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Title: Director

Comments: Objection

Against the Middleman Project

March 8, 2021

Objection Reviewing Officer USDA Forest Service Northern Region

26 Fort Missoula Road

Missoula, MT 59804

2. Name and Location of the Proposed Project.

Middleman Project Helena Ranger District

Helena-Lewis and Clark National Forest

1. Name of the Responsible Official.

Not identified in the draft DN, but could be either Bill Avey, Helena[shy] Lewis and Clark National Forest Supervisor, or Katherine Bushnell, Helena District Ranger.

4. Statement that Identifies a Connection between the Proposed Project and Prior Specific Written Comments by Objectors.

Native Ecosystems Council (NEC) and the Alliance for the Wild Rockies provided scoping comments on the Middleman Project on February 19, 2020 and comments on the draft environmental assessment on September 1, 2020. Our issues raised in the DEIS comments include the illegal use of a programmatic EA; a failure to define mitigation measures in order to demonstrate project impacts will not be significant; failure to complete an environmental impact statement; failure to complete Forest Plan monitoring requirements in order to evaluate

past vegetation management impacts on MIS; failure to define why failure to meet elk standards in the Forest Plan the currently occur in the project area do not trigger significant adverse impacts; providing false claims that proposed and cumulative impacts of Forest Plan amendments for elk and mule deer standards will not have significant impacts to these MIS; failure to define why exemptions to MIS standards for elk and mule deer are consistent with Forest Plan goals and objectives for big game; numerous false, unsubstantiated claims made in regard to project impacts on MIS mule deer; misleading analysis of project impacts on MIS goshawk, pine marten, flammulated owl, hairy woodpecker, and pileated woodpecker; failure to demonstrate that logging of unsuitable timber lands benefits wildlife; failure to provide an analysis of how the large openings that will be created will impact wildlife either directly, or due to habitat fragmentation; failure to monitor vegetation management impacts on

MIS during the planning period so that this information would guide management actions planned in the Middleman Project Area; failure to plan project activities within the timeline required by the NEPA; application of an invalid snag management strategy to the Middleman Project area, a strategy that was invalidated 25 years ago; failure to identify the planned loss of old growth in the Middleman Project Area as a significant wildlife impact;

providing false information to the public that logging old growth will maintain wildlife values; failure to complete a Forest Plan amendment to allow logging of old growth forests and logging of unsuitable timberlands; failure to evaluate the direct and cumulative impacts on migratory birds; failure to adhere to the Roadless Area Conservation Rule by implementing fuels management activities which create adverse impacts to wildlife and to whitebark pine; failure to define how the project will be implemented over the next 20 years; failure to complete any wildlife surveys in the 53,131 acres of wildlife habitat proposed for modification, while at the same time claiming no significant adverse impacts will result from this lack of surveys; providing false information to the public that the treatment on 53,131 acres, and many miles of new road construction and maintenance/improvement will not create significant new infestations and/or expansions of noxious weeds and invasive annual grasses as cheatgrass; failure to substantiate claims that removal of trees and shrubs in ecotones will produce wildlife benefits, to both nongame and big game species, based on either Forest Plan monitoring of past ecotone burning, as well as published science; failure to identify that the massive proposal will have severe adverse impacts on the wolverine and grizzly bear, including movement corridors.

These DEIS comments are being incorporated by reference into our objection, in order to avoid repetition and simplify the objection. We have added one new issue that arose since we provided DEIS comments, and that is the refusal of the Forest Service to provide hard copies of project NEPA documents.

5. Additional Information Provided with this Objection

We have included 6 appendices along with this Objection. Appendix A includes literature cited on goshawks; Appendix B includes literature on various wildlife topics discussed in the Objection; Appendix C contains an Attachment defining logging impacts on western forest birds; Appendix D includes relevant portions of literature in this Attachment; Appendix E includes an Attachment addressing opening impacts on wildlife; Appendix F includes relevant portions of literature cited in that Attachment; and Appendix G includes copies of correspondence between NEC and the Forest Service on requests for hard copies of documents, as well as an agency reference that the public could request hard copies of Middleman documents.

6. Suggested Remedies.

This project has so many legal violations, violations that will be addressed below, that planning for such needs to be cancelled. Any future planning for this project should be done within the confines of the NEPA and NFMA, including limitations of opening sizes and limitation of project scope to one that the public can easily review and one that the agency can complete the minimum level of wildlife surveys and provide a reasonable level of information to the public as to how the project will be implemented on yearly basis, but what the impacts will be to wildlife, including current issues on elk displacement to private lands, based on past Forest Plan monitoring, the current best science, and high-quality wildlife surveys in the proposed project areas. In addition, any proposal needs to exclude proposed activities within the 5 IRAs in the project area, unless the agency can provide valid data that management intervention is needed in order to maintain or promote wildlife habitat, and will not result in drastic increases of noxious weeds.

7. A Description of those Aspects of the Project Addressed by the Objection, including Specific Issues Related to the Project, as to How They Violate Law, Regulation or Policy.

1. The Middleman Project will result in violations of the National Environmental Policy Act (NEPA), the National Forest Management Act (NFMA), the Administrative Procedures Act (APA), the Roadless Area Conservation Rule (RACR), and the Migratory Bird Treaty Act, including the requirement to obtain a "take permit" when killing of migratory birds will occur as a result of project activities.

The various violations noted above regarding law, policy or regulation are broken down into the following 17 sections for clarity.

Goshawk Management.

The goshawk is a management indicator species for the Helena portion of the Helena-Lewis and Clark National Forest. Management of this MIS on this portion of the forest, as well as existing and proposed management within the Middleman Project Area, violations the NEPA, the NFMA, and the APA. The following are examples of these violations.

1.

1. The agency provided no population monitoring data for this MIS, either on the Forest or within the Middleman Project Area. Population trends are unknown. Impacts of past management on the Forest and within the Middleman Project Area are unknown. Yet the agency claims this project will not impact forest viability. The Lewis and Clark portion of this national forest has, on the other hand, adhered to the NFMA and has over the years completed extensive monitoring of goshawks which includes habitat use (USDA 2004). The reason why the Helena portion of this forest does not monitor goshawks is clearly not because this is an impossible requirement.

1.

1. The recently-implemented Castle Mountains Restoration project on the Lewis and Clark portion of this forest mapped goshawk territories and post-fledging areas across most of the entire 80,000 acre project area (USDA 2019). There are at least 11 known goshawk territories mapped for this project area. In addition, post-fledging

areas (PFAs) have been mapped, and habitat evaluated within these PFAs (Id.). This was done to measure how proposed vegetation treatments may impact PFAs. This is critical in order to measure impacts of vegetation management, as PFAs have been defined as a critical habitat management area on this forest by Murphy (2014). For the Middleman Project, there were no goshawk territories mapped, and the number of territories and their locations are apparently not known. There were no PFAs identified or mapped, even though habitat conditions within these PFAs are key to productivity. Murphy (2014) noted, after many years of monitoring goshawks on the Lewis and Clark portion of this forest, that PFA habitat is very limited and protection of these areas is essential in order to maintain goshawk productivity.

2. In the analysis of the Middleman project, the agency notes that "site specific" data is best to use in an analysis of impacts on wildlife. There is extensive site-specific information on goshawk habitat use on the Lewis and Clark portion of this forest, information that was not used in proposed management of the goshawk in the Middleman project area. For example, monitoring on the Lewis and Clark portion of this forest (USDA 2004) reported that on that forest, goshawks are selecting habitat with an average of 11 percent grassland, 2 percent clearcut/seedlings, 1 percent sapling, 14 percent old forest, and 68 percent coniferous forest. No comparisons were made between these on-the-ground habitat descriptions, based on long-term monitoring, for the Middleman Project. It was noted that these selected habitat conditions are quite similar to those recommended by the southwest goshawk guidelines by Reynolds and others (1992).

1.

1. The 2004 Lewis and Clark Forest monitoring report noted that goshawk PFAs have on average 14% old growth. There was no discussion in the Middleman Project goshawk analysis as to how the very low level of old growth in the Middleman Project area, less than 5%, has impacted goshawks.

1.

1. The vegetation composition of occupied PFAs on the Lewis and Clark portion of this forest is 22% old forest, 67-68% coniferous forest, 2- 3% saplings, 4% clearcut, and 12% grass (USDA 2004). This site-specific data, based on a large number of known goshawk territories, was not used for the Middleman Project.

1.

1. The agency's failure to use site-specific data on goshawk habitat use for the Lewis and Clark National Forest means that there can be no valid analysis of project impacts on this MIS.

1.

1. The agency claims that there will be no impact on goshawk prey species from the Middleman Project, even though prey species may change. This is implausible. There is research that demonstrates the squirrels are a key prey species for goshawks, in both Arizona (Reynolds 2011) as well as in Montana (Clough 2000), and also, in Wyoming (Squires 2000). Logging reduces red squirrel populations in concert with the amount of forest removed (Herbers and Klenner 2007; Holloway and Malcolm 2006). Overstory and understory thinning will also reduce snowshoe hares (Holbrook et al. 2017b). Snowshoe hares are also an important goshawk

prey species in Montana (Clough 2000), as well as on the Lewis and Clark portion of this forest (Johnson 2015; Murphy 2014).

1.

1. Young goshawks will not be protected from disturbance up to middle August, when they can sustain flight, because nesting sites are not identified in the Middleman Project Area.

1.

1. There was no analysis of how the proposed created openings, ranging from 57 to 1,634 acres, will affect goshawk habitat in the Middleman Project. Reynolds et al. (1992) notes that openings over 4 acres in size should not be considered as goshawk habitat. This is consistent with site-specific monitoring on the Lewis and Clark portion of this forest where goshawk post-fledging areas had an average of only 4% clearcut, while home ranges had only 2 percent clearcuts. The proposed openings will eliminate vast portions of goshawk habitat in this project area, but the impact on individual goshawk home ranges is never addressed. At a minimum, the agency has site-specific information from monitoring on the Lewis and Clark portion of this forest that goshawk home ranges on average have 14% old forest and 68% coniferous forest, coming to 82% of the home range. This site-specific data needs to be used to measure the impact of the proposed large openings on goshawk home ranges. What percentage of these home ranges will be removed as goshawk habitat for decades, and how will this impact goshawk populations in the project area. An opening of 1,634 will eliminate 27% of a goshawk territory. Why wouldn't this affect the quality of this habitat for goshawk breeding? Also, it was unclear as to why these large openings are claimed to provide future benefits to goshawks when they grow back to mature forests. This is 100 years or more, so why is this considered a benefit? Since PFAs are not identified for the project area, it is unknown how many openings will be created in these PFAs, which typically have only 2-3% openings on this landscape.

The proposed created openings in lodgepole pine forests will also have an adverse impact to goshawks commensurate to the size of the created openings in lodgepole pine forests because development of complex, mixed conifer forests will be terminated (Malcolm 2012). This succession of these lodgepole pine stands to subalpine fir create optimum habitat for snowshoe hares, a very important prey species for goshawks on the Lewis and Clark portion of this forest (Johnson 2015; Murphy 2014). Clearcutting eliminates the shade required for subalpine fir to regenerate. The loss of subalpine fir means that the optimal forage provided by lodgepole pine to snowshoe hares (Holbrook et al. 2017b) will not develop the high-quality hiding cover that would be provided by subalpine fir (Malcolm 2012). This severe adverse impact of clearcutting on goshawks was never identified in the Middleman project analysis..

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1. As noted from site-specific monitoring on the Lewis and Clark portion of this forest (USDA 2004), as well as the southwest goshawk guidelines (Reynolds et al. 1992), goshawks select habitat that is predominately forested (80% or greater). Research demonstrates that as landscape become more open, habitat transitions from

goshawks to red[shy] tailed hawks (La Sorte et al. 2004). Red-tailed hawks are a very common generalist species; Swant (2015) reported that in Montana, red-tailed hawks were observed 2,947 times between 2003 and 2011, while goshawks were observed only 540 times. There is no analysis in the Middleman Project as to what level of forest removal will cause a conversion of goshawk habitat to red-tailed hawk habitat.

1.

1. There was no analysis in the Middleman Project on how the vast acres of proposed prescribed burning will impact goshawks. One factor that is clearly an adverse impact of this burning is the agency's intent to remove conifers and various brush species at the edge of the timberline, of what constitutes "ecotones." The rationale for removing trees in these ecotones was never provided in any specific terms, like why this is needed for wildlife habitat. These lower elevation ecotone areas are essential for young goshawks after they fledge and leave the parent territories to forage for themselves (Wiens et al. 2006). These young birds are also highly vulnerable to starvation at this time, so removing habitat for prey species as rabbits that depend upon good hiding cover in these woodlands is a direct conflict with maintaining this MIS. Id.

1.

1. The agency did not adhere to the NEPA by defining why goshawk surveys for the Middleman Project Area could not be done to identify and map all post-fledging areas, as is done on the Lewis and Clark portion of this forest. Until valid, multi-year surveys are done in the project area, this project needs to be postponed so that actual impacts to the goshawk, a forest MIS, can be determined as is required by the NEPA.

Flammulated Owl Management

1. The flammulated owl is listed as a Species of Conservation Concern for landscapes that include the Middleman Project, within BCC 10, including the Helena-Lewis and Clark National Forest (MTNHP.org-SOC Report 4/16/2020). It is also listed as a sensitive species for this forest. Id. The Forest Service defines a sensitive species as one for which population viability is a concern as evidenced by a significant downward trend in populations of habitat capacity. The Forest Service defines a Species of Conservation Concern as follows: a species, other than federally recognized Threatened, Endangered, Proposed, or Candidate species, that is known to occur in the plan area and for which available scientific information indicates substantial concern about the species' capability to persist over the long-term in the plan area (36 CFR 219.9).

1. The flammulated owl is known to occur on the Helena-Lewis and Clark National Forest, including in the Big Belt Mountains where the Middleman Project is located (Cilimburg 2006). There are 44,170 acres of mapped flammulated owl habitat in the Middleman Project Area (Project non-game report, Table 16 at page 74). None of these 44,170 acres of flammulated owl habitat has been surveyed for owls at least since 2008 when the Montana Natural Heritage Program and the Northern Region Landbird Monitoring Program funded surveys on portions of the Helena-Lewis and Clark National Forest.

1. Of the mapped flammulated owl habitat in the Middleman Project Area, 5,809 acres will be logged, 48 acres

will be precommercially thinned, and 11,349 acres will be prescribed burned (Project Non-game Report Table 16 at page 74). There have been no flammulated owl surveys conducted within these 17,205 acres of planned vegetation treatments. These impacts represent 39% of all mapped flammulated owl habitat in the Middleman Project Area.

1. The potential for destruction/degradation of flammulated owl nesting territories due to these treatments on 17,205 acres can be estimated based on reported territory size for flammulated owls. Linkhart et al. (1998) estimated flammulated owl territories as ranging from 30-60 acres, while Linkhart and Renolds (1997) reported 14 flammulated owl territories within a 1,130 acre study area. These indicate that as a general estimate, flammulated owl territories may average out to roughly 1 territory per 80

acres, given that all portions of a landscape may not provide suitable habitat. Thus the planned logging of 5,809 acres of mapped flammulated owl habitat in the Middleman Project Area would impact roughly 72.6 owl territories; burning of 11,349 acres of mapped habitat could potentially impact 142 owl home ranges. This would create a cumulative impact on up to 215 flammulated owl territories in the Middleman Project Area.

1. The Forest Service analysis of flammulated owl habitat in the Middleman Project Non-game Report notes that they select open-grown, old growth forests as breeding habitat; they are cavity nesters; nesting trees include clumps of dense cover. It is claimed that logging trees out of flammulated owl habitat would improve habitat by creating a more open forest structure preferred by owls, while clumps of dense vegetation would eventually return; prescribed burning is stated to benefit flammulated owls by creating open understories and promote shrub growth which are important to these owls. No published reports were cited where logging and burning flammulated owl habitat promoted occupancy by this species. These are unsubstantiated claims that misrepresent project impacts to the public, in violation of the NEPA and the NFMA.

1. Wright et al. (1997) summarized the estimated impacts of logging on flammulated owls in Montana as follows:

Selective logging that removes large ponderosa pine or Douglas-fir trees would be expected to decrease the availability of early-season feeding sites, song and roost sites, and trees for snag recruitment in areas already limited in large snag abundance; without studying reproductive success relative to large tree density to gather information on habitat quality, it may be risky to selectively harvest large ponderosa pine or Douglas-fir trees or snags from current habitat.

Occupied habitat in selectively-logging stands in our study area contained fewer large (over 15 inches dbh) snags than selectively-logged stands around unoccupied plots, indicating owls use stands that had been harvested less intensively.

The evidence is clear that flammulated owls occupy, and sometimes nest in selectively-logged stands; however, inferences about habitat quality, such as comparing unlogged and selectively-logged sites should be saved for

studies that incorporate measures of reproductive success and survivorship;

present/absence data provide valuable information about which habitats are completely unsuitable; however, it is inappropriate to assume equal habitat quality among all occupied areas; 2 forest types may appear suitable based on occupancy data, but reproductive or survivorship data could indicate one type provides high-quality habitat than another; thus our results provide information about which microhabitat and landscape conditions were completely unsuitable in our study area, rather than information about the relative habitat quality of occupied sites.

While the elimination of some understory forest would be expected to maintain the grassland openings used by foraging owls, management activities that eliminate all understory Douglas-fir may remove thickets important for roosting and singing, for drop-pounce foraging perches, and for predator protection cover.

1. It is clear that logging and prescribed burning may eliminate suitable flammulated owl habitat and territories, as well as suitable snags for nesting. Holloway and Malcolm (2006) reported that selective logging reduced the density of larger snags over 9 inches dbh by 58%. Large, open[shy] canopied old fir and pine trees will also be reduced, habitats that are key to early-season foraging by owls. And random burning out understory cover will eliminate hiding cover, roosting cover, and singing cover for owls, and thermal and hiding cover for fledged owlets.

1. The agency falsely concluded the following for flammulated owls: effects would be a mix of short-term reductions in habitat and longer-term improvements; overall and long term, effects to habitat should be beneficial; design criteria would retain nest sites "if they are encountered during implementation; the proposed action may affect individual flammulated owls but is not likely to result in a trend towards federal listing or loss of viability. In effect, the agency contends that impacting 38% of flammulated owl habitat, and potentially 215 territories, will not significantly affect viability, since this proposal is being implemented under an Environmental Assessment (EA), not an Environmental Impact Statement (EIS). There are no required mitigation measures to protect any occupied flammulated owl nesting site, as no surveys have been conducted. The population trend for this owl on the Helena-Lewis and Clark Forest is unknown due to a lack of monitoring. The cumulative loss of habitat from past logging projects, where there were also no flammulated owl surveys done, is unknown. The agency clearly has no basis for claiming that the Middleman Project will not have

direct and cumulative significant diverse impacts on this Species of Conservation Concern.

1. In addition to the direct removal of suitable habitat for the flammulated owl, this project, where 17,205 acres of potential mapped owl habitat will be logged or burned, may cause direct mortality to owls, in violation of the Migratory Bird Treaty Act (MBTA). There are no mitigation measures implemented to protect mapped owl habitat during the nesting season, so a unknown amount of direct mortality to young owls is likely to occur. McCallum (1994) identified the egg-laying period for owls as follows:

New Mexico: 5/16-6/4 Colorado: 5/29-6/14 Oregon: 6/12

British Columbia: 7/1-75 (likely re-nesting)

McCallum (1994) identified the range of hatching dates for flammulated owls as follows:

New Mexico: 6/6-6/28 Colorado: 6/20-7/6

McCallum (1994) identified the range of fledging dates for flammulated owls as follows:

New Mexico: 6/27-7/24 Oregon: 8/15-8/19; 7/19-8/1 Colorado: 6/13-7/29

British Columbia: 7/15-8/16

McCallum noted that newly-fledged owls remain within 100 meters of the nest tree for one week before expanding movements. Thus the first week following fledging will also be critical for protection of young owlets from disturbance.

The Forest Service did not make any attempt to protect mapped flammulated owl habitat during the nesting season where vegetation treatments would be implemented. There was no attempt to estimate the potential for direct mortality to flammulated owls that will result from vegetation treatments on 39% of the mapped habitat in the project area, even though the agency concluded these treatments will not significantly impact viability in the project area.

1. The essential information in regards to project impacts on the flammulated owl, a Species of Conservation Concern, has not been collected by the Forest Service. This is the completion of valid surveys to locate flammulated owl nesting sites in the mapped habitat. The agency did not identify that this type of information could not be derived, and indeed, flammulated owl nesting sites can be located during surveys (Linkhart et al. 1998). There was no information ever provided as to why surveys were not completed, since these could have been done. So the agency is violating the NEPA by claiming that the level of environmental impact on flammulated owls was reasonably determined to be insignificant in spite of a lack of surveys. In addition, the agency failed to identify why surveys were not possible to be conducted. Given that surveys have not been done, the NEPA requires that the agency eliminate all mapped flammulated owl habitat from treatment, since impacts of these treatments are unknown and potentially significant. Or the project could be postponed until valid, multi-year flammulated owl surveys are conducted in all mapped habitat.

Old Growth Management

1. The Forest Service is implementing multiple new directions for old growth over Forest Plan direction without completing any Forest Plan amendments, in violation of the NMFA. The Helena Forest Plan defines old growth as "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 tree tops, and moss. The Forest Service notes, however, that "some" old growth selected in the Middleman Project is based on Green et al. 1992 minimum old growth criteria. Most of the selected stands for old growth management appear to be Douglas-fir, as was noted by the agency, even though most of the identified stands have no species identified. The minimum criteria for Douglas-fir old growth types 1, 2 and 3 for Eastside Forests is only on characteristic, the number of large old trees, which are 4, 5 and 10 large trees, respectively. These old growth criteria are not the same as Forest Plan direction.

In addition, the agency has added another new criteria for old growth designation in the Middleman Project Area, a criteria that is not included in the Green et al. 1992 minimum criteria. This additional criteria is eliminating from old growth consideration those forest stands with medium to high levels of dead material. The white paper on old growth management states that stands identified as old growth outside of 3rd order drainages, or as excess within 3rd order drainages, were reviewed to determine categories of mortality, from low to high; stands with moderate or high level of mortality were assumed to no longer be old growth, and were dropped from consideration. So a key characteristic of old growth, or standing and downed dead material, is identified as a quality that disqualifies stands as old growth in the project area. It is not clear why stands that meet the minimum number of large old trees would not qualify as old growth because there are too many dead trees. The Green et al. (1992) criteria do not identify that old growth is not suitable if there are too many dead trees. So in effect, the Green et al. 1992 criteria are being superseded by yet another criteria, which also has not been amended into the Forest Plan.

1. The agency did not demonstrate why almost none of the lodgepole pine stands in the Middleman Project Area do not meet the minimum criteria for large trees as per Green et al. (1992). This would require 12 lodgepole pine trees per acre over 10 inches dbh. That almost no such stands exist seems highly implausible. There were only 3 lodgepole pine stands identified for old growth management: stand 016 at 2103, stand 023 at 3905, and stand 34 at 5103, totally 78 acres of the 5,978 acres of forests identified for old growth management in Table 3 of the old growth white paper. So the agency is providing false information to the public by saying that old growth stands were selected based on the minimum criteria of Green et al. (1992). The age factor was not likely the basis for this massive exclusion of lodgepole pine old growth, since many stands were selected based on the "next best thing." The agency notes that field validation of old growth stands is not even complete at this time, but will be done "prior to implementation". There is no actual valid old growth inventory that has yet been done in order for the agency to apply the Green et al. (1992) criteria. It appears that lodgepole pine stands have been deliberately avoided in designations of old growth and the next best old growth stands, simply to promote clearcutting of these lodgepole pine stands. The acreage of suitable lodgepole pine old growth that is being harvested in this project is unknown. Failure to provide valid analysis data, which in turn misleads the public as to how this landscape is being managed, is a violation of the NEPA.

2. The ecosystem value of unlogged older lodgepole pine stands is enormous, and this value is never noted in the Middleman analysis, including as to why lodgepole pine stands were excluded for old growth designation. Lodgepole pine stands that are not logged will progress into high quality complex forest stands important to species as the pine marten (Chapin et al. 1997), an MIS for the Helena National Forest. Clearcutting lodgepole pine eliminates not only the current developing high values of these stands to wildlife, but permanently impacts the longer-term development of mixed conifer stands with high levels of subalpine fir due to removal of shade

(Collins et al. 2011; Malcolm 2012). The planned clearcutting of lodgepole pine habitat in the Middleman Project Area will have long-term and significant adverse impacts to wildlife, impacts that were never disclosed in the EA.

1. The agency provides conflicting information on the current level of old growth in the Middleman Project Area. The white paper on old growth, page 1, states there are 7,253 acres of old growth in the project area, or 6%, based on limited FIA data. Based on completed field surveys within this project area, only 1,194 acres of forest meet the Green et al. (1992) definition of old growth. This equates to 1.4% percent old growth in the 3rd order drainages of the project area. The Forest Plan standard is 5%.

1. In addition to 1,194 acres of verified old growth as per Green et al. (1992) in the 3rd drainages, 772 acres of TBT (the next best thing) were identified based on stand exams, and another 1,445 acres were tentatively identified for old growth management that require field verification. So currently, 65% of stands selected for old growth do not actually meet the minimum criteria for Green et al. (1992), even though these are the criteria the agency has substituted for Forest Plan old growth criteria.

1. A significant portion of the landscape on the Helena National Forest actually has no old growth requirements, since these areas are outside of 3rd order drainages. The Middleman Project Area comprise 80,860 acres of Forest Service land within 3rd order drainages (Table 2 in old growth white paper). The Middleman project area totals 134,491 acres of Forest Service lands. Thus 60% of the project area is in 3rd order drainages that require old growth management. And 40% of this project area does not require old growth management. In effect, the Forest Plan old growth standard requires 5% old growth on 80,860 acres, or 4,043 acres of designated old growth. For the landscape, this requirement is 3% old growth.

1. As noted above, the required level of designated old growth on the Helena National Forest is roughly 3%, at least in the Middleman Project Area, given that no old growth is required outside of 3rd order drainages. The current best science for old growth wildlife requirements range from 20-25% for forest birds (Montana Partners in Flight 2000), 20% of the MIS goshawk (Reynolds et al. 1992), and 25% for the MIS pileated woodpecker. The Middleman project NEPA analysis does not identify this conflict, or how it is impacting the viability of 2 MIS for the Helena Forest Plan. Failure of the agency to disclose that old growth requirements for the Helena Forest Plan, including in the Middleman Project Area, are significantly below (3% versus 20-25%) the levels recommended by the current best science is a NEPA and NFMA violation, as viability of old growth wildlife in this area is likely not being met. The Forest Plan direction is not capable of sustaining old growth MIS based on current science. In addition, the agency has yet to provide any Forest Plan monitoring data that indicates otherwise. Monitoring data on the Lewis and Clark portion of this forest clearly indicates that 3% landscape old growth is unsuitable for the goshawk, which selects areas of 14% old growth (USDA 2004).

1. The agency claims that old growth designated stands can be logged and burned without degrading quality for wildlife. There is no provision in the Helena Forest Plan for treating old growth habitats. The proposed treatments in designated old growth in the Middleman Project are a violation of the Helena Forest Plan. The old growth white paper notes that 42% of the potentially designated old growth in the project area will be logged or burned.

1. The claims made in the Middleman NEPA analysis that logging and burning designated old growth will maintain its old growth values is a violation of the NEPA, because no monitoring data or published science was provided to support this claim. An Attachment included with this objection on logging impacts on western forest birds addresses how logging and burning older forest stands will degrade habitat for many wildlife species. A brief summary of this attachment follows. We noted there are roughly 20 species of forest birds on the Helena National Forest that are associated with old growth forests. As noted in this Attachment, logging old growth stands will eliminate jack-strawed logs, an important structure in old growth as access under the snow for pine marten, and escape routes into the canopy for young raptors, as the great gray owl. It will open stands and make forest

raptors more vulnerable to predation. Opening stands will increase summer temperature extremes, including for forest owls sensitive to heat. Forest thinning will increase snow crusting during the winter, to the detriment of forest owls and mammals as the pine marten. Forest thinning will reduce insect infestations upon which migratory songbirds and woodpeckers as the sensitive black-backed woodpecker, depend to raise their young. A loss of woodpeckers means that the 25 forest bird species dependent upon snags will have fewer nesting cavities created. Thinning will reduce conifer seed production upon which roughly 17 western forest birds depend upon, as well as the red squirrel, which is an important prey species for the MIS goshawk and MIS pine marten. Also, many small mammals important as prey to forest mammals and forest raptors depend upon conifer seed production.

Thinning will reduce habitat for the snowshoe hare, which is an important

prey species for the MIS goshawks and MIS pine marten. Thinning can convert dense forest landscapes required by the MIS goshawk into open forest landscapes that benefit the very common raptor, the red-tailed hawk. Understory burning of designated old growth stands will eliminate the understory hiding cover essential to most western forest birds once they fledge and are flightless for a day or more, in order to avoid predation. This understory vegetation will also protect ground-nesting migratory birds, as well as flightless fledglings, from severe weather, including precipitation as well as winds and heat, and severe spring storms in goshawk nesting areas. Thinning will reduce the density of larger snags in the stand, and impact 25 western forest bird species that use snags as nesting habitat.

1. The agency repeatedly claims that the proposed treatments, which would include logging and burning old growth stands, is needed in order to restore the historic range of natural variation. The current level of old growth in the Middleman Project Area in 3rd order drainages is 1,194 acres. The 3rd order drainages consist of 80,860 acres (Table 2 of the old growth white paper). This means that these drainages currently have 1.5% old growth. Although this level is likely higher, since the agency has apparently excluded most of the lodgepole pine stands for old growth designation. The historic natural variation of old growth in the Northern Rockies is 20-50%

(Lessica 1996). Logging will not maintain the existing level of old growth. So the agency's rationale for restoring old growth into the natural range of variation is false, in violation of the NEPA.

1. The total acres planned for old growth designation, not old growth management, is 5,978 acres (Table 3, old growth white paper). This would represent 4.4% of the Middleman project area. The proposed logging of 633 + 484 acres, and burning of 1,389 acres of old growth, will eliminate old growth characteristics on 2,506 acres of this potential old growth. This will leave 3,413 acres of forests that may be managed for old growth, which is

2.6% of the project area. Thus the Middleman project proposes to reduce suitable or developing old growth further below the historic range of variation, which is 20-50% (Lessica 1996). This proposal is therefore a direct contradiction of one of the stated purposes of this project, and is misleading to the public, in violation of the NEPA.

Analysis of Large Openings

1. The agency notes that created openings will range from 57 to 1,634 acres (EA 17, 75). These openings are identified in Table 1 in a summary of proposed openings - 4/27/2020. The average size of created openings will be 310 acres. Two openings will be 1,321 and 1,634 acres in size, which would be 2 and 2.6 square miles in size. In spite of no actual analysis of these created large openings on wildlife on 5,892 acres, including 6 Helena Forest MIS, the agency claims these impacts were estimated to not be significant.

1. The extent of the agency's analysis of wildlife impacts created by 5,892 acres of openings over 40 acres in size is limited to a summary of acres of logged habitat in habitat mapped for 4 MIS, the hairy woodpecker, pine marten, northern goshawk, and pileated woodpecker. For these species, as identified in Table 3 of the project non-big game report, logging will remove 9%, 11%, 11% and 9%, respectively of forest habitat for these MIS. The acreage of logging that will include large openings is never identified, although it may be the majority of the 6,377-6,552 acres of habitat identified for these 4 MIS. As noted previously, 5,892 acres of large openings are planned. The acreage of smaller openings under 40 acres is unknown, but would contribute to the cumulative loss of forest habitat for these 4 MIS.

1. The agency has violated the NEPA and NFMA by failing to evaluate how the planned creation of 5,892 acres of large openings, which will average 310 acres, will impact MIS, as well as migratory bird species, and a large spectrum of forest wildlife due to forest fragmentation..

2. The pine marten was re-introduced into the Big Belt Mountains in the mid-1950s (Murray 2021). They are still present, although their numbers are unknown. Id.

1. The pine marten is an MIS for mature forest habitat. A recent discussion of pine marten in the Bozeman Daily Chronicle (Murray 2021) noted that this species is tied to complex, multi-story older forest types as per MFWP biologist Jay Kolbe reported; he also noted that the likelihood of survival of pine marten in areas with a lot of openings, whether it's man[shy] made or natural is much less; they're way more susceptible to avian predators (eagles, owls, hawks) and coyotes, they're loath to even use openings within forested areas.

1. A valid analysis of openings impacts on the MIS pine marten would require a measure of existing and planned mature forest habitat within all estimated pine marten home ranges in the Middleman Project Area. Openings will remove this MIS habitat. The level of mature forest habitat per average pine marten home range was not identified. The amount of mature forest habitat that will be removed via openings in each estimated pine marten home range was not identified. The average size of pine marten home ranges for females will average about

1,160 acres for females, and 1,750 acres for males (Warren 1990). Thus the location of large openings within an estimated home range could remove the entire home range, or a large percentage of it, rendering it unsuitable for pine marten. The impact of large openings on this MIS are unknown, since the percentage of home ranges that will be rendered unsuitable due to the large openings was not identified.

1. A valid analysis of openings impacts on the MIS goshawk was not done for the Middleman Project. The only analysis of project impacts was limited to the total acreage of goshawk habitat that would be removed with logging. The estimated distribution and number of goshawk territories in the Middleman Project Area was never identified. Thus the current level of openings in an average estimated goshawk territory is unknown. Monitoring on the Lewis and Clark National Forest indicates that goshawks select habitats with only about 2% openings (USDA 2004). Thus the level of openings to be created in estimated goshawk home ranges will be crucial to viability of these home ranges. The impact of the proposed openings will likely be highly significant to active goshawk home ranges, since the current best science (Reynolds et al. 1992) notes that openings over 4 acres should not be considered goshawk habitat. This is consistent with monitoring on goshawk habitat use on the Lewis and Clark National Forest (USDA 2004). The planned openings of 1,321 and 1,634 will remove a potential 22-27% of a goshawk territory, which would be a significant loss of foraging habitat, and render the home range unsuitable for breeding. These removals could also occur in critical post-fledging habitat, which could eliminate the suitability of this home range for breeding. As well, creating openings up to several square miles will likely convert goshawk home ranges into red-tailed hawk home ranges. Without a measure of openings to be created in estimated goshawk home ranges, the impact of openings remains unknown.

1. There was no analysis of opening impacts on MIS pileated woodpecker, even though the agency claims no significant adverse impacts will occur to wildlife. There are no maps of estimated pileated woodpecker home ranges in the Middleman Project Area, home ranges that should be 900 acres in size (Bull and Holthausen 1993). The current best science recommends that there be no clearcutting in pileated woodpecker home ranges (Bull and Holthausen 1993). This 1993 recommendation was supported by subsequent research results reported for a 30-year monitoring program on pileated woodpeckers where a severe loss of pileated woodpecker nesting pairs (from 5 to one pair) occurred only in areas that were extensively clearcut (Bull et al. 1997). The agency needs to provide a map of estimated pileated woodpecker home ranges, along with the existing level of openings, as well as the proposed level of openings for each estimated territory. The level of clearcutting per estimated pileated woodpecker territory would provide a measure of the proposed habitat loss for each 900 acre territory. This percentage of planned habitat removal per home range would provide a general measure of the expected impacts of large openings, including at the site-specific level.

1. There was no analysis of opening impacts on the MIS hairy woodpecker in the Middleman Project. This species is noted by the agency to be indicated by mature forest, where trees are at least 10 inches in diameter, the size needed for a cavity tree (Bull et al. 1997). A logical measure of hairy woodpecker habitat would be drainages across the Middleman project area, since territory sizes are too small to map. The current level of hairy woodpecker habitat per drainages needs to be defined, as well as the proposed level of habitat that would remain once the 5, 892 acres of large openings are created from logging. The current and planned level of suitable forest habitat to be retained in each drainage would provide a general measure of the impact of large openings, since these create intensive local impacts to species as the hairy woodpecker due to habitat loss.

1. There was no analysis of how the proposed large openings to be created would impact the flammulated owl, a Species of Conservation Concern. Their habitat was mapped for the project area, but the overlap of proposed large openings within this mapped habitat was not defined to the public. Any openings at 80 or more acres will most likely remove an entire flammulated owl nesting territory in mapped habitat. Logging is planned on 5,809 acres of flammulated habitat. This could include all of the planned 5,892 acres of large openings. The estimated number of flammulated owl territories that will be eliminated or heavily impacted with these large openings needs to be defined to the public, along with some criteria as to what level of population/habitat loss is considered to be significant.

1. There was no analysis of the impact of the proposed large openings on western forest birds, which are neotropical migrants. Although not MIS or Species of Conservation Concern on the Helena-Lewis and Clark National Forest, their viability is a recent management concern due to large population declines since the 1970s (Rosenberg et al. 2019). Large openings will eliminate habitat for these species, which in general include about 50 species that would occur on the Helena-Lewis and Clark National Forest. These species are summarized in an Attachment provided to this objection titled "Attachment for Logging Impacts on Western Forest Birds." Although this was initially developed for western forest birds that are found on the Lolo and Flathead National Forests, these birds would also generally occur on the Helena-Lewis and Clark National Forest. These birds that will be harmed by clearcuts, including large openings which will remove significant amounts of habitat locally, include 20 species associated with old growth forests, 25 species associated with snag habitat within forests, 15 species associated with older, relatively undisturbed forests, and 17 species that feed on conifer seeds. Research has also shown that 30 of these species are adversely impacted by clearcutting and significant forest thinning. When the overlap of similar habitat associations are addressed, these species total about 50 bird species. Exclusion of these 50 species of western forest birds from any assessment of large openings means that no valid NEPA analysis of opening impacts on wildlife has been done for the Middleman Project, in violation of the NEPA. A logical analysis of project impacts of openings on western forest birds would be by each drainage in the Middleman Project Area, as would also be suitable for assessment of impacts on the MIS hairy woodpecker.

12. There was no analysis of the impacts of large openings on MIS elk security in the Middleman Project. There are 2 current definitions of elk security, and both (Hillis et al. 1991) and Lowrey et al. (2020) define security as hiding cover. So clearcuts will remove elk security. As was noted by research in the Elkhorn Mountains of the Helena National Forest, pine beetles did not have any significant impact on elk use. Canopy cover of infested stands was only reduced from 77% down to 69%, or by 8%. These canopy cover levels still fell within the 40% canopy cover definition used on the Helena National Forest as elk hiding cover. So the creation of 5,026 acres of large openings, in 19 units with an average size of 265 acres each, will clearly remove elk security, even if roads are closed following treatments. The creation of these large openings that will remove elk security cannot be fully mitigated by road closures, so their effect must be identified. This was not done in the Middleman NEPA analysis. Specifically, as per the analysis for large openings, there was no information ever provided to the public as to how many elk security areas will be removed as a result of these openings, within each of the 5 elk analysis areas.

1. The fragmentation impacts of the proposed large openings was not assessed in the Middleman Project NEPA analysis. We have attached our analysis of fragmentation impacts of openings on wildlife, titled "Attachment on Opening Impacts on Wildlife." Species that were addressed as per impacts of fragmentation include the red-backed vole, the northern flying squirrel, the pine marten, the Canada lynx, the northern goshawk, the pileated

woodpecker, the three-toed and black-backed woodpeckers, snowshoe hares, red squirrels, western forest birds, and elk. Openings create barriers to movements for all these species, and reduce the local size of forest blocks, possibly below the minimum size requires for occupancy, such as for the brown creeper, who needs large blocks of habitat up to 250 acres in size.

1. The overall fragmentation impacts of the proposed large openings, some of which will be several square miles in size, will surely create highly significant adverse impacts to many if not most wildlife species that occur in this landscape. The agency conclusions, without any supporting analysis, that fragmentation impacts will not significantly affect wildlife are a violation of the NEPA, NFMA, and APA.

Forest Service Violation of the 40-acre Opening Limit as per the Forest Plan and as per the NEPA and APA.

1. Table 1 in the agency's summary of proposed openings over 40 acres shows that there are 24 units over 40 acres. There are actually 25, since one unit has 2 types of reasons for the unit, one being a catastrophic insect mortality (opening ID 11). Of the total openings over 40 acres, which is 5,892 acres, 85% of them are based on a claim that these are allowed because of catastrophic insect mortality. These include 19 units that total 5,026 acres, and average 265 acres per unit. The other 866 acres that are large openings due to other causes average only 144 acres in size. Thus the catastrophic insect mortality justification is being applied to create massive clearcut openings in the Middleman Project Area. There is no actual information ever provided in the Helena Forest Plan as to where these large openings are allowed, or what criteria are required to allow them. The Regional Guide is referenced, but is not included in the Helena Forest Plan. The public has no expectation that these massive openings are allowed by the Forest Plan, or what constitutes "catastrophic" insect damage for wildlife, including elk.

1. There is no analysis in the Helena Forest Plan of the impact of large openings created as the result of catastrophic insect mortality. The public is not provided any information as to what conditions must exist before these large openings are allowed. There is no analysis in the Forest Plan FEIS as to how this exception to 40 acre openings is to be coordinated with elk hiding and elk security standards. As applied to the Middleman Project, the agency assumes that the creation of massive clearcut openings due to insect infestations takes precedence over elk habitat standards. However, this priority is never addressed in the FEIS, or in Forest Plan standards. There is no provision in the Forest Plan that allows elk habitat standards to be dropped due to insect mortality. The agency's use of this catastrophic insect mortality exception is therefore a violation of the NFMA as well as the NEPA.

1. The agency's use of a claimed exception from openings over 40 acres in size in effect makes any Forest Plan standards for elk meaningless, because almost any area of the Helena National Forest will experience mountain pine beetle infestations at some point in time.

2. The agency is clearly providing a false rationale to the public in regards to the justification for creating massive clearcut openings because of insect epidemics. Research on the Helena National Forest recently published in the Journal of Wildlife Management (Lowrey et al. 2020) clearly noted that the heavy pine beetle mortality in the Elkhorn Mountains of 80% did not remove hiding cover for elk, defined as a canopy cover level over 23%. In fact, this heavy pine beetle mortality only reduced the canopy cover level of forest stands by 8.5%. The Helena Forest uses a 40% canopy cover level of 40% as a measure of hiding cover. The pine beetle epidemic reduced canopy

cover levels in the lodgepole pine stands of the Elkhorn Mountains from 77% down to 69%. Thus even by the agency's own definition, hiding cover for elk was not removed with an 80% mortality of trees caused by the pine beetle.

1. The agency is violating the NEPA and the APA by claiming that massive insect mortality creates a justification for massive clearcutting and dropping elk habitat standards since elk hiding cover is not eliminated with beetle infestations. These heavily-infested areas currently do not qualify as openings for the MIS elk, but they would qualify as openings after treatment.

Violation of the Migratory Bird Treaty Act and Associated Agreements

1. The Migratory Bird Treaty Act and associated agreements require the Forest Service to promote the conservation of migratory birds. As a part of this Act, the Forest Service agrees to evaluate the effects of agency actions on migratory birds within the NEPA process, focusing first on species of management concern along with their priority habitats and key risk factors; to balance benefits against adverse effects, to pursue opportunities to restore or enhance migratory birds habitat, and to consider approaches for minimizing take that is incidental to otherwise lawful activities.

1. Take of migratory birds will likely occur during implementation of the Middleman Project. This will result from the proposed vegetation treatments when they overlap with the breeding season, which would be generally from May through July, but for some species as owls, or re-nesting by other birds, go up to September. Displacement of breeding adults affects their ability to take care of dependent young and negatively affect productivity; displacement of recently fledged birds can affect their likelihood of survival due to increased vulnerability to predation, as well as starvation.

1. There is no analysis of project impacts on migratory birds, or their priority habitats, including old growth, snag forests, undisturbed older forests, and forests with high production levels of conifer seeds.

1. It is clear that the proposed project will have severe adverse impacts on at least 50 species of western forest birds. Vast tracts of habitat will be removed with logging, and also degraded with prescribed burning, that will remove large amounts of important understory vegetation for wildlife, including western forest birds. These losses will include removal of old growth forests, removal of snag forest habitat, removal of undisturbed older forest habitat, and reduction of conifer seed resources.

1. The level of direct mortality to be created from prescribed burning in May into July, and logging beginning in June or July, was not addressed in the Middleman Project. However, this will be extensive given the acres to be treated. This direct killing of migratory birds is a violation of the MBTA unless the agency has obtained a "take" permit from the U.S. Fish and Wildlife Service. The public was not informed of the expected level of mortality of migratory birds, including the Species of Conservation Concern the flammulated owl, that will result from this

project. It also does not appear that the Forest Service believes they require a take permit for this planned mortality, as no mention of such a request was provided in the NEPA analysis.

1. The MBTA and associated agreements require the Forest Service to define how adverse impacts to migratory birds will be "balanced out" by benefits. There were no benefits identified for migratory birds, as there were not adverse impacts identified for migratory birds. Thus the Forest Service has failed to meet this requirement of the MBTA. In fact, there will be severe adverse impacts of the proposal based on past acres treated along with vast amounts of new acres to be treated. There are no actual benefits to migratory birds, benefits that will be balanced out by the severe adverse impacts. Thus it will be impossible for the agency to meet the requirements of the MBTA to balance benefits with adverse impacts to migratory birds.

Violation of the NFMA, NEPA and APA for Wildlife Conservation

The economics report for this project shows in table 7 and 8 that the revenue from this project is estimated at \$5,817,000. The total costs are estimated at \$9,667,406. It is notable that none of these almost 10 million dollars in costs are for wildlife surveys. It is impossible to do extensive vegetation treatments across a landscape without monitoring for wildlife, especially MIS as the goshawk, pine marten, and pileated woodpecker, and especially for Species of Conservation Concern, as the flammulated owl. In addition, there has been no mapping of elk calving and mule deer fawning habitats, even though both of these are MIS, and this type of habitat may be extensively burned in the Middleman Project. There is no information ever provided in the stated reasons for this project as to why no surveys have been done for these MIS and Species of Conservation Concern, even though thousands of acres of their habitats will be treated. Also, there was no information provided in the NEPA analysis as to why Forest Plan population monitoring and effects of vegetation treatments have never been done on the Helena National Forest. This monitoring is required when vegetation treatments are being implemented. Thus the cumulative impact of the Middleman Project cannot be known for MIS, even though the agency claims no significant impacts have or will be triggered by vegetation treatments across the Forest or in the Middleman Project Area.

Violation of the Roadless Area Conservation Rule

I. During the various visits NEC has made to the Big Belts over the years, it is clear that there are widespread and in many cases, massive weed infestations in these mountains. These weed infestations have not been eliminated by the Forest Service to date. There are no weed infestations mapped for the thousands of acres of planned burning in the 5 IRAs in the Middle Project Area. So these areas will not be protected from burning, which will not only increase existing infestations, but create new ones. The agency claims that these burns are needed to restore ecosystem function in these IRAs. This is clearly a false claim as increasing weed infestations, infestation which the agency will never eradicate, is not promotion of ecosystem function.

1. The agency proposed to burn 22% of the Cayuse Mountain IRA, 41% of the Devils Tower IRA, 35% of the Hellgate Gulch IRA, 12% of the Holter IRA, and 35% of the Middleman Mountain/Hedges Mountain IRA. There is no information provided as to why additional burning is needed in these IRAs. No information was provided as to how many acres of these IRAs has been recently burned in wildfires, including the Cave Gulch Fire, the Jimtown Fire, the Meriweather Fire and the North Hills Fire. The public is not provided with any information as to what level of fires is required to restore ecosystem function in these IRAs, or if multiple fires are required for this restoration. It is unclear to the public why past fires have not already "restored" fire to this landscape. So the

public needs to understand what constitutes "restoration of fire" to these IRAs.

1. The agency has never defined what constitutes "restoring or maintaining ecosystem function" in IRAs. This is a violation of the NEPA, because the public is not being provided high quality information on which to judge agency proposed actions. The failure of the agency to provide this important information is all the more concerning given that the agency proposed actions in IRAs as needed to restore ecosystem function is contradicted by Forest Plan direction. These contradictions thus require the agency to address them in the NEPA analysis. First, almost any wildlife standard that exists in the Helena Forest Plan, either Forest-wide or within management areas, is being dropped in order to promote these prescribed burns. The agency failed to define why Forest Plan direction for wildlife is not incorporated as an important function of ecosystems, including elk hiding cover, mule deer hiding cover, elk calving habitat, mule deer calving habitat, elk thermal cover, and mule deer thermal cover. Second, there is published science regarding the historic level of variation for old growth forests in the Northern Rocky Mountains (Lessica 1996), which is 20-50% old growth. This published science is directly contradicted by the proposed burning of old growth forests within IRA, supposedly being done to restore the historic range of variation. The current estimated level of old growth in the Middleman Project area is at best less than several percentages, or not even close to the historic range. It is a violation of the APA for the agency to thus claim that burning old growth forests in IRAs is needed to restore historic levels of such.

1. To date the Forest Service has not provided any monitoring data or published science demonstrating that burning big game winter ranges, calving and fawning areas maintains or restores these key big game habitats.

A large portion of the proposed 24,711 acres of burning in the 5 IRAs includes big game winter ranges. The areas that will burn calving and fawning areas is not even known, but is still claimed to benefit deer and elk. These claims are a violation of the NEPA, because the public is not being provided with the basis for these claims. This information is especially important because the Montana Fish, Wildlife and Parks does not appear to agree that burning mule deer fawning habitat benefits this MIS.

1. The impact of the prescribed burning in the IRAs, for a total of 24,711 acres, on vegetation is never defined. The public is not told what specific changes in vegetation, including trees and shrubs, are planned with the burning. The extent of the analysis is that burning will occur. Thus the agency has not provided the public with any information as to why burning will restore and/or maintain what species of trees and shrubs, or why burning is needed in order for these trees and shrubs to remain on this landscape.

1. The Middleman Project will involve 50.8 miles of road management, which is defined as "routine maintenance." These roads will be improved to allow access for the 24,711 acres of prescribed burning planned in the IRAs. The Forest Service has already been noted by a court decision to act in "bad faith" in regards to information provided on road management within IRAs. The public should not be expected to take the agency's work for it that road improvement will not occur within IRAs, which would be a violation of the RACR. In addition, improvement of these roads to allow prescribed burning will result in an increase in road violations, which are already occurring in the Big Belt Mountains.

Violation of the NEPA, NFMA, and APA on Big Game Analysis and Proposed Forest Plan Amendments

1. The site-specific Forest Plan amendment and agency practice of issuing successive site-specific amendments to evade analysis of a "significant" Forest Plan Amendment violates the NFMA, the NEPA, and the APA. The Forest Service has repeatedly issued "site-specific" Forest Plan amendment to avoid complying with Forest Plan standards for elk; the Forest Service has issued previous such amendments for some or all of the Forest Plan elk standards for other projects that are completed or are planned for up to a dozen or possibly more projects. These amendments have clearly altered the long-term relationship between levels of elk security identified in the Helena Forest Plan, and what is actually being provided by Plan implementation. As just one example, all 5 elk herd units in the Middleman Project do not meet any of the Forest Plan elk standards even before this next project is to be implemented, which clearly demonstrates the Helena Forest has not implemented big game security standards in the Forest Plan in the past. The Montana Fish, Wildlife and Parks has identified that this failure to implement elk security standards in the Helena Forest Plan has resulted in significant impacts to elk security in their reviews of both the Divide and the Blackfoot Travel Plans (multiple documents for NEPA comments and objections during 2013-2014).

1. A Forest Plan amendment must include an analysis of reasonable alternatives to for the Forest Plan Amendment. There were no such alternatives identified for the Middleman Project. Simply removing Forest Plan standards and replacing them with nothing is not reasonable and does not comply with the 1982 planning regulations or NEPA.

1. The impact of the lack of the Middleman Project Area to meet elk security standards is not evaluated in the project NEPA analysis, in violation of the NEPA and NFMA. The level of displacement to adjacent private lands that currently occurs is not evaluated, as were how the lack of security within the project area is impacting elk vulnerability, defined as the bull:cow ratio. It seems highly likely that existing impacts on elk vulnerability are already significant, and will be further exacerbated with the proposed removal of yet many more acres of security cover.

1. There is no actual information provided in the big game report that shows what the expected level of security will be as per the agency's new definition defined by Lowrey et al. (2020) will be after project implementation. Thus the project level impacts on security are not defined to the public, even though this is a noted issue for both the public and MFWP.

1. The agency's use of the Lowrey et al. (2020) definition of elk security cannot be understood due to the manner it was provided. The Lowrey et al. (2020) definition included the combined criteria of at least 23% canopy cover and over 1.14 to 2.2 miles from an active motorized route. However, the Middleman analysis uses these 2 categories separately, so it is not clear what the actual definition is that is being applied. These criteria are not separate, as is presented by the agency. So the actual levels of security as per the Lowrey et al. (2020) definition in the Middleman Project area is not clear.

1. It is likely that the measures of elk security in the Middleman Project Area by Lowrey et al. (2020) in Table 8 of

the big game report ranges from 0-8 percent in the 5 elk herd units. This miniscule amount of security clearly is a significant impact for elk vulnerability, an impact that is never identified by the agency.

1. There are 6,874 acres of suitable security habitat in the Middleman Project Area as per the Lowrey et al. (2020). There will be 1,893 acres of logging and/or burning of these security acres, or reduction of such by 28%. The level of Lowrey et al. (2020) security after this removal of cover is not disclosed by the agency. However, elk vulnerability will increase as a result.

1. As is shown in Figure 6 of the big game report, elk security is not well-distributed across the Middleman Project Area, even though it is recognized as a critical factor for elk use of public lands in the fall hunting season by MFWP. However, there was no alternative developed that would improve this level of security, including up to minimum levels recommended for elk herd units of 50% via collaboration between the MFPW and the Forest Service during the development of the Divide and Blackfoot Non-winter Travel Plan Amendments.

1. There are 5,977 acres of clearcutting proposed for the Middleman Project as per Table 9 of the big game report. There are 5,892 acres of proposed openings over 40 acres, ranging from 52 to 1,634 acres. Thus almost all, if not all proposed clearcuts, will completely remove any hiding cover for elk, and thus eliminate the potential for an increase in elk security in these areas. Given that elk displacement to private lands is an identified issue with MFWP, it would be reasonable for the Forest Service to include alternatives that would address this issue. However, no such alternative was included, so there is not an adequate range of alternatives developed that would address known issues, in violation of the NEPA.

1. There will be 24,192 acres of hiding cover removed for the Middleman Project as per Table 10 in the Big game report. This is 31.6% of the existing hiding cover of 76,382 acres in these elk herd units. Although the no action alternative would not remove any of this hiding cover, it also would not reduce the open road density so that a huge increase in elk security could be achieved. The failure of the agency to develop an alternative to address this issue is a violation of the NEPA.

1. Although the agency did not address how the proposed project would impact elk displacement to private lands, or security by the Lowrey et al. (2020) method, the agency repeatedly claims that the project will improve forage for elk, and thus will be beneficial to elk. No monitoring or literature was cited to support claims that logging and burning will increase forage for elk. This claim is a violation of the NEPA due to a lack of documentation, but as well, because it is falsely being promoted to justify the extensive planned removal of hiding cover.

1. The agency repeatedly claims, in violation of the NEPA, that logging and burning hiding cover and thermal cover on big game winter ranges for both elk and mule deer will be beneficial without providing any Forest Plan monitoring or specific research that identified population increases due to such treatments. The 15 year Elk-Logging study by Lyon and others specifically noted there was no evidence that logging benefits elk. Given the extreme lack of security in the project area, there is little reason to believe that forage is the key factor that needs

to be addressed via management. As well, since Forest Plan standards for hiding and thermal cover will be violated, there is little reason to believe that the violation of these standards represents habitat improvement for elk and mule deer.

1. The elk calving and deer fawning areas are not mapped, and will be logged and burned. The agency noted that these areas are "difficult" to map, but they clearly can be identified since these have been identified as key habitats for elk and mule deer. The agency simply has not expended the dollars required to actually identify these areas. If these shift from year to year, then the total areas used still need to be mapped and managed for high levels of both hiding and thermal cover.

1. The MFWP has criticized the planned burning of mule deer winter and fawning areas. Yet there was no alternative that would not burn these areas. The agency has failed to address an important public issue, including one that was raised by NEC and AWR.

1. The big game report at 28 states that post-implementation, all existing roads would be returned to their pre-project levels. This clearly indicates that roads within IRAs will be significantly improved for this project, in violation of the RACR.

1. There is no analysis provided in the Middleman Project as to how past vegetation management activities have contributed to the current failure of this area to meet almost all the big game standards, from cover to security. The big game report at 29 notes there have been 27,811 acres of fuel treatments, and 10,150 acres of past harvest. Simply listing the acres of past treatments is not an analysis of cumulative impacts. A valid analysis as per the NEPA would define that these past as well as ongoing actions have contributed to the current failure of this landscape to meet Forest Plan standards for big game. This information is important to the public, in order that the Forest Service demonstrates how the Forest Plan has been implemented in this landscape during the past. Since it obviously has not been followed in the past, the claim that the Middleman Project is just a one[shy] time site-specific amendment for this area is false, and is a violation of both the NEPA and the NFMA.

1. The added impact of several ongoing projects, including the Beaver Soup habitat enhancement project, and the Bull Sweats and Jimtown prescribed fire projects, also need to be included in the cumulative effects analysis. It is not clear if this Middleman analysis on big game included these ongoing activities.

Violation of the Roadless Area Conservation Rule in regards to Whitebark Pine, and Violation of the NEPA by making False Claims About Treatments of Whitebark Pine.

The proposed treatments of the proposed species, whitebark pine, in the Middleman project area, including with roadless areas, is a violation of the NEPA because the agency failed to disclose that to date treatments of whitebark pine have resulted in severe adverse impacts to whitebark pine, instead of restoration. The agency's claims that treatments will restore whitebark pine are false and clearly mislead the public. The intentional management of whitebark pine stands when data indicates this management will have severe adverse impacts on whitebark pine is also a violation of the NFMA. Treatments in whitebark pine in the IRAs clearly does not qualify as restoration or maintaining ecosystem function, as is claimed by the agency.

Violation of the NEPA by Limiting Public Access to Agency Documents and Failure to Disclose Rationale for Restricting Public Access to Agency documents.

NEC has been unable to obtain any hard copies of various NEPA documents for the Middleman Project since 2020, although requests for such documents were met previously by the Forest. In fact, the January 2020 document outlining detailed information on the Project noted that the public could request hard copies of project documents. However, NEC's request for a hard copy of NEPA documents, including an EA that with appendices is over 500 pages long, on January 27, 2021 was denied by the Forest Service on February 3, 2021. NEC then requested an explanation as to why hard copies would not be provided to the public. No response was ever provided. Given that the Middleman Project is projected to cost almost 4 million dollars, which is a conservative estimate based on the Forest Service claimed values for timber harvest, it is not clear why provision of hard copies of various documents to the public upon request is being denied by the agency. As a part of the project planning for the Middleman Project, the agency has failed to respond to this request for information, in violation of the NEPA.

Violation of the NEPA and the NFMA by Proposing Massive Projects in a Programmatic EA that Covers Time Periods Far Beyond the Forest Plan Monitoring Requirements or Reporting.

We are not aware of any legal direction that allows for programmatic EAs, as is the case for the Middleman Project. There is no legal precedent for a programmatic EA, clearly because the requirements of the NEPA cannot be met by this approach. As with the Middleman Project, the public is provided such a limited amount of detail as to how the treatments on 53,131 acres of the project area over the next 20 years will be implemented that the requirement of NEPA for the agency to provide "high quality" information to the public is not being met. As is noted in the Draft DN, there will be multiple projects implemented over the next 15-20 years, but these projects are not defined either as per location or timing. The public has no information to know how many specific projects are involved, or when they will be implemented. This implementation could occur in any area during any of the next 20 years. It is clear that the agency is using this programmatic EA to escape the requirements of the NEPA to provide high quality information to the public on how projects will not only be implemented, but as well, what the effects of the project will be. It is impossible that the agency has clearly defined impacts to elk, for example, by providing one figure for hiding cover, open road densities, and elk security for the entire 20 year period. Does this mean that these measures will apply during the entire 20 year period, or if not, what year will they apply? Surely these measures will not be the same for a given elk herd unit for each of the 20 years. So in effect, the agency has not provided the public any reasonable information on how the Middleman Project will impact elk habitat in each elk herd unit during the next 20 years.

As well, the assumption seems to be with a programmatic EA that Forest Plan monitoring is not necessary, since monitoring requirements that range from 1-5 years clearly cannot be applied to a decision that covers 20 years. It is clear that a programmatic EA is a violation of the NFMA because it excludes Forest Plan monitoring. It also violates the NFMA because it assumes there will be no change in the status of any wildlife species during the next 20 years, including species that become a conservation concern.

The Middleman Project is also a NEPA violation, as well as a NMFA violation, because the agency is apparently justifying the complete lack of any wildlife surveys, be them MIS, Montana Species of Concern, or Species of Conservation Concern as per the USFWS, due to the size and scope of the proposed project. Otherwise, it is not clear specifically why the agency determined that no wildlife surveys were required for this project for pine marten, goshawks, pileated woodpeckers, hairy woodpeckers, elk and mule deer calving and fawning habitat, and the Species of Conservation Concern the flammulated owl.

The Significant Impacts the Project will Contribute to Climate Change were not Accurately Disclosed by the Agency, in violation of the NEPA.

This project will exacerbate the impacts that logging and prescribed burning will have on global warming. These adverse impacts were not disclosed by the agency to the public. As just one example, the logging of larger trees removes one of the greatest carbon storage benefits of national forests, since a large portion of the stored carbon lies within these larger trees (Mildrexler et al. 2020). These activities are falsely justified by claims that the historic range of variation will be reached, when published estimates of historic old growth forests are far higher than what currently exists in the Middleman Project Area. Restoration proposals by the agency will reduce old growth further, and as a result, the agency is misleading the public about the rationale for vegetation treatments in much of the project area.

Treatments of both logging and burning will make it more difficult to restore historic levels of old growth forests. Restoration of these old growth forests will promote carbon storage, and thus address climate change. There is no information ever provided to the public in the Middleman NEPA analysis that discloses the value of old growth, and actual restoration of old growth, to climate change.

The Agency is Violating the NEPA by Failing to Include Action Alternatives that Address Public Issues.

There is no action alternative that would address the well-documented public issue about the lack of big game security on public lands, which triggers displacement to adjacent private lands in the fall hunting season (MFWP 2013-2014). The only action alternative developed by the Forest Service results in even less big game security than exists now. As a result, the agency has violated the NEPA by failing to provide an adequate range of alternatives that address public issues.

The Agency is Violating the NFMA, the NEPA and the APA by Creating Huge Opening Across the Project Area.

The Forest Service claims that most of the large openings to be created, including those over 1,600 acres in size, complies with the NFMA limit of 40 acre openings because of catastrophic pine beetle mortality in lodgepole pine stands. As we noted earlier, this exception to unlimited sizes of openings is not identified or evaluated in the

Helena Forest Plan. It is also not defined as per the NFMA that there can be unlimited openings sizes if there has been catastrophic mortality caused by insects. There is no actual definition of what "catastrophic mortality" entails, and without a valid definition, it cannot provide a criteria for exemptions on opening sizes. The inference that catastrophic insect mortality creates openings is illogical, since a bark-beetle infested stand is clearly different from a clearcut or meadow. This inference is illogical. The agency did not provide any evidence that stands with heavy beetle mortality represent openings to wildlife. In fact, monitoring in the Elkhorn Mountains of the Helena-Lewis and Clark National Forest show that pine beetle mortality up to 80% do not remove elk security, and only reduce canopy cover by about 8%. So the Forest Service's inference for the Middleman Project that pine beetles create openings is clearly a lie. Providing deliberately false information to the public on rationales for vegetation treatments, especially clearcutting, is a violation of the NEPA.

The Agency is Violating the NEPA by Failing to Develop an Action Alternative that Limits Openings to 40 acres or less.

Large openings are clearly a public issue by MFWP, as well as the public (NEC and AWR). In addition, the Helena Forest Plan indicates that openings will be limited to 40 acres. And as we indicated above, the Helena Forest Plan does not identify that there can be unlimited openings created in areas with high levels of tree mortality from bark beetles. Given this, the agency needs to include an action alternative that limits openings to 40 acres.

The Agency is Violating the NEPA by failing to Prepare an Environmental Impact Statement for the Middleman Project due to it's Massive Scope and Resource Impacts that are Clearly Significant.

The proposed treatments of 53,131 acres of wildlife habitat in the Middleman Project area for the next 20 years will clearly have significant impacts due to numerous impacts, not limited to but including the following: severe adverse impact to wildlife, given that elk displacement to private lands will be exacerbated above levels that are already significant; given that no wildlife surveys have been done for any MIS or sensitive wildlife so their habitat will not be protected; given that the proposal will violate the Migratory Bird Treaty Act and adversely impact roughly 50 species of migratory birds; given that the proposal will result in adverse impacts to whitebark pine, a species proposed for listing under the Endangered Species Act; given that multiple Forest Plan violations will occur in regards to management area direction, wildlife stands in both management areas and forest-wide standards, direction that was developed to prevent significant adverse impacts to wildlife on the Helena National Forest; and given that massive management interventions are planned within IRAs, in violation of the Roadless Area Conservation Rule.