorized characteristics outside of wilderness.

   e. The FS should review and use the research that supports FSM 2310.3 policy and includes information found in General Technical Report PNW-98, The Recreation Opportunity Spectrum: A Framework for Planning, Management, and Research by Roger Clark and George Stankey. I demonstrated the knowledge to make this assessment in coauthoring a FS ROS handbook: Recreation Opportunity Setting as a Management Tool.1 (Recreation Opportunity Setting as a Management Tool - Stankey, Warren, and Bacon - 1986; http://www.nstrail.org/carrying_capacity/ros_tool_1986.pdf)

K. 664-22: The proposed action and alternatives do not protect the CDNST by establishing Primitive and SPNM allocations on the Helena National Forest in the Granite Butte, Greenhorn Mountain,

and O'Keefe Mountain areas. The conclusion should describe that the CDNST management corridor would not be protected in vicinity of Granite Butte, Greenhorn Mountain, and O'Keefe Mountain as identified in Appendix B.

L. 664-23: The proposed Plan appropriately strives to protect the Outstandingly Remarkable Values of Wild and Scenic Rivers (FW-WSR-GDL), National Historic Trails (FW-LCNHT- SUIT), and other special areas (Appendix B, Tables 12 &14), but then avoids protecting CDNST values from effects of timber production. The effects resulting from timber production activities along the CDNST corridor would substantially interfere with the nature and purposes of this National Scenic Trail being inconsistent with the requirements of the National Trails System Act (Section 7(c)).

M. 664-24: The FS should develop a CDNST unit plan and support it in the FEIS.

Supplemental Response Statements:

A. 517-22: In the preferred alternative (alternative F), the northern boundary of the Silver King RWA is located 150 feet south of the Continental Divide trail (Trail 440) from where it intersects the East Fork Falls Creek trail (Trail 219) south to Lewis and Clark Pass. This allows for a mountain biking connection between East Fork Falls Creek and Rogers Pass.

B. 664-8: Plan components were developed for all designated areas on the HLC NF, including those that protect wilderness character and the nature and purposes of the National Scenic and Historic Trails, including the Continental Divide National Scenic Trail.

C. 664-10: The HLC NF developed the 2020 Forest Plan using the 2012 Planning Rule, the 2015 Planning Directives, and direction from the National CDNST trail coordinator. All plan components are designed to protect the nature and purposes of the CDNST trail. The preferred alternative, alternative F, establishes a CDNST corridor that extends 1/2 mile either side of the CDNST trail. Plan components for the CDNST provide direction within this corridor. The corridor map is on display in Appendix A of the 2020 Forest Plan. Analysis for this trail corridor is included in the FEIS.

D. 664-12: See the response for (C).

E. 664-16: The affected environment has been updated to include additional activities that are taking place within the CDNST corridor.

F. 664-17

    a. Please see FW-CDNST-DC-01.

    b. Please see FW-CDNST-DC-02.

    c. Please see FW-CDNST-STD-01 through 03. Addition guidance for activities along the CDNST may be found in FW-CDNST-GDL-01 through 10.

    d. Forest plan direction for the scenery along the CDNST may be found in FW-CDNST-DC-02, FW-CDNST-GDL-02, FW-CDNST-GDL-03, and FW-CDNST-GDL-06.

G. 664-18: Please see the response for (C).

H. 664-19: The FEIS includes the analysis of effects resulting from the development of a 2020 Forest Plan. Site- specific effects, such as those created by potential timber harvesting in the Granite Butte, Greenhorn Mountain, and O-Keefe Mountain areas, were not considered in this analysis. All future site-specific project analysis will consider the CDNST trail tread and the CDNST corridor as displayed in the 2020 Forest Plan and will need to follow the associated plan components.

I. 664-20: Forest plan direction for the scenery along the CDNST may be found in FW-CDNST-DC-02, FW-CDNST-GDL-02, FW-CDNST-GDL-03, and FW-CDNST-GDL-06. Direction for timber harvesting along the CDNST is found in FW-CDNST-GDL-09.

J. 664-21

   a. Additional analysis has been added to the FEIS to describe the effects to the purpose and nature of the CDNST in areas where the trail is located within roaded natural ROS settings.

   b. Comments/issue received from the public on the proposed action did not recommend substantial changes to the plan components that would warrant additional alternatives.

   c. The FS considered all comments to the proposed action and DEIS.

   d. Please see the response for (C).

   e. Please see the response for (C).

K. 664-22: Plan components in the forest plan have been specifically designed to protect the nature and purposes of the CDNST. Please see FW-CDNST-DC-01 through 07.

L. 664-23: The HLC NF is not proposing timber harvesting with the action of the 2020 Forest Plan. Site-specific actions along the CDNST, such as timber harvesting, will be analyzed through NEPA outside of the forest planning process. Plan components in the 2020 Forest Plan have been designed to protect the nature and purposes of the CDNST during future proposed site-specific management activities.

M. 664-24: The FS must follow all laws, regulations, and policies that provide direction for the CDNST. FSM 2353.44b directs the FS to complete a CDNST Unit Plan for those segments of the trail that cross the HLC NF. Since the unit plan is mentioned in the FS Manual there is no need to repeat this direction in the 2020 Forest Plan.

Cultural, historical, and tribal resources

CR52 Badger Two Medicine – Other Resources

Supplemental Concern Statements:

A. 617-8:

   a. Please consider the following for suitability statement for the Badger Two Medicine: (a) The Badger-Two Medicine area is suitable for habitat restoration activities, (such as whitebark pine restoration), where the outcomes will restore the natural ecology of the area.

   b. Vegetation management activities, (such as prescribed fire), are allowed in the Badger-Two Medicine area for reasons specifically designed to maintain the natural ecology and the desired conditions associated with the area.

   c. The Badger-Two Medicine area is not suitable for new trail construction. Maintenance and/or reconstruction of existing system trails is permitted.

   d. The Badger-Two Medicine area is not suitable for either lift off or landing use by aircraft, including drones. Flight in or over the Badger-Two Medicine should be compatible with values defining the Blackfeet Traditional Cultural District. Exceptions may be made for authorized permitted uses or in emergencies involving fire control efforts, public health and safety that are determined on a case-by-case basis.

e. The Badger-Two Medicine area is not suitable for new or expanded livestock grazing allotments.

f. The Badger-Two Medicine area is not suitable for mineral or energy leasing or exploration, or for the development of leasable or locatable minerals.

g. The Badger-Two Medicine area is not suitable for commercial wind, solar, or geothermal projects.

h. The Badger-Two Medicine area is not suitable for hazardous fuel reduction projects/activities.

i. The Badger-Two Medicine area is suitable for the restoration of wild bison.

B. 1028-1): The FS should include a standard requiring government-to-government consultation on any issue relating to the management of the TCD and the inclusion of an additional desired condition.

C. 1028-2: RM-BTM-STD-02: Management activities within the Badger Two Medicine area shall not pose adverse effects to the Badger Two Medicine Traditional Cultural District. Compatibility shall be determined through government-to-government consultation. Management activities shall consider scientific research, native knowledge, and ethnographic research as they relate to Blackfeet cultural land-use identities when analyzing project effects.

D. 1035-46

a. We would like to see the following included in the 2020 Forest Plan: Strong language pertaining to the plan components for the Badger-Two Medicine area. Consultation between the Blackfeet Nation and the FS should explore options for creating a meaningful management area designation that would provide stringent protections for the cultural and ecological values of the area.

b. Additionally, we support inclusion of plan language that would provide the Blackfeet Nation a defined role in determining whether a project or activity is consistent with the plan components for the Badger Two Medicine area.

c. The FS should develop a desired condition for the Badger Two Medicine that the B2M area is to be cooperatively managed between the Blackfoot Nation and the FS towards protecting the ecological and cultural integrity of the area, Blackfeet Treaty rights, and the documented values of the Traditional Cultural District.

d. The TCD is over 160,000 acres in area, encompasses two National Forests (the HLC and the Flathead), and straddles both sides of the Continental Divide. We would like to see a more clearly articulated plan for inter-Forest cooperation in management of the TCD.

e. Ensure that all management directives are consistent with Blackfeet Treaty rights. We appreciate the inclusion of the Draft Plan's standard (RM-BTM-STD 01) to manage the area "to fulfill Blackfeet treaty obligations, and federal trust responsibility" and "to protect and honor Blackfeet reserved rights and sacred land."

f. Given that the Tribe has explicitly weighed in that they see mechanized travel in this area as a modern development inconsistent with maintaining the integrity of the religious and cultural traditions of the Blackfeet Nation, the Forest plan should specify that mountain bike use does not meet suitability criteria for the Badger Two Medicine unit and Traditional Cultural District.

g. We also share concerns expressed by MWA and others regarding differing allowance of recreation uses like mountain bikes for areas under the Primitive Recreation Opportunity

Spectrum (ROS) class. While we are not advocating for Recommended Wilderness for the Badger Two Medicine area, we do feel that it should be placed under the Primitive ROS class and that this class should be consistently applied across the Forest, including the Badger Two Medicine, to exclude allowance of mountain bike use. Accordingly, the Primitive suitability component should be changed to state that mechanized recreation is not suitable.

h. Another opportunity is to provide a plan component whereby Native Knowledge is utilized (defined at 36 CFR 219.19) in a context of a government-to-government relationship between the Federal Government and Blackfeet Nation.

i. Ensure enforceable standards that protect sources of public drinking water, wherever they exist.

j. Ensure enforceable standards for weed management to provide for the control, prevention, and eradication of invasive weeds within the Badger-Two Medicine area.

k. Identify and maintain Badger-Two Medicine ecosystem qualities consistent with Grizzly Bear primary conservation area status.

l. Ensure that habitat restoration activities (such as management-ignited fires, active weed management, road removal and recovery) are used in ways consistent with preserving the area's attributes and values.

E. 1037-4

a. Recommended Standard: Management activities within Badger Two Medicine area shall not pose adverse effects to the Badger Two Medicine Traditional Cultural District. [Compatibility shall be determined through government-to-government consultation.] Management activities shall consider scientific research, [Native knowledge,] and ethnographic research as they relate to Blackfeet cultural land-use identities when analyzing project effects.

b. Recommended standard: Management shall recognize, ensure and accommodate Blackfeet tribal members access to the Badger Two Medicine area for the exercise of reserved treaty rights, and enhances opportunities for tribal members to practice spiritual, ceremonial and cultural activities. . . [including bison as a cultural component to these practices.]

Supplemental Responses:

A. 617-8

a. The HLC NF agrees that a suitability statement would be appropriate to describe restoration activities. Please see RM-BTM-SUIT-02.

b. See the response for (a).

c. New trail construction and maintenance/reconstruction of existing trail is beyond the scope of the 2020 Forest Plan and would require site specific environmental analysis.

d. The Federal Aviation Administration is the authority over the flying of all unmanned aircraft, including drones. The HLC NF does make determinations over recreation settings across the forest. These settings are described by recreation opportunity spectrum (ROS) settings. For more details on the recreation activities allowed within these settings please see the Recreation Settings section.

e. The Badger-Two Medicine area contains a large active cattle grazing allotment with multiple permittees. The permits are in good standing with conservative stocking rates

and an allotment management plan in place that is flexible to address resource concerns if they are identified. The 2020 Forest Plan will not be used as a platform to reduce, restrict, or eliminate livestock grazing from the Badger-Two Medicine Area.

f. The Badger Two Medicine area was withdrawn from mineral entry by PL 109-432 on January 8, 2007. This means the area is not available for new locatable and leasable mineral activities. In the early 1980's, prior to PL 109-432, the BLM and US FS leased several oil and gas parcels in the B2M. The Department of the Interior subsequently cancelled those leases in 2016 and 2017. However, two of those leases are subject to ongoing litigation by the lease holders. Please see RM-BTM-STD-04 for direction concerning surface occupancy in the B2M for leasable minerals.

g. Please see FW-LAND USE-GDL-03.

h. It is not appropriate to preclude fuels reduction activities in the Badger Two Medicine area, although, other land features will limit the extent that these activities are likely to occur.

i. The FS acknowledges the historic and cultural significant of American Bison to the indigenous Native American peoples. The 2020 Forest Plan includes components to maintain habitat for native wildlife species and support the native flora and fauna on the HLC NF, including habitat that would support American bison and other species of tribal interest. Please see plan components in the vegetation, wildlife, and tribal sections of the 2020 Forest Plan.

B. 1028-1: Proposed actions in the Badger Two Medicine will follow all federal laws and regulations for cultural resources and government to government consultation, in addition to any plan components.

C. 1028-2: See the response for (B).

D. 1035-46

a. See the response for (B).

b. Co-management of the Badger Two Medicine between the tribe and the FS is outside of the scope of the 2020 Forest Plan.

c. See the response for (b).

d. Please see FW-CR-GO-01.

e. Please see RM-BTM-DC-01.

f. Except within RWAs, the responsible official has decided not to make travel plan changes within the Forest Plan revision process. Under current travel plans, motorized uses are not allowed in the Badger Two Medicine area. Mechanized means of transportation (including mountain biking) is allowed in all areas expect for those areas closed by Congressional action (such as wilderness) or specific area closures.

g. The preferred alternative (alternative F) allocates a primitive ROS to the Badger Two Medicine and allows mechanized uses to continue.

h. Please see RM-BTM-STD-01.

i. Please see plan components in the forest wide Aquatic Ecosystems section.

j. Please see plan components in the forest wide Vegetation - Invasive Plant section.

k. Please see plan components in the NCDE Grizzly Bear Amendment section.

l. Please see RM-BTM-STD-01, RM-BTM-STD-02, and RM-BTM-STD-03.

E. 1037-4

a. Please see RW-BTM-STD-02. Also see the response for (B).

b. Please see RM-BTM-STD-03. Also see the response for (B).

Timber and other forest products

CR227 Firewood

Supplemental Concern Statements:

A. 625-46 and 1041-73: Firewood gathering (as allowed in FW-OFP-GDL-03) on temporary roads is not appropriate in general, given concerns with impacts to wildlife and user-created routes; if it is allowed, it should be limited to 1 year during only periods that are dry and not sensitive to wildlife.

B. 940-2: The current rules for off-road vehicle access for firewood is too limiting, due to the physical difficulty; off-road motorized use for firewood gathering should be the same as what is allowed for camping.

Supplemental Responses:

A. 625-46 and 1041-73: FW-OFP-GDL-03 was reworded to improve clarity for minimizing impacts to other resources, including wildlife, if temporary roads are utilized for firewood gathering. Occasionally, managers might open temporary roads in specific areas for a short period for firewood cutting, which would be evaluated on a site-specific basis. All the action alternatives include guideline FW-OFP-GDL-03 that provides access for firewood gathering while protecting other resources.

B. 940-2: The forest plan recognizes the importance of providing opportunities for firewood cutting. See the desired conditions in other forest products sections in the plan (FW-DC-OFP-01 and 03). Firewood permit restrictions regarding off-road motorized use are not addressed by Forest Plan revision.

CR232 Timber – Salvage and Sanitation

Supplemental Concern Statements:

A. 625-45, 316-11, 625-45, 1081-27, 1081-192, 1081-193, 1081-194, 1159-16, and 1173-8: There are concerns regarding the definitions, analysis, and potential application of salvage and sanitation harvest practices.

B. 316-11: Salvage is an important management tool; there should be additional components that require salvage to occur in a timely manner to best recover economic value.

C. 625-41, 625-45, and 1173-8: Additional limitations should be placed on salvage logging, including limiting cutting areas to 40 acres or less, with buffers, and retaining some standing dead trees for wildlife habitat considerations. It should only be conducted if it causes minimal disturbance (specific concern about roads).

D. 1081-27, 1081-192, 1081-193: Salvage should only be allowed on lands suitable for timber production, because by definition economics are the primary purpose; if salvage is allowed in other areas, it should be done only to achieve other resource desired conditions. Management emphasis of areas should be determined now rather than at the site-specific project level.

E. 625-45: There are too many exceptions allowed for salvage in the plan components.

F. 1081-194: The effects of salvage logging are not adequately addressed; they are not included in the modeling. Analysis needs to focus on what the plan allows, not what has been done in the past.

G. 1159-16: The analysis doesn't use the BASI concerning salvage logging.

Supplemental Responses:

A. 625-45, 316-11, 625-45, 1081-27, 1081-192, 1081-193, 1081-194, 1159-16, 1173-8: The 2020 Forest Plan allows for salvage and sanitation harvest activities, in a manner consistent with the National Forest Management Act (NFMA), the 2012 Planning Rule, and associated directives (FSH 1909.12 chap 60). Salvage and sanitation harvest on the Forest is expected to occur in the future, but since these are opportunistic types of harvest, their location and amount cannot be determined with any certainty. At the programmatic level of the plan, the Forest does not believe it is appropriate to place a restriction or prohibition on the use of salvage or sanitation harvest in general or to identify site-specific situations where they could or could not occur. The application of salvage or sanitation harvest would be guided by the same requirements as any other vegetation treatments insofar as the planning and decision-making process (NEPA) and would not be arbitrarily applied across the landscape. The ecological as well as economic and social impacts associated with salvage or sanitation harvesting would be considered at the project level, based on site-specific conditions. Applicable information, including the BASI, would be used to guide project development and decisions. Consistency with the forest plan direction would be documented, as is required for all project-level decisions.

B. 316-11: Plan components are in place that allow for the use of salvage harvest on both lands that are suitable and unsuitable for timber production. It is not appropriate for plan components to compel action.

C. 625-41, 625-45, and 1173-8: The standards that limit timber harvest activities in the Timber section of the plan would apply to any type of harvest activity, such as salvage in burned forests or treatments in "green" stands. Among other things, the standards and guidelines address limitations related to harvest that are set forth in the National Forest Management Act (36 CFR 219.11(d)(1)-(7)) for purposes such as protecting soil productivity, ensuring that restocking of trees occurs, and using the clearcutting method only where it is determined to be the optimum method. The exception to opening size limits for salvage projects is as stated in Forest Management Act and the 2012 planning rule and directives (FSH 1909.12 chap. 60 sec. 64.21). Project level analysis may implement smaller sizes and buffers if needed based on site specific analysis. Snag guidelines would apply to salvage projects. In addition, there is a specific plan component that addresses the need to retain burned trees for wildlife habitat (FW-TIM-GDL-03).

D. 1081-27, 1081-192, 1081-193: The 2020 Forest Plan reflects the direction in the National Forest Management Act and the 2012 planning rule regarding salvage and sanitation harvest and allows this activity to occur on lands suited for timber production as well as some of the lands not suited for timber production. As stated in the planning rule (FS Handbook 1909.12 chap. 60 sec. 64.1), the National Forest Management Act directs that "the Secretary shall assure that except for salvage sales or sales necessitated to protect other multiple-use values, no timber harvesting shall occur on such lands [lands not suited for timber production] for a period of 10 years (USC 1604(k))."

Although no timber harvest for the purpose of timber production may occur on lands not suited for timber production, forest plans "may have components that allow timber harvest on lands not suited for timber production to protect other multiple-use values, and for salvage, sanitation, public health, or safety" (FS Handbook 1909.12 chap. 60 sec. 64.1). Also, the National Forest Management Act provides for the removal of timber in salvage or sanitation harvests at a level that may exceed the sustained yield limit for the Forest (16 U.S.C. 1611 and FS Handbook 1909.12 chap. 60 sec. 64.3).

Salvage or sanitation harvest usually is conducted for the purpose of recovering some of the economic value of the trees and providing timber products that contribute to economic sustainability and income to local economies. By capturing some of this economic value, it is sometimes possible to utilize those funds for other needed restoration activities, such as planting trees in burned areas. Ecological reasons

for salvage and sanitation harvest may also exist, such as the removal of burned trees to reduce the chance of bark beetles (e.g., Douglas-fir or spruce bark beetles) breeding and multiplying and spreading to adjacent, otherwise healthy trees.

Management emphasis of areas is established in the 2020 Forest Plan, to the extent it is appropriate to do so (for example, through the identification of lands suitable for timber production, recreation opportunity spectrum classes, and the like).

E. 625-45: The 2020 Forest Plan reflects the direction in the National Forest Management Act and the 2012 planning rule and directives regarding exceptions made for salvage and sanitation harvest in plan components (FS Handbook 1909.12 chap. 60 sec. 64.1).

F. 1081-194: The 2020 Forest Plan reflects the direction in the National Forest Management Act and the 2012 planning rule and directives regarding salvage and sanitation harvest. The sustained yield limit does not apply to the sale of volume from salvage or sanitation harvesting, and the projected wood sale and timber sale quantities (PTSQ/PWSQ) do not include volume from those activities (FSH 1909.12 chap. 60 sec. 64.31 and 64.32). Based on this direction, and because the extent and location of future disturbance events is highly uncertain, the vegetation modeling appropriately does not include potential salvage activities. Additional analysis was added to the timber section of the final EIS describing the potential for future salvage activities and their associated effects.

G. 1159-16: The timber section of the final EIS discusses the effects of salvage logging in more detail and includes additional BASI. Additional analysis would occur at the project level prior to salvage treatments occurring, and that analysis would incorporate the BASI relevant to the project and site conditions.

CR233 Timber – Openings

Supplemental Concern Statements: Commenters expressed concern or suggestions related to plan components providing for the maximum size of even-aged regeneration harvest openings. Specifically:

A. 410-46, 625-24: The limitations provided for even-aged regeneration harvest openings are too broad and the potential exceptions undesirable.

B. 625-42: 40-acre opening size limits should apply to areas of natural disturbance; potential additional limitations should apply for wildlife purposes especially in lands unsuitable for timber production; specific buffers should be required between openings.

C. 625-40: Clarify if there are opening size exceptions in other vegetation types besides "Cool Moist".

D. 410-46: The forest openings allowance is not based on wildlife assessment or natural habitat conditions; with no analysis of fragmentation. There is no justification for creating large openings from a wildlife perspective. The impacts of large openings that would eliminate habitat (including elk, grizzly bears, lynx, pine marten, and northern flying squirrel) are not addressed.

E. 410-46: There is no clear rationale or references for how clearcuts replicate conditions created by insects/fire; there would be differences in snags, patches of hiding cover, etc.

F. 625-20: What is the existing condition of early successional forest patches?

Supplemental Responses:

A. 410-46, 625-24: FW-TIM-STD-08 is designed to provide the flexibility necessary to help achieve desired ecological conditions for the Forest, as required by the planning rule, by allowing for patches up to 75 acres to be created by even-aged harvest. The particular conditions that would likely be most influential at the project level when considering the size of harvest openings are connected to resource conditions or direction related to other forest plan components. Analysis and documentation of pattern and size of openings, effects to multiple resources, and project consistency with this standard would occur at the site-specific project level, with opportunities for public review and comment. Final approval would be by the project-level deciding officer.

B. 625-42: Opening size limits and exceptions apply to both lands that are suitable and unsuitable for timber production. All plan components, including those related to desired vegetation conditions and wildlife habitat needs, would be considered during site specific project development and analysis. The maximum allowable opening size limit does not preclude the Forest from implementing smaller sizes and/or incorporating buffers if needed when designing projects.

C. 625-40: The NRV patch size analysis was re-done (see appendix I of the FEIS) and based on the results the opening size exception was re-done (see also appendix H of the FEIS). This plan component allows for opening size exceptions up to 75 acres on all potential vegetation types.

D. 410-46: The opening size is based upon the NRV analysis, which would incorporate the conditions necessary to support native wildlife species on the landscape. The utility of openings up to 75 acres would vary by wildlife species; as with all forest structural conditions, some species would benefit from this condition on the landscape while others would avoid using the area until it grows into another structural stage. Project level analysis would be required to meet all 2020 Forest Plan components, including those related to wildlife, when designing harvest projects that may utilize FW-TIM-STD-08.

E. 410-46: Additional discussion was added to the Terrestrial Vegetation and Wildlife sections of the final EIS to describe the impacts of even-aged regeneration harvest patch sizes and the extent to which they are similar to patches created by natural processes such as insects and wildfire.

F. 625-20: The existing condition of early successional forest patch sizes is disclosed in the Terrestrial Vegetation section and appendices H and I of the final EIS. Plan component FW-VEGF-DC-08 was updated to more narratively describe landscape patch and pattern, without a quantitative measure of patch sizes.

CR235 Timber – Suitability

Supplemental Concern Statements:

A. 346-7, 557-11, 1081-157, 1081-196, 1081-197, 1081-198, 1081-216, 1159-10, 1159-11, 1159-12, and 1159-68: There are concerns regarding how suitability for timber production was determined, and the degree to which this determination does or does not influence allowable management actions.

B. 1081-157, 1081-196, 1081-197, and 1081-198: A full disclosure of how the lands suitable for timber production were determined and mapped needs to be provided, specifically related to other resource objectives like conservation watersheds, municipal watersheds, IRAs, the Elkhorns WMU, CMAs, and developed recreation sites. Clarify what lands may be suitable, and what lands are suitable for timber production, for each alternative, and how plan components support this determination.

C. 1081-216: The analysis indicates that Primitive ROS lands are not suitable for timber production, but this is not included as a plan component.

D. 1159-10, 1159-11, 1159-12, and 1159-68: The plan does not appropriately limit logging, because harvest can occur in lands unsuitable for timber production for a wide variety of purposes. "Unsuitability" is a meaningless concept and misleading to the public.

E. 346-7: Please add discussion/table/maps showing how the South Hills Rec Area will impact timber production in the Divide GA.

F. 557-11: Provide clarification as to the potential for timber harvest in the Rocky Mountain Range GA.

Supplemental Responses:

A. 346-7, 557-11, 1081-157, 1081-196, 1081-197, 1081-198, 1081-216, 1159-10, 1159-11, 1159-12, and 1159-68: The identification of lands as suitable for timber production, and plan components that allow for harvest on lands unsuitable for timber production, are consistent with the National Forest Management Act, 2012 Planning Rule and associated (FS Handbook 1909.12 chap. 60 sec. 61).

B. 1081-157, 1081-196, 1081-197, and 1081-198: Appendix H of the FEIS provides a more detailed discussion of how lands were determined to be suitable for timber production. Suitability for timber production was determined based on whether the desired conditions for these areas conflict with timber production.

C. 1081-216: There is no plan component for Primitive ROS areas that precludes timber production or harvest. No ROS designations were eliminated from lands that may be suitable from timber production. However, ROS plan components were used as a reference for the potential values and accessibility of lands. Primitive areas were generally excluded from timber production in the alternatives because the desired vegetation conditions and unroaded nature are not compatible with rotation forestry. Harvest may occur in Primitive ROS areas, if compatible with all other plan components. Plan components FW-TIM-SUIT-01 and 02 were added to clarify which lands are suitable for timber production and where harvest may occur for other purposes. Additional description of potential timber harvest in Primitive ROS areas was added to the Timber section of the FEIS. See also the discussion of the determination of timber suitability in Appendix H.

D. 1159-10, 1159-11, 1159-12, and 1159-68: In all cases, harvest must be consistent with desired conditions and other plan components for the area. This direction provides the opportunity to utilize harvest as a tool, if deemed appropriate, to achieve desired conditions.

E. 346-7: A section on "Effects of plan components associated with the South Hills Recreation Area" was added to the timber section of the FEIS, along with other special areas identified in the plan.

F. 557-11: Please refer to Appendix H for a detailed discussion of how suitability for timber production and timber harvest was determined. In the Rocky Mountain Range GA specifically, several land designations precluded suitability for timber production based on executive order or legal statute (designated wilderness areas, IRAs, and conservation management areas). There is little remaining land that could be considered for suitability for timber production or harvest in this GA, and these lands are primarily located in the Badger Two Medicine Area. Based on the desired conditions and public input on this area, the deciding official determined to make this area unsuitable for timber production, but some harvest may occur in portions of the area for other resource management purposes. The acreage where harvest may be allowed varies by alternative, as described in the timber section of the FEIS.

CR236 Timber – Volume Projections, Modeling, and Metrics

Supplemental Concern Statements:

A. 625-43, 1081-201, 1081-202, 1081-203, 1081-204, 1081-207, 1081-208, 1081-210, 1081-211, 1081-212, 1081-213, 1081-214, 1081-215, and 1185-11: The timber modeling was not done appropriately and new analysis must be done to display and/or clarify volume projections and harvest levels.

B. 625-43: The projected volume metrics do not include potential salvage harvesting; how would these activities affect long-term soil productivity, and how will lands unsuitable for timber production where salvage occurs provide ecosystem services?

C. 1081-201: There is a contradiction in the assumption that site-specific factors wouldn't materially affect timber yield (assumptions, 3.29.3), when the DEIS also states that site-specific data at the project scale would result in changes to timber suitability and volume outputs (3.29.4).

D. 1081-207: The DEIS should have taken into account the effects of the 2017 fires on timber volumes.

E. 1081-202: It is unclear how wildlife plan components would limit harvest, and yet at the same time not alter expected outputs. Appendix H should better describe how various plan components were factored into timber projections; and specify the magnitude of the effects of those plan components.

F. 1081-208: The EIS must discuss how timber projections were affected by the recent mountain pine beetle outbreak.

G. 1081-208: The role of future wildfire, insects, and disease in determining expected timber yields must be explained; and the modeling for alternatives should be tied to what plan components actually say about future fire suppression.

H. 1081-210: Timber volume projections are overestimated, based on the loss of a proportion of the former timber base to IRA designation. The conclusion that potential volumes are higher than what has been produced in recent decades is unsupported.

I. 1081-210: Clarify what factors are not under FS control that are not included in the modeled metrics.

J. 1081-211, 1081-214: The way that the sustained yield limit is calculated is not in compliance with NFMA; it is not based on lands suitable for timber production and does not include a requirement for non-declining even flow as required. It is likely too high.

K. 1081-211: The analysis should address harvest from lands suitable for timber production separately from harvest on lands unsuitable for timber production, because harvest on the former is subject to a non-declining even flow criteria, and harvest on the latter would be more uncertain.

L. 1081-212, 1081-213: Clarify the discussion regarding departure from the SYL versus a departure from non-declining even flow (NDEF) with respect to NFMA. All of the alternatives depart from non-declining even flow because second decade harvest levels are larger than first decade harvest levels. The FS must disclose why this departure is made; and provide an alternative that does not depart from NDEF.

M. 1081-213: Terminology and interpretation of timber volume may not be changed across alternatives; this is a NFMA violation; the action alternatives are incorrectly formulated and must be made comparable to alternative A.

N. 1081-215: The harvest level assumptions in the modeling related to ROS settings must be disclosed and explained.

O. 1185-11: The plan should allow for timber volumes up to the sustained yield limit, and should not be constrained by budget, because of the potential for partners to increase harvest capacity on the HLC NF.

P. 1081-202: Adjustments should be made to reduce projected harvest in lands unsuitable for timber production.

Q. 1081-189, 1081-202, and 1081-204: Effects of timber harvest on specific areas such as conservation watersheds, municipal watersheds; habitat for grizzly bear, lynx, and elk; and wildlife connectivity areas should be included in the timber modeling and reported in the EIS.

Supplemental Responses:

A. 625-43, 1081-201, 1081-202, 1081-203, 1081-204, 1081-207, 1081-208, 1081-210, 1081-211, 1081-212, 1081-213, 1081-214, 1081-215, and 1185-11:The analysis reflects the direction found in the National Forest Management Act, the 2012 planning rule, and associated directives (FS Handbook 1909.12, Chapter 60). The analysis was re-done to incorporate improvements in future fire projections, mapping of RMZs, and updates to the existing condition data.

B. 625-43: As per FSH 1909.12 Chapter 60, salvage harvest is not included in projected volume metrics. Additional discussion was added to the timber section of the final EIS to describe potential salvage activities and their effects. Potential salvage projects would be subject to all relevant plan components, including those that protect soil productivity and other ecosystem services.

C. 1081-201: Additional text was added in the timber section of the final EIS to clarify these statements. FW-TIM-STD-01 and 02 may result in eliminating areas where harvest can occur based on a site-specific determination of soil, slope, or watershed conditions; or reforestation assurance (FSH 1909.12 Chapter 60, 64.14). This is an important step due to the broad scale nature of suitability mapping. These potential changes are not expected to change the overall volume projections at the Forestwide scale. All of the design criteria that may applied to projects cannot be modeled programmatically due

to their complexity. However, primary resource constraints were included in timber modeling, and the potential site-specific nuances are not expected to differ greatly from the prescriptions used to develop yield tables.

D. 1081-207: In the analysis for the final EIS, all fire and harvest activity that has occurred through summer 2018 was incorporated by updating the model input files with the disturbance event and expected post-disturbance condition.

E. 1081-202: Plan components that could be measured/mapped and that would have an impact on potential timber outputs were included in the timber modeling. The only specific wildlife constraint included was for lynx habitat. The magnitude of the effects related to these components is described in the sensitivity analysis in Appendix H, as well as in the effects analysis of the timber section of the EIS. Other considerations for wildlife plan components would be factored in during site-specific project design, and would be key elements of project development but are not expected to materially alter timber output estimates at the programmatic level because there is sufficient flexibility at the broad scale in regards to project and treatment unit placement, design, and prescriptions.

F. 1081-208: The effects of the recent mountain pine beetle outbreak are incorporated into the projected timber outputs because the mortality is reflected in the data used to represent the existing condition and build the yield tables.

G. 1081-208: Future wildfire and insect outbreaks are reflected in projected timber yields, because the expected levels of these disturbances and resulting vegetation conditions are incorporated into the PRISM model. In addition to these disturbances, the results of fire suppression are represented by calibrating the SIMPPLLE model to represent the results of current fire suppression strategies. Additional description of how the modeling of fire suppression correlates to the fire/fuels plan components, and how that relates to the assumptions in the timber modeling, was added to Appendix H and the timber section of the final EIS.

H. 1081-210: The timber modeling reflects potential harvest volumes on the HLC NF based on the most current available data and modeling tools, and incorporates the limitations placed on harvest by IRA designations. Additional clarification was provided in the timber section of the final EIS with regards to how the model incorporated management restrictions in these areas; and describing the relationship between projected timber volumes and the amount that has been produced recently on the HLC NF.

I. 1081-210: The EIS references factors that are outside of FS control and not incorporated into the timber model that may influence timber metrics by delaying timber projects; these include factors such as litigation processes, conditions on adjacent private lands, and USFWS direction.

J. 1081-211, 1081-214: The sustained yield limit is calculated per the method described in FSH 1909.12, Chapter 60, Section 64.31, as described in the timber section of the final EIS and Appendix H.

The NFMA requires that forest plans "limit the sale of timber from each National Forest to a quantity which can be removed from such forest annually in perpetuity on a sustained-yield basis" (16 USC 1611(a)). The NFMA does not specify which lands are to be considered when determining this limit. However, the Multiple Use Sustained Yield Act defines sustained yield as "the achievement and maintenance in perpetuity of a high level of annual or regular periodic output of the various renewable resources of the national forests without impairment of the productivity of the land" (16 USC 531(b)). Thus, the implementation directives of the 2012 planning rule (FSH 1909.12 chapter 60) indicate the sustained yield limit is calculated from all National Forest lands except those that are legally withdrawn, are not forested, or where timber cannot be removed "without impairment of the productivity of the land" following the criteria in FSH 1909.12 chapters 61 and 64.3.

The NFMA permits timber harvest from lands not suited for timber production for salvage sales or sales necessitated to protect other multiple-use values (16 USC 1604(k)). And 36 CFR 219.11(c) provides additional clarification that timber may be harvested from lands not suited for timber production if the harvest is used to improve wildlife habitat, reduce fire risk, or other multiple-use values (36 CFR 219.11(c)). Given the NFMA limitations of timber removal applies to all national

forest system lands (16 USC 1611(a)) not just the lands suited for timber production, the Forest calculations are consistent with the NFMA as delineated by FSH 1909.12, chapter 60.

The sustained yield limit is neither a target nor a projected harvest level; it is the upper limit of timber that could be offered annually in perpetuity based on growth and yield. Actual timber sale levels (harvesting levels) would depend on any number of factors, including constraints on timber harvest in the forest plan (e.g., suitability components and standards and guidelines), project-level analysis, and the fiscal capability of the planning unit. Anticipated sale volume based on these factors is reflected in the projected timber sale quantity and projected wood sale quantity described in FW-TIM-OBJ-01 and 02, which are considerably lower than the sustained yield limit. Even with an unlimited budget (removing fiscal capability as a constraint on timber harvest projections), the anticipated sale volume that could be achieved while still complying with constraints on timber harvest in the forest plan is lower than the sustained yield limit.

K. 1081-211: Appendix C of the final EIS discloses the projected timber volume outputs from lands suitable for timber production, and lands that are unsuitable. The timber section of the final EIS also discloses the expected levels of harvest acres on lands that are suitable versus unsuitable for timber production, although there is no requirement to do so. The total timber volume was modeled with a non-declining even flow criterion, although not required by the Directives. The requirement is to provide for economic sustainability, and to ensure this there is no need to apply a non-declining flow constraint separately for lands suitable for timber production.

L. 1081-212, 1081-213: The EIS contains clarifying discussion regarding departure from SYL and non-declining even flow criteria. FSH 1909.12, sec 64.33 states that "The Responsible Official may decide to increase the expected sale of timber above the sustained yield limit for the first decade of the plan, and for a second decade if necessary...Departure from the sustained yield limit must be designed for achieving multiple-use management objectives of the land management plan...". The 2012 planning rule and the directives indicate that a plan may provide for departures from the sustained yield limit as provided by the NFMA when departure would be consistent with the plan's desired conditions and objectives. Exceptions for departure from this limit on the quantity sold may be made only after a public review and comment period of at least 90 days (36 CFR.11(d)(6)(i)). However, the revised plan's PTSQ and PWSQ are not departed from the SYL; therefore, public notification is not required. There is no requirement in the NFMA for a non-declining even flow of timber. Timber volumes may change from decade to decade as long harvest levels are consistent with management for all multiple uses and do not exceed the capability of the land to sustainably produce timber.

M. 1081-213: The alternatives are analyzed as directed in FSH 1909.12. The metrics as defined in the 1982 planning rule would not apply to the revised plan action alternatives. The Allowable Sale Quantity and Long Term Sustained Yield metrics from the 1986 plans are disclosed when discussing alternative A. All alternatives are compared using the metrics required in the FSH 1909.12 (sustained yield limit; projected wood sale quantity, and projected timber sale quantity), in a consistent manner to ensure a proper comparison.

N. 1081-215: The timber model does include calibrations based on expected harvest limitations by Recreation Opportunity Spectrum classes. Description was added to the timber section of the final EIS and Appendix H to clarify these modeling assumptions and how they are consistent with the plan components for ROS.

O. 1185-11: It is possible that harvest could exceed the projected timber/wood sale quantity plan objectives, so long as it remains below the sustained yield limit. Footnotes were added to FW-TIM-OBJ-01 and 02 that reflect the volumes that could be achieved with unlimited budgets; these volumes reflect the amount possible while still consistent with all other plan components and resource constraints and are analyzed throughout the final EIS. Such levels may be achievable with increased budgets or partner contributions. However, no alternative (with or without a budget constraint) results in volume levels that are the same as the sustained yield limit. This is because sustained yield limit

displays a level of volume production that could be produced on all lands that *may be suitable* for timber production, assuming these lands were managed to produce timber without considering other multiple uses (FSH 1909.12, 64.31). It may be possible that fiscal and organizational capacity can be increased by leveraging partnerships; however, all other resources and plan components must be taken into account. In addition, projected timber/wood sale quantity are based on the lands determined to be suitable for timber production in each alternative, which is a subset of the lands that may be suitable for which sustained yield limit is calculated.

P. 1081-202: As described in Appendix H, the PRISM model was formulated to restrict harvest on unsuitable lands to reflect the differences in management emphasis on those lands.

Q. 1081-202, 1081-204: Timber harvest constraints for wildlife species other than lynx were not included in the timber modeling, as described in response #5. Potential lynx habitat and grizzly bear habitat zone maps were included in the timber modeling, and therefore summaries of the projected harvest activity can be reported for those broad areas. Analysis was added to the timber and wildlife sections of the FEIS with this information. In addition, the map of lands suitable for timber production can be compared to specific resource areas such as municipal watersheds and conservation watersheds; this information was added to the timber and watershed sections of the FEIS.

However, it is not appropriate to apply projected harvest acres or timber volumes that may be extracted to delineations such as conservation watersheds, municipal watersheds, or wildlife connectivity areas. The PRISM model itself is not spatially explicit aside from the broad land classifications described in Appendix H; due to limitations on model complexity, it is not possible to refine the model into additional or more fine-scale land classifications such as those listed. In addition, some of the conditions requested in the comments are not explicitly mapped (for example, wildlife connectivity areas). Projected harvest treatments are "placed" on the landscape in the SIMPPLLE model to project the potential effects of alternatives; however, this placement is random within the broad land classifications available in PRISM. It is not possible to know more site-specifically where harvest activities may actually occur, and it would be highly speculative to do so. For this reason, effects to other wildlife habitat conditions, conservation watersheds, municipal watersheds, or wildlife connectivity areas are not quantified. Rather, these effects are described programmatically in the FEIS. There are plan components in place that would guide potential harvest in these areas in a manner consistent with the other resource desired conditions.

CR258 Timber – Editorial

Supplemental Concern Statements:

A. 284-4: Timber should be mentioned as one of the multiple uses in the introduction to "Benefits to People: Multiple Uses and Ecosystem Services".

B. 1159-64: FW-TIM-DC-02 nullifies the direction in the FP towards recognizing the ecological necessity of wildland fire.

C. 1159-64: Several standards for timber are re-statements of NFMA and do not need to be in the Plan.

D. 1159-65: Several standards include exceptions and loopholes to the extent that they do not constrain management at all (FW-TIM-STD-06, 08, 09, 10).

E. 1159-66: FW-TIM-GDL-01 is re-stating a desired condition and is not actually a guideline.

F. 1159-67: FW-TIM-GDL-02 places timber above other resources and encourages abuse.

G. 1159-69: FW-TIM-GDL-04 acknowledges that clearcutting burned areas might be destructive, but the agency will do it anyway.

H. 1185-12: FW-STD-TIM-04 is unnecessary and creates unneeded burden of proof; a simplified re-word is suggested.

Supplemental Responses:

A. 284-4: Timber harvest was added as requested into the introduction of the Benefits to People section of the 2020 Forest Plan.

B. 1159-64: FW-TIM-DC-02 does not reflect a desire to exclude wildland fire from occurring in lands suitable for timber production; rather, that it is desirable for lands suitable for timber production to be resilient to disturbances.

C. 1159-64: The directives for the 2012 planning rule (FSH 1909.12 chapter 60, section 64) require that these limitations on timber harvest be included in the plan, even though they are also part of the NFMA.

D. 1159-65: The exceptions provided in these standards are consistent with NFMA, the 2012 Planning Rule and associated directives.

E. 1159-66: This guideline (FW-TIM-GDL-01) was re-worded so that it no longer compels action and is not a re-statement of a desired condition. The guideline ensures that when timber harvest activities occur, that they are designed to achieve vegetation desired conditions. This would constrain the forest from conducting timber harvest projects that are done solely for other purposes such as economics.

F. 1159-67: This guideline was removed from the Plan, because it compelled action rather than acting as a constraint. It was replaced with a desired condition (FW-TIM-DC-05), which reflects the desire for timber harvest to be used on lands suitable for timber production to help achieve desired conditions on the landscape. This DC is included to indicate that timber harvest will be a multiple use provided on the HLC NF.

G. 1159-69: This guideline (now FW-TIM-GDL-03) emphasizes the importance of retaining burned trees for wildlife when salvage operations are conducted.

H. 1185-12: This standard is based on language found in NFMA and the directives for the 2012 planning rule and is required content for the forest plan (FSH 1909.12, chapter 60, section 64).

Geology, minerals, and energy

CR17 Minerals and Geology

Supplemental Concern Statements:

A. 68-5: Why wasn't the mineral that would be tied up in these proposed RWAs on the maps?

B. 98-7: I noticed a lack of discussion of any prospecting and mining policy. As I am a claimant and seasonal recreational miner on the EHK unpatented placer claims in the Forest, I am particularly interested in this area. I have not yet read the entire report, but here are some of my concerns:

C. 232-5: No mining, no drilling, no mechanized equipment, no selling it off for sub-division, no roads, let it all be natural.

D. 280-2: Your plan ignores the MINING AND MINERALS POLICY ACT OF 1970: "The Congress declares that it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in (1) the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries…"

E. 285-70: FW-EMIN-OBJ 1: This seems very conservative. Please adjust the minimum and remove the upper limit. It seems difficult to achieve the DC's with this.

F. 285-71: FW-EMIN-GDL 1 and 2—the word practicable is unclear and raises a red flag here. Who determines what is "practicable"?

G. 317-2: Please add and consider Monarch/Neihart, Castletown, Utica, Hughesville, Belt, Lennep, Checkerboard, White Sulphur Springs, Martinsdale and Lewistown in the discussion of early mineral development on the bottom of page 9

H. 358-3: None of the WSAs should ever suffer the degradation of mining. The environmental damage caused by present mining practices is too great to repair, as evidenced by the catastrophe suffered in the North Moccasin Mountains just outside of Lewiston, Montana.

I. 553-40: EMIN pg 105-107 The EMIN DC's are well written. FW - EMIN-OBJ 1 This seems very conservative. Please adjust the minimum and remove the upper limit. It seems difficult to achieve the DC's with this. FW - EMIN-GDL 1 and 2—the word practicable is unclear and raises a red flag here. Who determines what is "practicable"?

J. 570-4: Inadequate Recognition of Mineral Resources and Protection of Areas Open for Mineral Resource Extraction Both the Draft Plan and the Draft EIS fail to adequately describe, recognize, or provide for areas of NFS land mineral deposit or extraction. The EIS recognizes that many locations were mined in the past, and Draft plans do provide for reclamation of old mining disturbed areas, and does recognize the rights of patented mineral properties within the National Forest Boundaries, but there are no adequate provisions for existing or future mineral extraction on NFS Lands. The proposed Draft Plan options do not specifically address known mineral deposit areas, nor make allowances for their extraction and use. Not one of the Draft Plan options indicates areas of mineral resource, current or existing development or proposed areas of use despite having been lightly referred to in the EIS. The Mining Law of 1872 authorizes and governs prospecting and mining for locatable minerals, such as gold, silver, copper, and uranium, on federal lands. Chap. 152, 17. Stat. 91 (May 10, 1872), codified at 30 U.S.C. §§ 21-54. The Mineral Leasing Act of 1920 authorizes and governs leasing on federal lands for development of deposits of fossil fuels, fertilizer minerals, and chemical minerals on federal lands. Pub. L. No. 66-146, 41 Stat. 435 (Feb. 25, 1920). The Federal Land Policy and Management Act of 1976 (FLPMA).2 The FLPMA, as amended, requires the National FS and/or Bureau of Land Management (BLM) to "develop, maintain, and, when appropriate, revise land use plans which provide by tracts or areas for the use of the public lands". 2 Pub. L. No. 94-579, 90 Stat. 2743 (Oct. 21, 1976), codified at 43 U.S.C. §§ 1701 et seq. (2012). 2 B-329065 Plans are to "use and observe the principles of multiple use and sustained yield[.]" FLPMA defines "multiple use" to encompass uses such as "recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values[.]" Multiple use management requires balancing various competing uses of land. All of the Draft Plan Options and the EIS fail to adequately address minerals in their associated multiple use plans.

K. 581-5: As the DEIS/Draft Plan mentions, the HLC National Forest has a significant history of placer and hard rock mining activities. Fifty-five streams reaches have been listed as water quality impaired by the Montana Department of Environmental Quality (2016) under the Clean Water Act, as a result of forest practices, such as roads, grazing, and mining. These activities threaten coldwater ecology, water quality and quantity, riparian habitat and terrestrial habitat. These impacts also harm downstream users such as those communities dependent upon drinking water, agricultural enterprises, and recreational pursuits. We recommend that the Final EIS provide more management objectives for preventing current and future impacts from mining activities. The current actions discussed in the DEIS/Draft Plan fail to adequately cover how the forest will protect its future.

L. 582-5: Prioritize Abandoned Mine Cleanup. As the DEIS/Draft Plan mentions, the HLC National Forest has a significant history of placer and hard rock mining activities. Fifty-five stream reaches have been listed as water quality impaired by the Montana Department of Environmental Quality (2016) under the Clean Water Act, as a result of forest practices, such as roads, grazing, and mining. These activities threaten coldwater ecology, water quality and quantity, riparian habitat and terrestrial habitat. These impacts also harm downstream users such as those communities dependent upon drinking water, agricultural enterprises, and recreational pursuits. We recommend that the Final EIS provide more management objectives for preventing current and

future impacts from mining activities. The current actions discussed in the DEIS/Draft Plan fail to adequately cover how the forest will protect its future.

M. 854-1: NO MINING IN the Big Snowies or anywhere else in Montana again! we are ruining are streams and lakes with this filthy deadly practice. Miners can get jobs in renewable energy fields and many other places!

N. 864-1: Please keep any exploration for and development of any kind of fuel and/or mining out of these areas.

O. 954-5: How can the USFS not include the claim holders of forest land in the forest plan? Those who have claims on the land in the forest plan should have been notified, included and the public should have been informed of who has claims on the land in the forest plan.

P. 954-6: Without inclusion of those who hold claims in the forest plan area in the forest plans, any decision of use of the land is illegal because the stakeholders have not been included. The Montana Bureau of Mining and Geology can provide this list of any land area in the Helena Forest District and this was not provided those who are voting in the forest use.

Q. 970-14: To the extent allowed by law, timing and road construction limitations and best reclamation are required for hardrock mining and exploration throughout the SHSRA.

R. 995-1: Minerals Policy: The Assessment and Desired Conditions phases of the Plan Revision process gave hope that mineral development on HLCNF managed public lands would be treated reasonably, responsibly, and fair. Alas, such is not the case. In my view, HLCNF continues its disdain for mineral development and is dismissive of its importance to local communities, Montana, and this Nation. For example: 1. The 1986 Plan states "Consistent with the mining and Mineral Policy Act of 1970, continue to (foster and) encourage the responsible development of mineral resources ---". In the Draft Desired Conditions, Sec. 7, "The FS has a minerals management mission to encourage, facilitate, and administer the orderly exploration, development and production of mineral ---." The June 2018 Plan simply states that "The FS has a minerals management mission to administer the order exploration ---." My impression is that maybe HLCNF (or Region 1?, or USFS?) would rather not be involved at all. 2. The 2015 Assessment states "The General Mining Law grants every US citizen the right to prospect and explore lands reserved from the public domain and open to mineral entry. The right of access to explore for and develop these minerals on federal lands open to the location of mining claims is guaranteed and not a discretionary action.", meaning forest managers cannot deny access. In the proposed Revised Plan, this has been warped to read "US citizens are guaranteed the right to prospect and explore lands reserved from the public domain (Forest Reserves?) and open to mineral entry. The disposal of these commodities is non-discretionary", which is as inane as it is irrelevant. In my view, this is an attempt to obfuscate our statuary right of access and may be signaling whether HLCNF will grant access in all cases in the future. 3. HLCNF may be trying to subvert the language of the 1872 law to suit their purpose of only allowing mineral development where they find it appropriate. "The right of reasonable and appropriate access for exploration and development of locatable mineral is guaranteed." The law does not say anything about "appropriate". "Appropriate" can be used as a tool to obfuscate reasonable access that project managers find "inappropriate". EA Andy Johnson Comments on June 2018 Plan Page 2. Minerals Policy (Cont) 4. I found it interesting that the June Plan states that the owners of privately-owned minerals have the right of reasonable access, but not the owners of unpatented claims. Unpatented claim owners need reasonable access too. All of this can be solved via the following two statements, and I strongly recommend they be inserted as part of HLCNF's policy towards mineral development because they give assurance that proposed projects will be treated reasonably, fairly, and within the law. a. The FS has a minerals management mission to encourage, facilitate, and administer the orderly exploration, development, and production of

mineral and energy resources on NFS lands. b. The right of reasonable access for purposes of prospecting, locating, and mining is provided by statute. Such access must be in accordance with the rules and regulations of the FS. However, the rules and regulations may not be applied so as to prevent lawful mineral activities or to cause undue hardship on bona fide prospectors and miners. 5. A minor point but the minerals introduction states "Government owned minerals". No! Mining law clearly states the mineral estate is owned by the Citizens of the United States. 6. Analysis area and indicators: The key indicators for minerals are: Locatable minerals - "acres unavailable for mineral entry (not withdrawn)". This is nonsensical. Either they are available or they are withdrawn. 7. In Regulatory Framework Section, pg 34, discussing 1897 Organic Act, what was left out was that mineral and agricultural lands were to be omitted because they are of higher value. It highlights greater significance of the mineral estate over the surface estate. Also, the 1872 Mining Law and the 1897 Organic Act are not listed. Purposeful ? 8. In the Assessments document, there is a table listing the abandoned/inactive mine sites. There is also a table listing "Salable mineral resources by geographic area - statistics and forecast". There are no tables or maps listing/showing mining districts, nor areas with mineral potential. These should be listed/depicted because they are important to alleviate future land use conflicts. 9. And finally, recommending 51,000 acres of wilderness addition in a historic mining district with numerous patented and unpatented claims? That says it all, in my view. EA Andy Johnson Comments on June 2018 Plan Page 3. Riparian Management Zones: HLCNF (and maybe Region 1, maybe FS) is obsessed with "Riparian Areas". In the 1986 Plan, perennial streams are listed. Then in the November 2016 Draft Plan, intermittent streams are included. Now in the June 2018 Plan, ephemeral streams are thrown in. "Annual scour or deposition" are defining criteria, which is reminiscent of Obama's "Water of the US", rescinded by President Trump. There are no definitive statements in any of these documents which state why "riparian areas" so important. In my view, "riparian area", like the Snail Darter and the Spotted Owl, is being used as a surrogate issue to stop any development HLCNF doesn't like, such as placer mining in streams. This is disingenuous, at best. In Guidelines, Item 07, "New sand and gravel borrow pit development or gravel mining should not occur within riparian management zones to minimize ground disturbance and sediment inputs". Nobody "mines" gravel unless the gravels contain gold. In my view, this is a shallow attempt to prevent placer gold mining in drainages, even though this activity remains a valid public land use under the 1872 mining law. A more reasonable and realistic guideline is given in the Gallatin National Forest Desired Conditions, Item 02, "When authorizing or reauthorizing mineral development and operations, ---, If the riparian management zone cannot be avoided, then ensure operators take all practicable measures to maintain, protect, and rehabilitate water quality, and habitat for fish and wildlife and other riparian associated resources ---". This should be used for Item 07 in the HLCNF Plan. The degree of the measures taken could be dictated by the classification of the categories given in Table 1 of this section. The State of Montana Streamside Management Law is referenced. I believe someone means The Natural Streambed and Land Preservation Act of 1975, and should be reported as it is at least once.

S. 1024-24: Page 20 Guidelines. FW-GDL-RMZ Add a guideline addressing the need for an operating plan for mineral operations in the RMZ.

T. 1024-36: Page 106. Energy and Minerals FW-EMIN-GDL page 106. Guidelines 1 and 2 are big improvements over what was included in the proposed plan. However, I have suggested somewhat more specific guidance under the aquatics section such as limiting timing of instream activities for suction dredging and eliminating suction dredging on streams identified on the existing list from the Montana FWP.

U. 1041-84: 6. Geology, Energy and Minerals (EMIN); p. 105 a. Desired Conditions (FW-EMIN-DC-07); p. 106 i. Close abandoned mines to public use and consult all current National and State

management plans related to the management of bats and bat habitat to reduce the risk of White Nose Syndrome. ii. Overall, this section is lacking in clear management direction with respect to most wildlife.

V. 1081-98: In addition, in September a federal district court overturned the 2016 cancellation of an oil and gas lease in the Badger Two-Medicine (United States District Court for the District of Columbia, 2018). The analysis for the FEIS should reflect this new information and assumptions that the Badger Two-Medicine will continue to serve as undeveloped landscape may need to be reconsidered.

W. 1155-3: please eliminate any access by extraction businesses. They will only pollute the waters and ground soil and once they leave, we taxpayers will have to pay for their damage left behind

X. 1170-4: There is a need to update the discussion of Badger Two Medicine oil and gas leasing on page 171+ with the recent restoration of past leases.

Supplemental Responses:

A. 68-5: The existence of certain minerals is not a criteria for analyzing areas for Recommended Wilderness purposes. For a detailed study of the mineral and energy resources specific to the Helena portion of the HLC Forest, please see the United States Geologic Survey Open-File Report 96-683-A, Mineral and Energy Resource Assessment of the Helena NF, West-Central Montana, (Tysdal, Ludington, & McCafferty, 1996).

B. 98-7: Please see the Regulatory Framework Section (Chapter 3.30.2) of the FEIS for a discussion of mining policy, regulations and laws.

C. 232-5: Thank you for your comment.

D. 280-2: Please see the Regulatory Framework Section (Chapter 3.30.2) of the FEIS for a discussion of mining policy, regulations and laws.

E. 285-70: Various GA plan component and other editorial suggestions were provided. Changes were made where applicable, please see the GA section of the 2020 Forest Plan. Where not changed per the comment, the Forest determined that the retained plan components were sufficient to meet our obligations under the 2012 planning rule.

F. 285-71: Practicable is defined as "able to be done or put into practice successfully." Various GA plan component and other editorial suggestions were provided. Changes were made where applicable, please see the GA section of the 2020 Forest Plan. Where not changed per the comment, the Forest determined that the retained plan components were sufficient to meet our obligations under the 2012 planning rule.

G. 317-2: Various GA plan component and other editorial suggestions were provided. Changes were made where applicable, please see the GA section of the 2020 Forest Plan. Where not changed per the comment, the Forest determined that the retained plan components were sufficient to meet our obligations under the 2012 planning rule.

H. 358-3: WSAs are not compatible with leasable or salable minerals as the disposal of these minerals is discretionary. Locatable mineral prospecting, exploration and development is allowable as WSA's are open to mineral entry until these areas are congressionally declared Wilderness Areas.

I. 553-40: Practicable is defined as "able to be done or put into practice successfully." Various GA plan component and other editorial suggestions were provided. Changes were made where applicable, please see the GA section of the 2020 Forest Plan. Where not changed per the comment, the Forest determined that the retained plan components were sufficient to meet our obligations under the 2012 planning rule.

J. 570-4: National Forest System lands on the HLC National Forest are open for mineral prospecting, exploration and development unless they are withdrawn from mineral entry.

K. 581-5: 36 CFR 228 Subpart A are the US FS mining regulations for locatable minerals whose purpose is to set forth rules and procedures through which use of the surface of National Forest System (NFS) lands in connection with operations authorized by the United States mining laws (30 USC 21-54), which confer a statutory right to enter upon the public lands to search for minerals, shall be conducted so as to minimize adverse environmental impacts on NFS surface resources. Included in these regulations are requirements and procedures for reclamation and bonding.

L. 582-5: 36 CFR 228 Subpart A are the US FS mining regulations for locatable minerals whose purpose is to set forth rules and procedures through which use of the surface of National Forest System (NFS) lands in connection with operations authorized by the United States mining laws (30 USC 21-54), which confer a statutory right to enter upon the public lands to search for minerals, shall be conducted so as to minimize adverse environmental impacts on NFS surface resources. Included in these regulations are requirements and procedures for reclamation and bonding.

M. 854-1: Thank you for your comment.

N. 864-1: Assuming that the commenter is referring to RWAs. RWAs are not compatible with leasable or salable minerals as the disposal of these minerals is discretionary. Locatable mineral prospecting, exploration and development is allowable as RWAs are open to mineral entry until these areas are congressionally declared Wilderness Areas.

O. 954-5: Please see the Public Involvement Section (Chapter 2.3) of the FEIS that describes the multitude of ways and opportunities to reach out and solicit public participation.

P. 954-6: Please see the Public Involvement Section (Chapter 2.3) of the FEIS that describes the multitude of ways and opportunities to reach out and solicit public participation.

Q. 970-14: 36 CFR 228 Subpart A are the US FS mining regulations for locatable minerals whose purpose is to set forth rules and procedures through which use of the surface of National Forest System (NFS) lands in connection with operations authorized by the United States mining laws (30 USC 21-54), which confer a statutory right to enter upon the public lands to search for minerals, shall be conducted so as to minimize adverse environmental impacts on NFS surface resources. Included in these regulations are requirements and procedures for reclamation and bonding.

R. 995-1: Various plan component and other editorial suggestions were provided. Changes were made where applicable. Where not changed per the comment, the Forest determined that the retained plan components were sufficient to meet our obligations under the 2012 planning rule. Additionally, several of your suggested changes were incorporated into the FEIS.

S. 1024-24: Various GA plan component and other editorial suggestions were provided. Changes were made where applicable, please see the GA section of the 2020 Forest Plan. Where not changed per the comment, the Forest determined that the retained plan components were sufficient to meet our obligations under the 2012 planning rule.

T. 1024-36: Various GA plan component and other editorial suggestions were provided. Changes were made where applicable, please see the GA section of the 2020 Forest Plan. Where not changed per the comment, the Forest determined that the retained plan components were sufficient to meet our obligations under the 2012 planning rule.

U. 1041-84: Various GA plan component and other editorial suggestions were provided. Changes were made where applicable, please see the GA section of the 2020 Forest Plan. Where not

changed per the comment, the Forest determined that the retained plan components were sufficient to meet our obligations under the 2012 planning rule.

V. 1081-98: This information has been updated in the FEIS.

W. 1155-3: 16 U.S. Code 478 provides for egress or ingress for prospecting and states "Nor shall anything in such sections prohibit any persons from entering upon such national forests for all proper and lawful purposes, including that of prospecting, locating, and developing the mineral resources thereof."

X. 1170-4: This information has been updated in the FEIS.

Carbon and climate

CR48 Carbon Climate – Vegetation and General

Supplemental Concern Statements:

A. The forest plan and analysis do not adequately take into account the impacts of climate change. The analysis did not include many relevant literature citations important to the topics of climate change, carbon sequestration, and greenhouse gas emissions related to land management activities.

B. 13-5, 13-6, 19-4, 19-5, 20-1, 25-2, 33-1, 44-1, 51-1, 59-1, 92-1, 126-2, 126-3, 126-4, 126-5, 126-6, 306-1, 528-1, 625-14, and 1159-362. The Plan and analysis do not adequately disclose the risk of large-scale forest die-back or ecosystem shifts that may occur due to drought, climate change, and/or megadisturbances.

    a. The analysis should further address the risk of limited regeneration potential and reforestation failure; and emphasize that monitoring of regeneration will be crucial. Address the potential loss of resilience.

    b. The analysis should further address the risk of growth loss and mortality linked to tree size.

    c. The DEIS has no scientific basis that treatments will result in sustainable vegetation with climate change. What management strategies could create conditions that are resilient/resistant to disturbances that may be amplified by climate change - irrigation?

    d. Please cite the following from Halofsky et al Chapter 5: ""Increasing air temperature, through its influence on soil moisture, is expected to cause gradual changes in the abundance and distribution of tree, shrub, and grass species throughout the Northern Rockies, with drought tolerant species becoming more competitive."

C. 20-1, 33-1, 117-3, 117-4, 117-5, 126-2, 126-3, 250-3, 250-4, 250-5, 250-6, 250-7, 250-8, 251-1, 271-1, 288-1, 289-1, 298-1, 302-1, 487-1, 528-1, 536-1, 584-1, 599-1, 717-1, 785-1, 1159-61, 1159-313, 1159-314, and 1159-350: The analysis and plan do not adequately provide for ecological integrity in the context of climate change because:

    a. The analyses do not adequately consider the risk of departure from the NRV due to climate change and megadisturbances using BASI; potential effects such as novel ecosystems should be disclosed.

    b. The desired vegetation conditions are not appropriate or may not be attainable; NRV is not a valid metric to use due to changes/uncertainty in future climate conditions.

    c. The Forest needs to conduct alternate scenario planning and consider desired conditions ("plan B") that are not within NRV. Robust scenario planning should be discussed in the Timber and Carbon sections.

    d. The analysis does not sufficiently disclose climate scenarios and effects. Please add Figure 2 from Millar and Stephenson (2015); and NRAP box 3.4 and 3.5.

D. 25-1, 25-2, 27-1, 95-1, 250-6, 625-71, 1159-351, 1159-355, and 1159-363: The analysis does not adequately analyze carbon sequestration.
    a. The analysis doesn't consider the potential for soils to shift to a carbon source and downplays the importance of forests in sequestering carbon in that context.
    b. The analysis doesn't consider that the capacity of forests to sequester carbon is decreasing.
    c. The FS has not modeled the carbon flux over time for all proposed stand management scenarios for each of the forest types on the HLCNF.

E. 13-4, 13-5, 60-1, 61-1, 62-1, 250-9, 250-10, and 785-1: The analysis and plan do not adequately predict and respond to potential species distribution changes due to climate change.
    a. The analysis should include probable species distribution projections for tree species. Please add Figure 5 from Rocky Mountain Forests at Risk.
    b. Allow for the introduction of species that currently do not occur on the HLC NF but are likely to be resilient to drought and climate change, such as bur oak.
    c. Assisted migration actions should be included in the plan.
    d. A triage approach to conserving species should be considered and discussed. The analysis needs to identify what is "savable".

F. 89-1, 250-11, 258-1, and 313-1: The analysis needs to discuss the positive feedbacks of climate change.

G. 1081-209: The allowable harvest should be adjusted downward to account for climate change.

H. 1159-348, 1159-353, 1159-354, and 1159-360: The EIS should disclose the amount of carbon dioxide and other greenhouse gas emissions such as methane and nitrous oxide created by Forest Plan implementation (such as from logging, livestock grazing, recreational motor vehicles). A cumulative emissions analysis should be done taking into account activities on non-NFS lands and other national forests. Global warming and its consequences may be irreversible, which implicates legal consequences under the NEPA, the NFMA, and the ESA which must be analyzed and disclosed.

I. 1159-349: The DEIS fails to provide any detailed description of what "warm and dry" means in terms of the climate assumptions used in modeling.

J. 1159-61 and 1159-352: The FS misinterprets or ignores BASI on the topics of carbon sequestration and climate change. The FS must undertake the peer review process the agency itself designed (Guldin et al., 2003) for forest plan revision.

K. 27-1, 625-14, 1159-349, 1159-354, 1159-356, 1159-357, 1159-358, 1159-359, 1159-361, 1159-364, 1159-365, and 1159-367: Forest policies must shift away from logging because publicly owned forests should be managed to maintain and increase carbon storage. The impacts to carbon from logging is not adequately analyzed.
    a. All old-growth, other forests, and grasslands must be protected and expanded for their carbon storage value. Forests that have been logged should allowed to revert to old-growth condition. National forest should not be considered "suitable" for activities that contribute to climate change.
    b. Future regrowth cannot make up for the effects of logging, because carbon storage will lag behind for decades or centuries. In addition, forest recovery (regeneration) is no longer a given.

c. Thinning to reduce potential carbon losses due to wildfire is in conflict with carbon sequestration, and would result in a net emission of CO2 because the amount of carbon removed to change fire behavior is often larger than that saved by changing fire behavior, and more area has to be harvested than will ultimately burn over the period of effectiveness of the treatment. The analysis needs to acknowledge that even intense fires emit only a fraction of the carbon emitted by fossil fuels.

d. The analysis should consider science that describes the adverse impacts that land management practices have on carbon sequestration. The analysis should acknowledge that removing trees and other biomass is a net source of atmospheric CO2; and disclose that when wood losses and fossil fuels for processing and transportation are accounted for, carbon emissions can exceed carbon stored in wood products. Clarification is needed as to how harvesting and regenerating forests can result in net carbon sequestration. Carbon emissions from soil due to logging are significant, yet under-reported.

e. The potential to create warmer conditions through forest removal must be considered.

L. 1159-353 and 1159-366: Cattle grazing produces greenhouse gas emissions and reduces soil carbon; this should be analyzed/disclosed; and this use should be minimized or discontinued.

M. 13-3, 13-6, and 126-1: The FS provided the public with an unreasonably optimistic outlook on forest persistence; it does not adequately address the economic risk related to our ability to grow and harvest economically important conifers.

N. 625-14, 625-15, and 625-16: The FS should maintain vegetation types that will become less tolerant of warm conditions.

a. Mixed mesic conifer and spruce/fir are important given climate change; why is the DC to reduce this?

b. Given climate change, Douglas-fir will be reduced; it is very important for habitat so why do the DCs call for reducing this component?

O. 5-1: Commenter asks if previous literature submitted will be considered.

P. 52-2: There is concern for funding necessary monitoring, especially related to climate change; please leverage partnerships and citizens in this effort.

Q. 76-1: Drought monitoring tools such as LERI should be used to provide early warning of droughts.

R. 117-1: The FS needs to increase its own efficiency of fossil fuel use, use of solar and wind, and carbon sequestration practices.

S. 121-1: Please define NRV - is that an acronym for natural range of variation?

T. 557-9, 557-13, 557-14, and 557-20: Climate change and carbon sequestration considerations are important for maintaining water quality and quantity; please include the Upper Missouri River Basin Climate Impacts Assessment in the process to address issues of drought, early runoff, and warming temperatures.

U. 10-3, 922-1, 922-2, and1062-16: Commenters asked the FS to build climate change adaptations into the Forest Plan, especially for vegetation and wildlife habitat.

Supplemental Responses:

A. The 2020 Forest Plan has taken into account the potential impacts due to climate change, to the degree that programmatic plan components and management approaches can or should incorporate concepts related to the issue. Climate change is recognized as a stressor and integrated into the discussion of affected environment and environmental consequences in the FEIS. Vegetation and wildlife plan components in the forest plan address future uncertainties by focusing on the development of landscapes and forests that are resilient and resistant to disturbances and drought. Vegetation modeling incorporated future climate scenarios that

reflected best estimates of trends over the next five decades. Appendix C of the plan suggests potential management approaches to address climate change, carbon sequestration, and forest resilience. Appendix J of the FEIS provides a summary of the climate change adaptation strategies incorporated in the plan.

B. 13-5, 13-6, 19-4, 19-5, 20-1, 25-2, 33-1, 44-1, 51-1, 59-1, 92-1, 126-2, 126-3, 126-4, 126-5, 126-6, 306-1, 528-1, 625-14, and 1159-362: These risks are incorporated into the analysis.
    a. The terrestrial vegetation section of the FEIS contains additional information related to the risks of forest die-back, regeneration failures, and loss of resilience in the context of climate change, drought, and megadisturbances, using many of the references suggested. Reforestation success is a key component of the monitoring plan (appendix B), and the terrestrial vegetation section discloses the results of recent and historic reforestation monitoring. In addition, several plan components help ensure reforestation can be assured prior to management activities (FW-VEGT-GDL-02, FW-VEGT-GDL-03, and FW-TIM-STD-02). The potential for sites to have limited regeneration potential was taken into account when identifying the lands suitable for timber production, as described in Appendix H. Reforestation potential was incorporated into the vegetation modeling.
    b. The 2020 Forest Plan calls for managing an array of size classes on the landscape as indicated by the desired conditions. While medium-sized trees may be impacted less by drought conditions, it would be inappropriate to adjust the desired abundance of this size class in relation to the other classes, due to the ecological importance of all classes. Further, the studies were not conducted on sites similar to the HLC NF, and therefore it would be difficult to apply in terms of quantitative adjustments. Please see also the response for issue #3, related to the concept of achievable desired conditions.
    c. The 2020 Forest Plan includes plan components related to promoting resilience (including but not limited to FW-VEGT-DC-01, FW-VEGF-GDL-01, FW-TIM-DC-02, FW-TIM-GDL-01, and FW-TIM-GDL-02). The FS does not propose to change moisture regimes through actions such as irrigation. Rather, management strategies that could create conditions more resilient/resistant to disturbances include thinning to lower tree densities so that there is more water available to the remaining trees, and creating stand conditions less susceptible to insects, disease, and stand replacing fire behavior. Management activities can also favor the retention species that are more tolerant of drought and wildfire events which can provide seed post-disturbance. These actions and their ability to increase resilience and ecological sustainability in the face of disturbances amplified by climate change are described in the terrestrial vegetation section of the FEIS.
    d. The citation quoted has been incorporated into the terrestrial vegetation section of the FEIS.

C. 20-1, 33-1, 117-3, 117-4, 117-5, 126-2, 126-3, 250-3, 250-4, 250-5, 250-6, 250-7, 250-8, 251-1, 271-1, 288-1, 289-1, 298-1, 302-1, 487-1, 528-1, 536-1, 584-1, 599-1, 717-1, 785-1, 1159-61, 1159-313, 1159-314, and1159-350: The analysis and plan follow the 2012 planning rule and directives relative to ecological integrity.
    a. The Deciding Official recognizes that there are uncertainties associated with future conditions as they compare to the NRV, and the potential for changes to occur on the landscape due to climate change and megadisturbances. Discussion is provided in the terrestrial vegetation section of the FEIS regarding how NRV is calculated and the potential to depart from those conditions, using some of the literature submitted. The wildlife analysis is based on the information provided by the terrestrial vegetation analysis. The potential for megadisturbances and novel ecosystems is disclosed, although not possible to precisely predict for the HLC NF. Appendix I describes the NRV analysis

in detail. Appendix H describes how climate was incorporated into the NRV modeling. The future modeling does project some departures from NRV within the planning period which are disclosed in the FEIS and Appendix H.

b. The potential effects of climate change, and associated levels of uncertainty, were integral in the development of desired conditions and the effects analysis. Desired conditions represent conditions that to the best of our knowledge align both with the NRV as well as BASI that informs potential future sustainable conditions. The desired conditions for vegetation composition, structure, and density are built upon the concept of maintaining and improving the resilience and resistance of vegetation, in part to address climate change. The vulnerabilities of tree species to climate change were considered in the development of desired conditions. Appendix H includes additional explanation concerning NRV as a basis for desired future conditions; and documents the adjustments made to desired conditions using BASI to account for potential future changes in climate.

c. The 2020 Forest Plan does not include a "plan B" of desired conditions because there is insufficient information available to do so. Most relevant studies predict species shifts on timescales longer than the planning cycle. Projected shifts include varying levels of uncertainties and are difficult to quantify at the scale of a National Forest. Numerous variables such as topography, microsite conditions, and available seed sources cannot be reflected by the models used to predict species presence or distribution shifts. However, monitoring is prescribed (Appendix B) which would be integral to inform the decision maker on the status and trend of vegetation on the HLC NF. As climate-related changes occur and more localized information becomes available, adjusted desired conditions could be incorporated via forest plan amendments, if necessary. See also the response to #5, regarding future species distribution projections.

d. The projected climate figures (Halofsky et al., 2018a)(3.4 and 3.5) are included in the carbon and climate section of the FEIS. This section was edited to more clearly disclose the climate scenarios used in the analysis. The specific figure from Millar and Stephenson (2015) is not added but is paraphrased in the terrestrial vegetation section of the FEIS to disclose that more frequent and more extreme disturbance events are projected for some ecosystems. These events may impact the vulnerability of vegetation types or tree species. The FS recognizes that changes in frequency and magnitude of disturbances can create novel systems that increase our uncertainty in any projections of future vegetation types or species distributions.

D. 25-1, 25-2, 27-1, 95-1, 250-6, 625-71, 1159-351, 1159-355, and 1159-363: Carbon sequestration is analyzed in detail in a manner consistent with BASI.

a. The deciding official recognizes the important role that the HLC NF plays in the carbon cycle. As reported in the carbon and climate section of the FEIS, maintaining healthy forested and non-forested vegetation is important to ensure the HLC NF continues to sequester carbon. This section places the role of the HLC NF in the context of the global issue of carbon sequestration. This section is derived from a Carbon Assessment White paper which provides a detailed quantitative analysis of baseline carbon stocks and flux on the forest (including soils), carbon storage in harvested wood products, and the relative effects of disturbance and environmental factors on carbon storage over time. It also considers potential carbon and climate effects in the future. This white paper is based on peer-reviewed and published datasets and tools and is provided in the project record.

b. The Carbon sequestration section of the FEIS and appendix J discloses the past, present, and potential capacity of the HLC NF forests to sequester carbon.

c. An analysis that estimates the carbon flux for specific management scenarios for each forest type on the HLC NF would be too fine scale with the available data and modeling

tools. The carbon and climate section of the FEIS uses BASI from the baseline carbon assessment and a disturbance assessment (Birdsey et al., 2019), summarized in appendix J, to estimate the maximum potential effects of management alternatives on carbon storage. This section also provides a discussion of these effects and puts them into context of forest dynamics across the entire national forest as well as national and global emissions. In addition, an analysis of the alternatives would likely fail to detect statistically significant differences among the alternatives as uncertainty is very high at such small scales and would not provide meaningful information to the decision given current laws and regulations. The FEIS adequately and accurately describes these potential effects and is warranted in not including a quantitative analysis of the effects of stand management scenarios.

E. 13-4, 13-5, 60-1, 61-1, 62-1, 250-9, 250-10, and 785-1: Potential species distribution changes and appropriate management responses are disclosed as appropriate.
    a. The terrestrial vegetation section of the FEIS discusses the trends and factors that may contribute to changes in tree species distribution. This discussion is primarily based upon the work of the Northern Rockies Adaptation Partnership (Halofsky et al., 2018a, 2018b), which provides species distribution information that local to the HLC NF. The suggested figure from Rocky Mountain Forests at Risk was not included. Although the suggested figure conveys a general trend of range contraction, it was not needed to convey that species are projected to expand and contract to change distributions based on many biotic and abiotic factors influenced by changing temperatures and precipitation. Modelling changes to climatic factors to project future distribution without modelling other contributing factors is less reliable because it overlooks the interactions of these factors that would affect changes to distribution. The projections for distribution changes are highly uncertain due to uncertainties of interactions among species and disturbance.
    b. The FS used the BASI for the HLC NF to inform the desired species compositions over the planning horizon; bur oak or other novel species were not included. See also the response to 5c, below, regarding assisted migration.
    c. The plan does not preclude the use of assisted migration, but detailed projections of this relevant at the scale of forest plan implementation are not yet available in terms of introducing novel species as part of the suite of desired conditions. Refer to plan component FW-VEGT-GDL-03. The FS would follow regional seedling transfer guidelines which are continually assessed for climate adaptability. Assisted migration may be a strategy adopted by the HLC NF if and when there is sufficient information to guide this activity.
    d. Triage is a difficult approach due to the uncertainty of specific locations that are more or less at risk or of achieving the NRV. The terrestrial vegetation section of the FEIS discusses the general conditions that would contribute to vulnerabilities that would reduce unit's ability to achieve the NRV for certain vegetation types - but this information is not specific to any one location. Triage requires we know where those conditions express themselves on the landscape. The plan and analysis do identify the species that best contribute to future resilience, such as drought tolerant species.

F. 89-1, 250-11, 258-1, and 313-1: Climate change and the positive feedback loops that further influence climate change are a global phenomenon. Given that greenhouse gases mix readily in the atmosphere it is difficult and very uncertain to ascertain the indirect and cumulative effects of emissions from multiple projects that derive the plan alternatives. Relative to national and global emissions, forest management activities contribute negligibly to overall GHG emissions and climate effects. Forest management activities may affect only 0.11 Tg of carbon stored in the forest ecosystem each year, which is extremely small compared to the approximately 91 Tg of

carbon stored in the forest ecosystem. The action alternatives would not significantly, adversely, or permanently affect forest carbon storage, but would rather achieve a more resilient forest condition that would improve the ability of the HLC NF to maintain carbon stocks and enhance carbon uptake. This is described in the Carbon Sequestration section of the final EIS as well as the supporting Carbon Assessment White Paper (Dugan et al. 2019).

G. 1081-209: The metrics used for timber projections include projected wood sale quantity, projected timber sale quantity, and sustained yield limit. Projected and timber sale quantities are not minimum or maximum levels of allowable timber production; they are estimates of likely harvest levels and are well below the sustained yield limit because they include all the applicable resource constraints in the 2020 Forest Plan. Sustained yield limit does represent a maximum amount of volume production that would be allowed, based on modeling that included all resource constraints. This model also indirectly incorporated the possible effects of climate change by including likely disturbance levels (fire and insects). These disturbance levels are based upon modeling which approximated climate change through the use of climate assumptions ("warm/dry") and minimum disturbance levels expected based on a science review. This modeling is described in detail in Appendix H as well as the timber and terrestrial vegetation sections of the FEIS. There is no further need to adjust sustained yield limit or other harvest metrics based on climate change.

H. 1159-348, 1159-353, 1159-354, and 1159-360: The carbon and climate section of the FEIS places the contribution of the HLC NF and its role of sequestering carbon into the context of global carbon and climate trends. This section is supported by a quantitative analysis of forest carbon stocks and factors influencing storage (appendix J). The 2020 Forest Plan does not make any commitment or authorize any actions on the ground. There is no requirement to conduct a detailed emissions analysis of the activities that may occur during Forest Plan implementation; such an analysis would be speculative. It would also be highly speculative and uncertain to conduct a cumulative analysis to take into account the potential activities on non-NFS lands and other national forests.

I. 1159-349: Appendix H of the FEIS is updated to include clarification on this modeling assumption. The model used to estimate the NRV and model vegetation into the future is SIMPPLLE; this model does not include the capacity for detailed climate modeling. Rather, in this model each decade is categorized into general climate trends (warm/dry, normal, cool/moist). These trends are not defined by specific temperature or moisture regimes; rather, they tie to other assumptions in the model that reflect the likely outcomes of the indicated climate trend. For example, in a decade categorized as "warm and dry", there are higher probabilities of insects, disease, and large wildfires; and reduced probabilities or less dense establishment of regeneration following disturbances.

J. 1159-61 and 1159-352: Please refer to the detailed response to the literature provided. Relevant and opposing literature was incorporated into the analysis as appropriate (refer to the carbon and climate section of the FEIS and the carbon baseline white paper in the project record). A peer review process is not required.

K. 27-1, 625-14, 1159-349, 1159-354, 1159-356, 1159-357, 1159-358, 1159-359, 1159-361, 1159-364, 1159-365, and 1159-367. It is not FS policy to maximize carbon or elevate the consideration of carbon above the many other services that NFS lands provide. In some instances, it is desirable to reduce carbon stocks to ensure the continued provisioning of other ecosystem services and for protecting lives and property. It is correct that hazardous fuel reduction treatments lower carbon stocks indefinitely as long as the treatments are maintained. However, any beneficial effects on carbon by avoiding a high-severity disturbance event, for example, is ancillary or a co-benefit to the primary reason fuel treatments are conducted. In the absence of fuels reduction treatments, the fire-adapted forest where the proposed treatments would take place may be more at risk to large and higher-severity wildfires (Addington et al., 2015; Agee & Skinner, 2005; Stephens et al.,

2013), resulting in decreased ecosystem services and potentially increased carbon emissions. High-severity fires, especially when they occur repeatedly, can affect human health and safety, infrastructure, and ecosystem services, and can cause delayed regeneration or even a transition of forests to non-forest ecosystems in some areas (Haffey, Sisk, Allen, Thode, & Margolis, 2018). By reducing the threat of wildfire, the management activities would create conditions more advantageous for supporting forest health in a changing climate and reducing GHG emissions over the long term. In fact, reducing stand density, one of the goals of this proposed action, is consistent with adaptation practices to increase resilience of forests to climate-related environmental changes (Joyce et al., 2014).

a. Logging is a suitable use on NFs, as directed by law and the 2012 Planning rule and associated directives. As described in the carbon and climate section of the FEIS, there is a relationship between tree removals from a site (whether through logging or natural disturbances such as fire) and greenhouse gas emissions or sequestration and climate change. The Paris Protocol reference to forest reduction is concerned with deforestation at the global scale. Vegetation treatments (or natural disturbances, for that matter) on NFS lands are not deforestation but rather are a altering stands to a more open state; or the conversion of forests back to the early successional stage of development and the initiation of new forests through regeneration. The forests on the HLC NF have been cycling through this natural succession process for millennia. Old growth in particular is recognized for its role in sequestering carbon, as described in the old growth section of the FEIS. The plan is explicit in promoting this specific forest condition (FW-VEGF-DC-05, FW-VEGF-GDL-04).
b. See the response to (B), regarding potential risks to reforestation success.
c. The amount of carbon expected to be influenced by thinning in the alternatives is very small with respect to the amount of carbon that the HLC NF contains. This amount is likely around one to two percent over the whole plan period, and expected emissions would be negligible with respect to both national and global GHG emissions. The biomass removed from the forest in fuels reduction treatments is not immediately emitted to the atmosphere. Rather that material can be used for wood products which substitute for more fossil fuel intensive materials, thus resulting in lower net emissions. The IPCC recognizes wood and fiber as a renewable resource that can provide lasting climate-related mitigation benefits that can increase over time with active, sustainable management (Intergovernment Panel on Climate Change (IPCC), 2000).
d. The carbon and climate section of the FEIS addresses the effects of land management practices on carbon sequestration, using BASI. In the absence of timber harvests and thinning, forests thin naturally from mortality-inducing natural disturbances and other processes resulting in dead trees that would decay over time, emitting carbon to the atmosphere. The wood and fiber removed from the forest under the alternatives would be transferred to the wood products sector for a variety of uses, each of which has different effects on carbon (Skog et al., 2014). Carbon can be stored in wood products for a variable length of time, depending on the commodity produced. Wood can be used in place of other materials that emit more greenhouse gases, such as concrete, steel, and plastic (Gustavsson et al., 2006; Lippke et al., 2011; McKinley et al., 2011). Likewise, biomass can also be burned to produce heat or electrical energy or converted to liquid transportation fuels that would otherwise come from fossil fuels. In fact, removing carbon from forests for human use can result in a lower net contribution of greenhouse gases to the atmosphere than if the forest were not managed (Bergman, Puettmann, Taylor, & Skog, 2014; McKinley et al., 2011; Skog et al., 2014). The IPCC recognizes wood and fiber as a renewable resource that can provide lasting climate-related mitigation benefits that can increase over time with active management (Intergovernment Panel on Climate

Change (IPCC), 2000). Furthermore, reducing stand density may also reduce the risk of more severe disturbances, such as insect and disease outbreak and severe wildfires, which may result in lower forest carbon stocks and greater greenhouse gas emissions.

e. Thinning forests may increase ambient temperatures within those stands for a short period of time following the harvest, but would make additional moisture and nutrients available, and create conditions more resilient to fire and insect disturbances. Thinning unnaturally dense stands would also help restore forest structure and function and ultimately support long-term carbon uptake and storage. Management activities overall would not increase temperatures in a broader sense.

L. 1159-353, and 1159-366: The effects of management activities on non-forest lands, including GHG emissions from cattle grazing in the HLC are disclosed in the FEIS and the corresponding Carbon Assessment (appendix J) included in the project record.

M. 13-3, 13-6, and 126-1: See also the response to #2, related to the risk of forest die-back and reforestation failures. The terrestrial vegetation and timber sections of the FEIS acknowledge the risk of forest decline and associated impacts to projected timber and economic outputs.

N. 625-14, 625-15, 625-16: The 2020 Forest Plan includes a suite of desired conditions that represent the natural diversity and abundance of vegetation types on the HLC NF. The analysis, as reported in the terrestrial vegetation section of the FEIS, acknowledges those types and species that are vulnerable to warm/dry conditions anticipated with climate change. See also the response for #5 regarding expected species distributions and vulnerabilities.

a. The desired conditions in the plan include the maintenance of all the vegetation types historically found on the HLC NF, including those that are less tolerant of warm and dry climate conditions, such as spruce and subalpine fir. The desired range of spruce and fir forests are important components to ecosystem diversity. Geographic area-level quantitative desired conditions were added to the revised plan, which show that the need to increase, decrease, or maintain these cover types varies depending on the specific area. In some GAs, fire exclusion may have allowed these forests to increase in areas historically dominated by lodgepole or whitebark pine; therefore, some reductions are warranted although spruce/fir would remain common on the landscape. In other areas, the abundance of spruce/fir is within the desired (natural) range. Finally, in some GAs the amount of spruce/fir cover type is below the desired natural range, perhaps due to increased fire activity, and increases are desired. The desired conditions for spruce/fir forests are further described in appendix H and the terrestrial vegetation section of the FEIS.

b. Douglas-fir forests are important and the desired conditions call for this species to remain prevalent on the HLC NF. Reductions in the Douglas-fir cover type and species extent are desired (specifically in the warm dry PVT) because there is ample evidence suggesting that the current levels of Douglas-fir are above the NRV levels due to factors such as fire exclusion, as described in Appendices H and I and the terrestrial vegetation section of the FEIS. Forest management actions would be designed to achieve (and maintain) the desired range for Douglas-fir, taking into account the effects of natural processes. Once monitoring shows that this species is present at the desired level, management actions would not be taken to reduce it further.

O. 5-1: The FS confirmed via email response that literature submitted during the proposed action comment period will be included in the response to comments.

P. 52-2: The monitoring plan reflects the reasonably foreseeable fiscal and organizational capacity of the HLC NF. The potential for working with volunteers and partners is allowed in the Plan.

Q. 76-1: Monitoring of drought is not specifically included in the HLC NF monitoring plan (appendix B of the revised plan), because this information is available through other data sources and reported by other organizations.

R. 117-1: The FS has internal policies related the agency's fossil fuel use and energy efficiency. The direction of such internal practices and policies is not a part of forest plan revision. Carbon sequestration is an ecosystem service provided by the HLC NF and is addressed in detail in the carbon and climate section of the FEIS. Plan component FW-CARB-DC-01 addresses the provision of this ecosystem service. See also the response to #4.

S. 121-1: NRV stands for the natural range of variation. The definition for this concept is provided by the 2012 Planning Rule and associated directives; this definition was provided to the commenter via email during the comment period. This concept is described in the terrestrial vegetation section of the FEIS.

T. 557-9, 557-13, 557-14, and 557-20: The HLC NF acknowledges the importance of considering climate change and carbon sequestration and has included robust analyses of these concepts throughout the FEIS. While the effect of carbon sequestration on lessening greenhouse gas emissions and potential climate effects is clear, the direct effect of carbon sequestration on water resources and water management is less clear. The HLC NF utilizes the work of the Northern Rockies Adaptation Partnership, as summarized in Halofsky et al 2018, to consider the potential effects of climate change to watershed functions. The applicable findings in the suggested information source would be consistent and complementary to this BASI.

U. 10-3, 922-1, 922-2, 1062-16: The HLC NF has incorporated a robust range of desired conditions for vegetation which considered resilience and potential climate-related impacts, as described in appendix H and the terrestrial vegetation section of the FEIS. Wildlife habitat plan components are based on this suite of conditions and provide additional species-specific habitat components where needed. Appendix C of the revised plan, and appendix J of the FEIS, also address potential management actions related to climate change adaptations that would be consistent with the 2020 Forest Plan components.

Literature Cited

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