

Middleman Environmental Assessment and Draft Decision Notice

Helena-Lewis and Clark National Forest

Objection Responses

Table of Contents

Issue 1 – National Environmental Policy Act	2
Contention 1.1 – Hard Copy Documents	2
Contention 1.2 – Long-term and Large Project	2
Contention 1.3 – Forest Plan Amendments	2
Issue 2 – Terrestrial Wildlife	3
Contention 2.1 – Northern Goshawk	3
Contention 2.2 – Big Game Security and Hiding Cover	4
Contention 2.3 – Flammulated Owl	5
Contention 2.4 – Impacts of Openings on Wildlife	5
Contention 2.5 – Migratory Bird Treaty Act	6
Contention 2.6 – Wildlife Surveys	7
Contention 2.7 – Grizzly Bear Security	8
Contention 2.8 – Whitebark Pine	8
Issue 3 – Watershed and Riparian	9
Contention 3.1 – Best Management Practices (BMPs) and Sedimentation	9
Issue 4 – Vegetation and Silviculture	10
Contention 4.1 – Large Openings Rationale	10
Contention 4.2 – Restocking Requirements	10
Contention 4.3 – Old Growth Analysis	11
Contention 4.4 – Old Growth Designation and Forest Plan Compliance	11
Contention 4.5 – Old Growth Lodgepole Pine	12
Issue 5 – Noxious Weeds	13
Issue 6 – Fire and Fuels	14
Contention 6.1 – Best Available Science for Fire and Fuels	14
Contention 6.2 – Fuels and Fire Project Purpose	14
Contention 6.3 – Lynx and WUI	14
Issue 7 – Climate and Carbon	15
Contention 7.1 – Carbon Analysis	15
Contention 7.2 – Climate Change	16
Issue 8 - Roadless	16
Contention 8.1 – Roadless Analysis for Vegetation and Elk	16
Issue 9 - Economics	18
Contention 9.1 – Economics	18
Issue 10 - Scenery	18

Issue 1 – National Environmental Policy Act

Contention 1.1 – Hard Copy Documents

Objector(s): Sara Johnson

An objector asserts that the responsible official is in violation of the National Environmental Policy Act (NEPA) by limiting public access to hard copy agency documents and failure to provide rationale for restricting documents to the public.

Response:

The Council for Environmental Quality (CEQ) Regulations for implementing the procedural provisions of the NEPA require that agencies provide environmental documents to persons who may be interested or affected. These regulations do not specify whether the documents must be hard copy or electronic. The responsible official responded to the objector's request for paper copies but chose to send the documents in electronic format (AppG_HLFResponseToHardCopyRequest). I conclude that the responsible official provided documents in a format allowed by CEQ NEPA regulations.

Contention 1.2 – Long-term and Large Project

Objector(s): Sara Johnson

An objector contends that the responsible official violates NEPA and NFMA by proposing a large project that extends 15-20 years beyond forest plan requirements or reporting.

Response:

The draft Decision Notice (draft DN) states, "Implementation of authorized activities will not occur all at once but be phased over a period of time. A ten- to twenty-year period is not unreasonable to ensure that treatments occur under favorable resource conditions and provide for safety (especially prescribed fire)" (p. 3). The draft DN further explains that there may be on-the-ground adjustments made to unit boundaries or temporary road locations during project layout to minimize resource impacts but adjustments would "fall within the bounds of the environmental analysis and will not exceed this decision's allowable road treatment miles and vegetation treatment acres" (draft decision notice, p. 3). The NEPA and its implementing regulations do not speak to limits of implementation schedules. I conclude the responsible official complied with NEPA.

Contention 1.3 – Forest Plan Amendments

Objector(s): Sara Johnson

An objector contends that the responsible official violates NEPA and NFMA, because this is one of a long list of forest plan amendments for elk and the analysis violates the 1982 planning rule due to a lack of reasonable alternatives for the forest plan amendment.

Response:

The Forest Service planning regulations at 36 CFR 219 set the requirements for amending land management plans. A plan amendment should be completed consistent with Forest Service NEPA procedures. The Forest Service NEPA compliance regulations at 36 CFR 220 describe that no specific number of alternatives are required or prescribed for an EA.

The site-specific amendment analyses in Appendix D in the EA describe the effects of all of the past site-specific amendments that have suspended big game standards and conclude that site-specific and programmatic amendments, existing and proposed, do not appear to have suppressed elk numbers. The

total number of elk observed in the hunting districts that primarily encompass the forest are in excess of the population target identified in the forest plan (Appendix D, p. 397). The conclusion section provides the context between these past amendments and the Middleman proposed amendment and how the outputs envisioned in the forest plan are still being achieved (EA, Appendix D, pp. 382-394, 397).

The cumulative effects analysis in the Big Game section of the EA describes effects to hiding cover as result of past activities and events relative to what's available currently by herd unit. That section also describes the inherently open nature of portions of the Middleman Project area and why the level of cover required in forest plan standards 3 and 4a is not be achievable. In other words, the lack of hiding cover in the respective herd units isn't necessarily the result of suspending standards in past projects (EA, Chapter 3, pp. 121-124). The EA for the Middleman Project included analysis of the site-specific forest plan amendment.

I conclude the responsible official complied with the regulations for the site-specific project amendment for elk.

Issue 2 – Terrestrial Wildlife

Contention 2.1 – Northern Goshawk

Objector(s): Sara Johnson

An objector asserts the responsible official provided an inadequate analysis for the impacts of project activities on the Management Indicator Species (MIS), northern goshawk.

Response:

The responsible official conducted nest check surveys in 2020 at six historic goshawk territories in the project area and found that all appeared to be abandoned - with no remaining sign of nests and in several cases depleted habitat conditions. Crews also visited all nest coordinates on record in the project area, searched in nearby habitat for signs of alternate nests, and conducted playback survey points in places where the nearby habitat looked suitable for use by goshawks. No goshawks responded to these calls (EA, pp. 148-149).

Northern goshawk habitat in the project area was evaluated based on guidelines outlined in Reynolds et al. (1992) and supplemented with regional guidelines provided by Brewer et al. (2009) (EA, pp. 146-147). The responsible official analyzed existing, and proposed effects to, vegetation size classes and potential nesting habitat at the project level (EA, pp. 151-152). Since no occupied or recently occupied territories had been identified in the project area, a post-fledgling area (PFA) level analysis was not warranted (Brewer et al. 2009, pp. 37, 44).

The EA contains a brief discussion of old growth in relation to goshawk habitat (EA, pp. 152-153) and references a more thorough discussion in the Tenmile-South Helena Final wildlife report (project file, document F17-19, pp. 287-322). This document states that while goshawk have specific nest habitat preferences, they are otherwise habitat generalists and are subsequently not particularly useful old growth indicators (document F17-19, p. 288).

The responsible official describes project area forest structure with recommendations from Reynolds et al. (1992) (EA, p. 152). Reynolds et al. (1992) state that goshawk prey is found at various abundances in a variety of habitats and stand ages, and maintaining structural stages similar to those recommended would provide adequate prey distribution.

The modified proposed action limits opening sizes to 386 acres, from up to 1,634 acres analyzed. The goshawk section in the non-big game report includes a discussion of large openings (F17_2, p. 32). The report states that openings of various sizes would contribute to the natural range of variation for landscape pattern in the project area and that analysis of effects of these openings is included in the larger discussion of structural stages and nest stand availability.

The EA (p. 152) includes a short paragraph that discusses the possibility for conversion of goshawk habitat to red-tailed hawk habitat. Similar to availability of prey, Reynolds et al. (1992) suggest that maintaining mature stands of trees with relatively high canopy cover at or near recommended proportions on the landscape would give goshawks a competitive advantage over species adapted to more open environments (such as red-tailed hawks). The responsible official demonstrates that at the project level, small changes in structural stages would result from the proposed action (EA, pp. 151-152).

Additionally, the EA includes a number of design features in the event goshawk nests are discovered during implementation as recommended by Brewer et al. 2009 (EA, Appendix B, p. 293).

Finally, the Responsible official provides a discussion of viability for goshawk on the Helena National Forest and concludes that viability of the species appears sound and would remain so upon implementation (document F17-7).

I find the responsible official's analysis of the project's effects to northern goshawk sufficient and in compliance with NEPA and NFMA requirements.

Contention 2.2 – Big Game Security and Hiding Cover

Objector(s): Stephen McEvoy, Sara Johnson

Two objectors contend that elk hiding cover and security were not adequately analyzed and standards for these topics were not met in violation of NFMA and NEPA.

Response:

All five of the affected elk herd units (EHUs) in the project area are currently below forest plan standard 3 thresholds for both hiding and thermal cover, and are below forest plan standard 4a threshold for hiding cover and open road densities. Objectors are correct, that forest plan standards for hiding cover would not be met for the project, as they would similarly not be met in the absence of any activity. Hence, the responsible official proposed a site-specific amendment to the forest plan to address these standards.

The responsible official (EA, pp. 114-121) provided analysis of project effects to elk hiding cover, thermal cover, and security. The EA discusses the potential for elk redistribution onto private land (EA, p. 127). Additionally, design features are included to provide security cover and to minimize effects to elk during the hunting season and to maintain hunting opportunity (EA, Appendix B, pp. 291-292).

Methodology for calculating hiding cover and thermal cover, and their relation to forest plan standard 3, is discussed in the EA on pages 105 and 108. Elk vulnerability during the hunting season as it relates to forest plan standard 4a is based on a hiding cover/open road density index, and is discussed in the EA on pages 109-110. The security area approach as described in Lowrey et al. (2020) is not a forest plan standard, but is included to assess project effects and incorporate best available science. Unlike standard 4a, the Lowrey et al. (2020) methodology does not include a security area threshold.

The responsible official (EA, p. 122) provides context for the lack of hiding cover by pointing out that one of the five EHUs is biologically incapable of ever meeting this standard, and the other four are very close to the standard even in their natural/unaltered state. The open nature of the project area also impacts thermal cover (EA, pp. 121-124). Forest plan standard 3 (and by association standard 4a) is not suited for this portion of the forest. The EA Appendix D documents at least seven projects that have been exempted from one or both of these standards during the life of the forest plan. During this time, the elk population has increased to more than double the forest plan objective (based on Montana Fish Wildlife and Parks data) (EA, p. 405).

I find the responsible official's analysis of elk hiding cover and elk security to be sufficient and in accordance with NEPA requirements. I also find that the proposed exemptions to forest plan standards are appropriate and in compliance with NFMA and the 2012 Planning Rule.

Contention 2.3 – Flammulated Owl

Objector(s): Sara Johnson

An objector contends that the responsible official did not consider effects to flammulated owl, a sensitive species, and project activities will eliminate flammulated owl habitat.

Response:

The EA (pp. 181-183) and Non-Big Game Wildlife Report (pp. 84-88) provide discussion of potential effects of proposed activities on flammulated owls. The analysis includes discussions of effects of various harvest types and prescribed burning, human disturbance, and habitat implications of trending vegetation to emulate the historic range of variability more closely. The argument for beneficial effects to the species is discussed in the context of trade-offs between short term negative effects versus long-term habitat improvements, and is supported by the section outlining effects of no action compared to the proposed action in the terrestrial vegetation report.

The flammulated owl section in the Non-Big Game Wildlife Report (pp. 87-88) includes a discussion of greater than 40-acre openings. Past survey efforts are discussed on page 84 of this report.

General effects of management activities similar to those proposed in the project on dry forest-associated species are discussed in detail in the Tenmile South Helena Project Wildlife Report (document F17-19, pp. 182-188) which is incorporated by reference. The document references improvement of flammulated owl habitat through active management and compares the effects to flammulated owl habitat between no action and restoration treatments.

Viability for flammulated owl on the Helena National Forest is provided by project record document F17-7. The responsible official concludes that viability of the species appears sound and would remain so upon implementation.

I find the responsible official adequately considered potential effects to flammulated owls in compliance with NEPA and NFMA requirements.

Contention 2.4 – Impacts of Openings on Wildlife

Objector(s): Sara Johnson

An objector contends that large openings will create significantly adverse impacts to most wildlife species across the project area in violation of NEPA and NFMA.

Response:

The modified proposed action limits opening sizes to 386 acres, which is a reduction from the maximum 1,634 acres analyzed. Effects of large openings on northern goshawk are addressed under Contention 2.1, above. Similar effects to flammulated owl are discussed under Contention 2.3, above.

The Non-Big Game Wildlife Report (pp. 19-20) section on Management Indicator Species (MIS) includes a brief discussion on openings greater than 40 acres. The migratory bird discussion (p. 36) says, “the sections on cumulative effects and openings greater than 40 acres for northern goshawk and flammulated owl provide an overview of what would be expected for the migratory bird species discussed here.” Effects to habitat (including creation of large openings) as measured by acres treated for MIS species is reported in Table 4 (p. 19) of the Non-Big Game Wildlife Report.

While raptors, woodpeckers, and songbirds are generally highly mobile and unlikely to have movements constrained by large openings, the same is not necessarily true of American marten. Marten are generally reluctant to cross or forage in large, uncluttered openings (project record, document F17-19, p. 322).

For information on how large openings may affect temperature extremes, refer to the response to Contention 7.2.

The grizzly bear section in the Non-Big Game Wildlife Report shows that grizzly bear presence, and subsequent conflicts with humans in the project area and Big Belt Mountains, are unlikely (pp. 41-42). The possibility of conflicts is even further reduced by the implementation of a Food Storage Order (p. 42).

Regarding elk security areas, acres of timber harvest in existing security areas and subsequent reductions of canopy cover below 23 percent is discussed in the EA (p. 120). Presence of large openings, particularly as they affect security areas, is discussed in the site-specific forest plan amendment and analysis (EA Appendix D, p. 404). Also see response to Contention 2.2.

There are only two forest plan standards that address openings and wildlife, Big Game Standards 5 and 6. The project is consistent with Big Game Standard 5. Compliance with Big Game Standard 6 is exempted through the site-specific forest plan amendment. Therefore, I find the responsible official’s analysis of the project’s effects does not violate NFMA. Further, I find the analysis of effects of large openings fulfills NEPA requirements.

Contention 2.5 – Migratory Bird Treaty Act**Objector(s): Sara Johnson**

An objector contends that the responsible official violates the Migratory Bird Treaty Act because the project will adversely impact migratory birds and that no benefits to migratory birds were identified.

Response:

The Forest Service and the U.S. Fish and Wildlife Service signed a memorandum of understanding (MOU) that directs the Forest Service to approach management of migratory birds in the following way: (1) focus on bird populations; (2) focus on habitat restoration and enhancement where actions can benefit specific ecosystems and migratory birds dependent on them; (3) recognize that actions taken to benefit some migratory bird populations may adversely affect other migratory bird populations; and (4) recognize that actions that may provide long-term benefits to migratory birds may have short-term

impacts on individual birds. The parties agreed that through the NEPA process, the Forest Service would evaluate the effects of agency actions on migratory birds, focusing first on species of management concern along with their priority habitats and key risk factors.

The responsible official found that the project would be expected to increase local habitat diversity (both the variety of habitat patches and plant species diversity) and, thus, would be likely to increase both the local diversity and density of migratory bird species. It would not measurably depress the population of any bird species in the project area and would not substantially affect migratory bird populations or their habitats. Furthermore, the modified proposed action provides mitigation for migratory birds in the form of design features (Non-Big Game Wildlife Report p. 36). Furthermore, the Ninth Circuit Court of Appeals has determined that “take” under the Migratory Bird Treaty Act only applies to deaths of migratory birds resulting from affirmative activities directed against wildlife, which this project is not.

I find the responsible official complied with the Migratory Bird Treaty Act.

Contention 2.6 – Wildlife Surveys

Objector(s): Sara Johnson

An objector contends that the responsible official is in violation of NEPA and NFMA by not completing wildlife surveys to inform analysis.

Response:

Under NEPA, the responsible official must consider the impacts of a proposed action and must ensure the scientific integrity of its analysis. NFMA requires that the responsible official comply with land management plans. Compliance with monitoring requirements in the Helena Forest Plan are listed on pages, II/17, III/96, and pp. IV/7-8 and is completed in forest plan monitoring reports, not project-level monitoring. In reference to surveys, the hard look and forest plan compliance require that the responsible official use information necessary to analyze the impacts of the proposed action and alternatives. Wildlife surveys were documented in the project record in the:

- Non-Big Game (including Threatened and Endangered Species) Wildlife Report (pp 5-15, 17-18, 27, 54-55, 60-61, 79, 84)
- 2019 and 2020 Goshawk field forms
- EA, Appendix E, p. 467
- 2019 and 2020 Montana Elk Population Counts
- 2018 Montana Statewide Elk Trend Estimates
- Elk Counts in Hunting Districts associated with the Helena National Forest, 2005-2020
- Big Belts post-season mule deer survey results 2019/2020 and 2020/2021
- Wildlife Appendix B, Viability Analysis
- Documents A5 and A7-A15, Forest Plan Monitoring Data
- Migratory Birds: Survey results and reports going back to 2007
- Flammulated Owl: Survey results and reports going back to 2005

I conclude that the responsible official completed a proper level surveys to inform the analysis in compliance with NEPA and NFMA and these can be found in the project record in the documents listed above.

Contention 2.7 – Grizzly Bear Security

Objector(s): Michael Garrity

An objector contends that the responsible official failed to consider logging roads and user-created roads and use ineffective closures to secure grizzly bears in violation of Section 7 of the Endangered Species Act.

Response:

The responsible official describes the use of the North Big Belts Grizzly Bear Analysis Unit (GBAU) as an appropriate cumulative effects area for the project based on its size (215,830 acres) (EA p.157) This area is approximately 3 times the size of an average female grizzly home range in the Northern Continental Divide Ecosystem (NCDE). Proposed project activities would be confined to this GBAU, and the argument that analyzing impacts over a larger area would effectively “wash out” project effects.

The Non-Big Game Wildlife Report (project file, document F17_2, pp. 38-39) also discusses connectivity (“linkage zones”) and includes a discussion of the potential effects of large openings in the project area (pp. 50-51).

Finally, the responsible official includes a discussion that specifically addresses the potential for illegal motorized use and possible impacts to secure habitat (EA, p. 160). As the EA points out, secure habitat is based upon the presence of roads (both open and restricted) so would not be affected by illegal use of such roads. The responsible official discussed the potential for illegal use, and determined that such activities were unlikely to result in adverse effects due to the low incidence and the Lolo National Forest’s efforts to quickly correct situations where off-road use is discovered.

I find the responsible official sufficiently addressed potential effects to grizzly bears in compliance with ESA and NEPA.

Contention 2.8 – Whitebark Pine

Objector(s): Sara Johnson

An objector asserts that the responsible official made false claims about treatments of whitebark pine in violation of NEPA and the roadless rule because she does not think the treatments will restore whitebark pine.

Response:

NEPA requires federal agencies to consider impacts, both beneficial and adverse, accounting for context and intensity. Intensity is evaluated in part by the degree to which actions may adversely affect an endangered or threatened species or its habitat under ESA; see pages 26-27 in the draft Decision Notice. Whitebark pine is proposed for listing and not regulated under ESA requirements (40 CFR 1508.27).

The Roadless Rule was adopted in 2001 to protect and conserve inventoried roadless areas on National Forest System lands. Activities not requiring new roads are allowed and a wide range of multiple uses are permitted on roads in place prior to the Rule. These include clearly defined, limited timber harvest and forest health treatments for maintaining or restoring characteristics of ecosystem composition and structure, such as reducing the risk of uncharacteristic wildfire effects (36 CFR Part 294).

The Middleman Project does not propose any whitebark pine treatments, restoration or otherwise (DN, pp. 3-6). Analysis of proposed treatment effects on the species were completed with rationale considering the affected environment (EA, p. 222), population viability/trend and threats to species (EA, pp. 223-224), environmental consequences of direct and cumulative effects (EA, pp. 225-229), and

conclusions (EA, pp. 230), compliance with regulatory framework (EA, p. 230), appropriate design features (EA, pp. 289-290), and determinations for proposed species (EA, p. 231; project record, document F13_4_20201205_FWS_WhitebarkPine). Activities undertaken by the responsible official in which individual or a small number of trees may be affected were not determined to be a threat to the species (DN, pp. 26-27; EA, p. 231).

There are no treatments proposed in whitebark pine in inventoried roadless areas or roadless expanse as only trace amounts of the species are present at most in the project area (EA, p. 25). The same design features address potential discovery of whitebark pine in any treatment areas.

I conclude the responsible official complied with NEPA and the Roadless Rule.

Issue 3 – Watershed and Riparian

Contention 3.1 – Best Management Practices (BMPs) and Sedimentation

Objector(s): Michael Garrity

An objector contends that the responsible official is in violation of NEPA and NFMA because she did not conduct a proper analysis of stream sedimentation based on road activities and relies inappropriately on BMPs and design features because for which efficacy has not been shown.

Response:

The State of Montana is required by section 305b of the federal Clean Water Act to address water quality biannually (Montana Department of Environmental Quality (DEQ), 2018). This report was reviewed and a number of streams in the project area are classified as Category 5 impaired waterbodies (No Total Maximum Daily Load analyses has been completed) and listed in the Aquatic Resources Report (Report, p. 7). The water quality metric in the Report discloses the finer details on erosion and best management practices (BMPs).

A sediment source survey was completed in 2019 for the proposed haul routes (Report, p. 13). Resulting field data was used to model upland erosion and sedimentation into stream channels using the Forest Service Watershed Erosion Prediction Project (FSWEPP) <https://forest.moscowfs.wsu.edu/fswepp/>. Potential erosion for vegetation treatments (timber harvest, prescribed burning) was modeled using the Disturbed WEPP batch (download) module and for haul routes using the WEPP: Road module on the website. FSWEPP modeling is among the best science-based method for erosion modeling.

Table 9 in the Report (p. 29) shows the summary of the erosion modeling. Output from FSWEPP modeling is in the project record. Conclusions from modeling indicate no direct or indirect effects to fisheries from proposed activities (Report, p. 36; EA pp. 196 - 201).

Water Quality standard attainment records for the State of Montana were reviewed for project area watersheds. A total of sixteen design features for soil, water, and aquatic species were included for the project to address potential upland erosion and sedimentation into stream channels (EA, Appendix B, pp. 2 - 300).

A comment letter from DEQ (C1_38_20200313_DEQComment) states the use of BMPs is crucial to meeting and maintaining water quality standards and to compensate for temporary sediment production associated with road construction/decommissioning activities. This is acknowledgment that Forest Service BMPs are effective. Additionally, monitoring is required to determine the effectiveness of treatment-unit and road best management practices (Report, p. 5).

I conclude that the responsible official complied with NEPA and NFMA.

Issue 4 – Vegetation and Silviculture

Contention 4.1 – Large Openings Rationale

Objector(s): Michael Garrity, Sara Johnson

Two objectors assert the responsible official violates NFMA for not getting approval from the regional office for openings greater than 40 acres, and is in violation of NEPA for not providing an alternative that provides for openings of only less than 40 acres.

Response:

NFMA requires that even-aged cutting methods are designed to regenerate even-aged stands of timber where there are established maximum size limits for areas to be cut in one harvest operation, including provision to exceed these limits after appropriate public notice and review by the appropriate Forest Service officer. Even-aged regeneration harvest effects were assessed and analyzed to determine potential for significant effects. Forest Plan Standard 4 (p. II/23) states timber stand openings created by even-aged silvicultural systems will normally be 40 acres or less. No specific number of alternatives is required since the purpose of alternatives is to address significant effects or reduce overall environmental harm while meeting project objectives (36 CFR 220.7(b)).

The responsible official evaluated regeneration harvest openings exceeding 40 acres noting regional forester approval (draft DN, p. 15). NFMA consistency requirements are described for clearcutting and even-aged management (part d.) dealing with these openings (draft DN, p. 31). Design features for these openings are included in VEG-3 (draft DN, p. 61).

I conclude the responsible official complied with NFMA and NEPA as well as Forest Service Region One direction for approval of openings greater than 40 acres.

Contention 4.2 – Restocking Requirements

Objector(s): Michael Garrity

An objector contends that the responsible official violates NFMA because he failed to determine if adequate stocking will be achieved.

Response:

NFMA requires achievement of adequate restocking within five years after harvest and cuts are conducted consistent with protection of resources for timber harvest on National Forest Lands (16 USC 1604 Sec.6 (g)(3)(E)(ii)).

The responsible official analyzed regeneration harvests and the expected influence of drought based on a literature review of the science and assessing past reforestation success using stocking surveys entered in the Forest Service Activity Tracking System (FACTS) database (EA, p. 53). Regeneration and drought was analyzed as an Issue/Indicator. Stocking surveys were completed within areas suitable for timber projection within the project area in areas that had regeneration harvest or stand-replacement fires. Of the 7,329 acres identified for reforestation, 93 percentage are currently certified as re-stocked, with 7 percent progressing. One 33-acre stand was coded as a failure (less than 1 percent), indicating in most cases, site conditions and available reforestation techniques ensure reforestation occurs following harvest treatments. Careful selection of these sites is imperative and continues based on current drought trends and potential future disturbances (EA, pp. 65-66).

The draft DN discloses field reviews and treatments were designed by a certified silviculturist, ensuring adequate stand restocking post-harvest based on site condition, treatment objective, forest plan, and desired stocking guide criteria in silvicultural prescriptions specific to each unit (draft DN, pp. 29-30). Local history provides evidence that previous successful restocking of harvest units in this area, increasing confidence in meeting the 5-year restocking timeframe (draft DN, p. 31). The monitoring plan for regeneration harvest units explains surveys in the first- and third-years post-harvest monitoring seedling establishment, with direction for additional treatments bringing regeneration to satisfactory levels after the third year if needed (draft DN, p. 67). Based on the site-specific review of stand productivity and capability, planned treatments and associated design features, and history of reforestation success on the national forest and ranger district, timely reforestation is assured for the proposed regeneration harvests in the Middleman Project, consistent with this requirement of NFMA (EA, p. 98).

I conclude the responsible official complies with the restocking requirements of NFMA.

Contention 4.3 – Old Growth Analysis

Objector(s): Sara Johnson

An objector contends that the responsible official violates NEPA because he has not shown analysis that logging and burning in designated old growth will maintain old growth values.

Response:

NEPA requires the use of science and an effects analysis on resources. The responsible official analyzed old growth treatments in the context of forest plan consistency and categories present (EA, p. 54). The EA discloses 70 percent of stands in the project area are not proposed for treatment and that the goal in all stands proposed for treatment is to retain and promote old growth. The analysis incorporates carefully designed silvicultural treatments as a valid approach to restore forest composition and structure altered by fire exclusion, especially in the project majority dry types. This can also maintain sufficient structure providing habitat requirements for certain wildlife (EA, p. 93). Design Features and Monitoring describe additional monitoring in treated old growth stands (EA, pp. 61, 68).

I conclude that the analysis of old growth meets NEPA with a thorough analysis and disclosure of effects because:

Contention 4.4 – Old Growth Designation and Forest Plan Compliance

Objector(s): Michael Garrity, Sara Johnson

Two objectors contend that responsible official fails to comply with the forest plan regarding the old growth requirement that 5 percent of commercially available old growth stands must be achieved within each 3rd order drainage and failure to use the forest plan definition for old growth by using the Green et al. (1992) definition.

Response:

One of the forest plan standards for old growth states that 5 percentage of each third order drainage should be managed for old growth (forest plan p. 11/20). Further, the forest plan states an old growth stand is generally characterized by a high level of standing and down, dead and rotting woody material; two or more levels of tree canopies and a high degree of decadence indicated by heart rot, mistletoe, dead or broken treetops, and moss. Green et al. defines old growth forest ecosystems distinguished by old trees and related structural attributes. Old growth encompasses the later stages of stand

development that typically differ from earlier stages in a variety of characteristics which may include tree size, accumulations of large dead woody material, number of canopy layers, species composition, and ecosystem function.

Old growth conditions account for approximately 6 percent (7,253 acres) in the Middleman Project area. Because old growth is rare and there are fewer than five plots in each third order drainage, it is not possible to use this data to estimate old growth at the third order drainage scale (EA, p. 67; project file, F4_25_20201118_MMOldGrowthWhitepaper_FEA, p. 1). In the third order drainages overlapping with the project area, the required designation amount is exceeded by 185 acres, all within the project area. Of designated old growth, about 3,953 (90 percent) lies within the project area. There are 1,761 additional acres in the project area not within a third order drainage. Of all types, 5,916 acres of old growth has been identified within the project area (EA, p. 68; project file, F4_25_20201118_MMOldGrowthWhitepaper_FEA, pp. 1-2).

The project record contains additional documentation of old growth analysis, processes, policy, guidance, and management considerations. Forest plan Amendment Z replaces the old growth definitions in the forest plan with those of Green et al. (1992, errata corrected) which more specifically define old growth characteristics of 15 forest types occurring on the forest. These new definitions do not in any way change the existing forest-wide standards (forest plan, pp. II-20 to II-21) relating to old growth (project file, A20_19930813_HNFForestPlan_AdoptOGDef_AppZ, pp. 1-2).

I conclude this project complies with the forest plan old growth standards (including amendments) because: The Responsible official is actively working to retain existing old growth (incorporating design features, DN, pp. 61, 68), increase representation where lacking, and improve monitoring and data collection using multiple tools to better identify what currently exists; Proposed treatments are intended to increase retention of some of current stands (Contention 4.3 response); and A substantial portion of old growth on the landscape will remain untreated (DN, p. 14; EA, p. 92).

Contention 4.5 – Old Growth Lodgepole Pine

Objector(s): Sara Johnson

An objector asserts that the amount of acreage of lodgepole old growth is unknown in violation of NEPA and Green et al. (1992).

Response:

NEPA requires analysis and consideration of effects. Methodology used to identify old growth is discussed in the EA (p. 54). The EA also states that most old growth identified is in Douglas-fir or ponderosa pine forest types; very small amounts of old growth identified are lodgepole pine type (p. 68).

The Existing Condition Updates for the EA (project file, document F4_8_20201204_MMVegExistingCondUpdates_FEA) show approximately 7 percentage of total treatment units are lodgepole pine cover type; 5 percentage (148 acres) are in the medium size classes (greater than 10 inches) (Table 12, p. 7) which is only one of the minimum old growth criteria. The others are minimum age of large trees and number of trees per acre at this DBH. Three stands (28, 38, and 12 acres in size) were identified as lodgepole old growth; one in a third order drainage and two identified as additional old growth habitat (project file, F4_25_20201118_MMOldGrowthWhitepaper_FEA, pp. 6, 12).

I conclude the responsible official appropriately estimated and disclosed amounts of lodgepole pine old growth in compliance with NEPA.

Issue 5 – Noxious Weeds

Objector(s): Stephen McEvoy

An objector asserts that summary table 4 indicates that the proposed action will aggravate weed infestation because no actions to mitigate weed spread will be implemented.

Response:

Table 4 in the EA (p. 28) lists resource issue indicators by alternative. The table shows that noxious weeds will increase if either the No Action or Modified Proposed Action Alternatives are implemented. However, the increase in noxious weeds will be more from the implementation of the modified proposed action than the no action alternative. However, the draft DN, (p. 56) and Weeds Specialist Report (p. 14) list design features that will ensure the increase in noxious weeds will not occur. This includes weed treatments (herbicide, biocontrol, and goat grazing) as well as adherence to weed mitigation listed in the forest plan, Helena Weed Treatment Environmental Impact Statement and Record of Decision, and Forest Service Manual 2900 (EA, p. 249; draft DN, pp. 55, 56). As written Table 4 in the EA leads the reader to believe that noxious weeds will be increased by up to 4,915 acres, however this is inaccurate because estimated increases do not consider implementing design features which are an integral part of the proposed action.

The responsible official will correct Table 4 regarding noxious weeds to portray effects more accurately prior to signing the final Decision Notice. Incorporation of design features will reflect lesser impacts.

Issue 6 – Fire and Fuels

Contention 6.1 – Best Available Science for Fire and Fuels

Objector(s): Michael Garrity

An objector claims that Dr. Baker's paper regarding fire and fuels is the best available science and was not followed in violation of NEPA.

Response:

NEPA requires agencies to insure the professional and scientific integrity of the discussion and analyses in an environmental impact statement (40 CFR 1502.24). The Forest Service extends this direction to EAs. The scientific literature relied upon for the fire and fuels analysis is in the project record.

Environmental effects to fuels and fire behavior are addressed in the EA (pp. 36-44) and to fire regimes (EA, pp. 56-60, 79 -81) and conclude that the proposed action would meet the purpose and need of the project (EA, pp. 36, 42-44, 45, 79-81). The responsible official provided rationale for the proposed action and how it meets the purpose and need in the Draft DN (pp.7-11).

I conclude that the responsible official applied scientific integrity in the analysis of fire and fuels.

Contention 6.2 – Fuels and Fire Project Purpose

Objector(s): Stephen McEvoy

An objector claims that the purpose and need statements for protection of infrastructure and WUI, and resiliency are inappropriate because treatments are located far from infrastructure or the WUI.

Response:

An objector contends that the proposed treatments that are not physically near structures do not meet the purpose and need for fire safety. The purpose and need for the project is not focused on protecting structures, but rather on larger scale life safety and ecosystem conditions (EA, pp. 5-7). The environmental effects analysis for fire and fuels, and for vegetation provides detailed support for the conclusion that the proposed action meets the multiple purpose and need statements (EA pp. 36, 42-44, 45, 79-81) and Draft DN (pp. 7-11). I find that adequate evidence and rationale were provided to show how the proposed action meets the purpose and need in the EA.

Contention 6.3 – Lynx and WUI

Objector(s): Sara Johnson

Concern Statement:

An objector contends that that the responsible official violated the Northern Rockies Lynx Management Direction (NRLMD) by authorizing logging that is prohibited because treatment units do not fall within the wildland urban interface.

Response:

The lynx habitat GIS layer was field validated and updated and the proposed action was modified to remove those portions of harvest units that were within lynx critical habitat (multi-storied, early stand, and stand-initiation) (EA, p. 12; draft DN, p. 12) to comply with NRLMD (EA pp 372-380). The WUI for this project is defined by the Tri-County CWPP (EA, pp. 3, 491) which meets the requirements of the Healthy Forest Restoration Act (Sec. 101 16 USC 6511).

I conclude that all proposed fuel treatments in critical lynx habitat within the WUI are disclosed in the analysis and comply with the Northern Rockies Lynx Direction.

Issue 7 – Climate and Carbon

Contention 7.1 – Carbon Analysis

Objector(s): Michael Garrity, Sara Johnson

An objector notes that responsible official did not analyze or disclose the amount of carbon dioxide or other greenhouse gas emissions from project implementation in violation of NEPA.

Response:

The objector disagrees with how the responsible official addressed the effects of the proposed action on carbon storage and emissions and requests a finer scale analysis. Regulations implementing NEPA state: “NEPA is satisfied if Federal agencies have considered *relevant* [emphasis added] environmental information, and the public has been informed regarding the decision-making process.” 40 CFR 1500.1(a) Additionally, the purpose of an EA is to “Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact” 40 CFR 1508.9 (a)(1).

The Middleman Project Scale Carbon Effects Final Report (Carbon Report) discloses the challenges to predicting carbon emissions from the project scale, “Because local greenhouse gas emissions mix readily into the global pool of greenhouse gas emissions, it is difficult and highly uncertain to ascertain the indirect effects of emissions from single or multiple projects of this size on global climate” (p. 4). The Carbon Report references the quantitative climate change assessment prepared for the Helena-Lewis and Clark National Forest that addresses forest carbon stocks and the factors that influence carbon trends such as management activities, disturbances, and environmental factors at the forest scale using the most current science (project record, document (F4_63_20191001_DuganEtal_2019_FEIS_AppxJ_ClimateCarbon)). The forestwide assessment acknowledges substantial uncertainties involved in estimating baseline forest carbon stock and stock exchange even at the forest scale (pp. 11-12). The Carbon Report concludes that the Middleman Project would make an extremely small direct contribution to overall emissions and provides rationale for the conclusion (pp. 11-12). The main reasons for the conclusion are that increases in emissions from the proposed action would be temporary (EA, p. 264), and because the project area would not be converted from forest to agricultural or developed landscapes. The latter represents the largest source of greenhouse gas emissions in the forestry sector globally (p. 264). Further analysis is not warranted.

I conclude the responsible official complied with NEPA by addressing climate change and disclosing the effects of the proposed action.

Contention 7.2 – Climate Change

Objector(s): Michael Garrity

The objectors contend that the EA fails to provide adequate information on climate change effects to project area vegetation.

Response:

Impacts to project area vegetation resources from climate change are addressed throughout the EA. Climate change is one of several factors causing a change in disturbance patterns affecting vegetation. The Fire and Fuels section notes that changes to disturbance processes such as fire suppression, livestock grazing, mining, high-grade logging, and climate change have altered the structure and function of forest types in the analysis area (EA, p. 37). As a result of climate change and other factors an increase in fire areas burned in the Rocky Mountains is predicted (EA, p. 40). Another effect related to grazing and its associated reduction in fire frequency, and possibly related to climate change through drought, is woodland expansion into grass and shrub plant communities (EA, p. 64). In the absence of disturbance, conifer establishment in these areas could be expected to increase in extent and density over time, reducing the vigor and extent of grassland/shrublands and savannas (EA, p. 72). Additionally, the EA discusses the interdependence between forest resilience and the tree regeneration process. "Because there are strong links between moisture availability and conifer regeneration, climate warming may decrease the frequency of seedling establishment events (Andrus et al. 2018)" (EA, p. 73).

Climate change effects on whitebark pine, a keystone species, are discussed on pages 223 to 224 of the EA. Climate change along with mountain pine beetles and altered wildfire patterns are negatively affecting the species' health.

The EA also discloses that climate change poses challenges to effects analysis for terrestrial vegetation due to the uncertainty in future conditions, disturbance regimes, and vegetative responses (p. 48). Methodologies and assumptions applied to the effects analysis are explained in the vegetation specialist report (project file, Document F4_1_20210119_TerrestrialVegetationFinalReport, pp. 8-10). The EA (p. 50) and vegetation specialist report (p. 9) also address the use of historical range of variability in the context of climate change to inform forest desired conditions. The files provide rationale and reference the science behind the assumptions made.

I conclude the responsible official appropriately addressed the impacts of climate change on project area vegetation.

Issue 8 - Roadless

Contention 8.1 – Roadless Analysis for Vegetation and Elk

Objector(s): Sara Johnson

An objector contends that the responsible official violated the Roadless Area Conservation Rule by not disclosing the amount of acres burned in previous fires in roadless areas, which would let the public know the amount of area needing to be restored from fire; and did not give an adequate definition of what "restoring or maintaining ecosystem function" in inventoried roadless areas means. Furthermore, vegetation and elk habitat condition will be degraded due to prescribed burning in roadless areas.

Response:

The EA describes historic fire information beginning on page 56 (*Issue/Indicator 1: Fire Regimes - Natural Range of Variation for Wildfire Acres Burned*) with a summary of acres burned by decade from 1940 to

2016 (p. 58). In addition, the EA contains a description of Natural Fire Regimes in the Middleman Project area beginning on page 59. Finally, Appendix A (*Proposed Treatment Units*) provides a good summary of all proposed treatments in Inventoried Roadless Areas (IRA) including the expected severity of the proposed burns.

Effects to elk habitat by alternative, including potential benefits from prescribed burning, are discussed in the following locations:

- 1) EA: Pages 114 – 116 - Alternative 2 Direct and Indirect Effects, Elk Summer Range, Hiding Cover on Summer Range
- 2) EA: Pages 117 – 118 - Elk Winter Range, Cover and Forage
- 3) EA: Pages 120 – 121 - Elk Security Areas
- 4) EA: Pages 131 – 132 - Conclusions – Rocky Mountain Elk

I conclude the responsible official adequately analyzed and disclosed the effects of proposed treatments within roadless areas. Furthermore, these treatments do not violate the 2001 Roadless Rule and meet requirements outlined in the October 24, 2018 Forest Service Chief's Letter to regional foresters outlining review and approval of certain activities in IRAs.

Contention 8.2 – Roads in Roadless

Objector(s): Steven McEvoy, Sara Johnson

Two objectors contend that roadless and recommended wilderness areas should not be entered unless a regularly used road currently exists.

Response:

The draft DN discloses that there is no new road construction or reconstruction proposed in any inventoried roadless area in the proposed action (p. 15). Thirty-one miles of existing, classified system roads, within IRAs, will be used during treatment activities. Approximately .9 miles of existing, classified system roads, within IRAs, will be used to haul forest products. These roads are all open to the public and are routinely maintained.

The map on page 487 of the EA (Appendix F, Map of Management Areas and Inventoried Roadless Areas Within Middleman Project area) displays where the Forest System Roads overlap with the IRAs within the project area. These roads were part of the North Belts Travel Plan Record of Decision (ROD) signed in May of 2005. The specific roads are listed in Appendix A of the ROD on pages 32 thru 42. The project record includes the Transportation Report which details the existing transportation network in the *Affected Environment* section (pp. 3-4). The 2001 Roadless Rule clearly states that "maintenance of classified roads is permissible in inventoried roadless areas."

In summary, I conclude the responsible official adequately analyzed and disclosed the effects of both the use and maintenance of existing roads within the inventoried roadless areas. Furthermore, the use and maintenance of these roads do not violate the 2001 Roadless Rule and meet requirements outlined in the October 24, 2018 Forest Service Chief's Letter to regional foresters outlining review and approval of certain activities in IRAs.

Issue 9 - Economics

Contention 9.1 – Economics

Objector(s): Stephen McEvoy

An objector contends, the responsible official puts economic values of timber sales and range management (increased forage need) over the values of elk hunting when both activities degrade the health of timbered and rangeland areas. The objector suggests that an EIS should be prepared.

Response:

Per the NEPA regulations (40 CFR 1508.14), social and economic effects by themselves are not meant to require preparation of an EIS. I have reviewed the Economics section the EA that includes both a financial efficiency and economic contribution analysis. The results of those analyses are among the many factors the responsible official considers. The financial analysis follows Forest Service Manual (2400) and Handbook (2409.18) in assessing financial efficiency of the timber harvest and required design criteria. The financial analysis is not meant to be a quantitative expression all market and non-market costs and benefits of the project. The financial analysis is not meant to be a quantitative expression of all market and non-market costs and benefits of the project. Many of the costs and benefits associated with a project, such as the effects to wildlife habitat, are not quantifiable in financial terms. These effects are described qualitatively in the various resource sections (e.g. wildlife) of the EA, and in the specialist reports included in the project file.

After reviewing the EA and the project file for the Middleman Project, I conclude that the project complies with NEPA and the Forest Service Manual and Handbook guidance on economics, and an EIS is not necessary for this project.

Issue 10 - Scenery

Contention 10.1 – View from Nearby Residents of the York community to Nearby Intermediate Harvest

Objector(s): Rich Jahr

An objector is concerned that the intermediate harvest of units 6 and 7 will create significant negative impacts to the viewshed if any type of immediate harvest were to take place.

Response:

Intermediate harvest was proposed for Units 6 and 7 in the scoping package for the proposed action (Middleman Scoping – Proposed Action with Proposed Harvest Treatments Defined Map 2). The objector submitted a scoping comment asking the responsible official to consider impacts to scenery and property values from Intermediate harvest. Intermediate harvest was still proposed in the preliminary EA (p. 441). After further review, the responsible official changed the treatment from intermediate harvest to prescribed burning in these units, as documented in the draft DN (p. 76). Furthermore, the draft DN includes design features that will ensure the impacts to scenery from prescribed burning will be minimized (pp. 57-58). Design criteria (SCE-2, SCE-4) require that fire personnel work with a scenery specialist to layout these units to minimize impacts to scenery.