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October 14, 2025

To: Beaverhead-Deerlodge National Forest

Objection Reviewing Officer

420 Barrett Street

Dillon, MT 59725

**RE: OBJECTION AGAINST THE BEAVERHEAD-DEERLODGE NATIONAL FOREST
CANADA LYNX FOREST PLAN AMENDMENT**

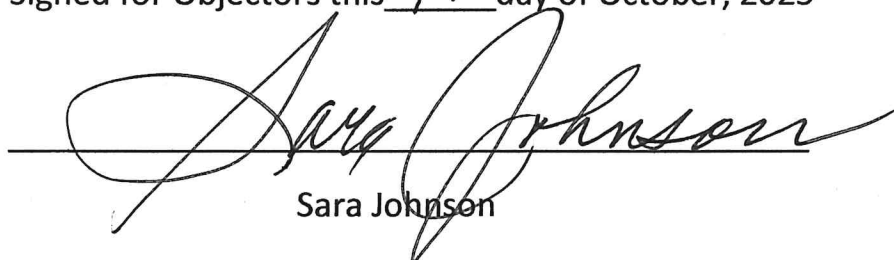
1. Objectors:

Lead Objector Sara Johnson, Director, Native Ecosystems Council, PO Box 125,
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Mike Garrity, Director, Alliance for the Wild Rockies, PO Box 505, Helena, MT
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Signed for Objectors this 14th day of October, 2025


Sara Johnson

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**Beaverhead-Deerlodge
National Forest**

2. Name and Location of the Project being Objected to:

Beaverhead-Deerlodge National Forest Canada Lynx Forest Plan Amendment

3. Responsible Official:

Corey Lewellen, Acting Forest Supervisor, Beaverhead-Deerlodge National Forest

4. Attachments:

This Objection includes 6 attachments.

Attachment #1 is a summary of various information provided in the USFWS 2017 Species Status Assessment for the Canada lynx.

Attachment #2 includes a summary of lynx management recommendations provided in Brittell et al. 1989.

Attachment #3 includes a summary hard copies provided for various publications and/or reports cited in the Objection.

Attachment #4 includes information on clearcut sizes for the Selway-Saginaw, Pintlar Face, Boulder Lowland, and Fleecer Mountain projects ongoing or planned on the Beaverhead National Forest.

Attachment #5 includes copies of maps, including one showing key linkage areas for lynx in the Northern Rocky Mountains as per the USFW 2015 Lynx Recovery Plan.

Attachment #6 includes 14 photos taken in the Fleecer Mountain Landscape representing “seral stage” and “other” forest types defined by the NRLMD; these forest types are not identified as lynx or snowshoe hare habitat because they are not multi-storied mature forests. They comprise 59% of remodeled LAUs on the BDNF, and about 70% of all forests within LAUs.

5. Connection between Objection Claims and Prior Public Involvement.

On April 7, 2025, Objectors submitted joint scoping comments on the proposed Canada lynx forest plan amendment. On June 30, 2025, Objectors submitted joint comments on the draft Environmental Assessment (EA) for the Canada lynx forest plan amendment. We are incorporating these comments into this Objection in order to avoid repetition. However, we will outline how identified concerns carry over into this Objection.

The April 7, 2025 scoping comments claimed that the amendment is a significant change in forest plan direction which requires an EIS. We stated that the NRLMD does not promote conservation of the lynx. We challenged the agency remapping that over half of the BDNF is unsuitable lynx habitat. We challenged the agency's use of primary and secondary habitat to define lynx habitat, including using the requirement of 10 square miles of primary habitat to qualify as a LAU. We noted that the rationale for eliminating LAUs was unclear. We noted that the NRLMD definitions of lynx habitat are not consistent with the current best science. We stated that the proposed amendment requires an analysis of the effectiveness of the NRLMD to conserve lynx and promote recovery. We noted a Forest Plan amendment is required to change the HFRA definition of the WUI. We requested the agency provide supporting documentation as to why a 6% exemption provides meaningful population trend data for lynx, and the documentation that 6400 acres of primary habitat is required within a LAU.

In our June 30, 2025 joint comments on the draft EA, we raised the issue of a failure to update the NRMLD since its development in 2009. We noted that the NRLMD violates the NFMA and the 2012 Planning Rule due to a failure to promote conservation of the lynx. We noted that the NRLMD is inconsistent with the percentage of openings recommended in lynx habitat as per the current best science. We noted that the NRLMD lacks any criteria for habitat connectivity within LAUs. We noted that the NRLMD fails to address the impact of clearcuts on habitat connectivity. We noted that the NRLMD fails to address management of

snowshoe hares. We noted that the NRLMD fails to address predation impacts on lynx from cover loss. We noted that the NRLMD definition of the WUI is different from that identified in the amendment, which is a forest plan violation. We noted that changes in LAUs in linkage areas will significantly reduce habitat connectivity of lynx across the Northern Rockies ecosystem. We noted that management of lynx core habitat needs to be included in any effective conservation strategy, a factor lacking in the NRLMD. We noted the change in LAUs from 2001 and 2020 was never clearly defined to the public. We noted that the NRLMD fails to address the importance of alternative prey areas, such as jackrabbits within sagebrush. And we noted that the NRLMD as implemented in 2007 has failed to demonstrate any population increases and recovery of lynx in the Northern Rockies.

6. Remedy

To date, the USFS and USFWS have not demonstrated that implementation of the NRLMD is promoting conservation and recovery of the threatened lynx, in violation of the National Forest Management Act (NFMA) and the Endangered Species Act (ESA). The BiOp for the remapping project, as well as for the NRMLD, is invalid, and cannot be used as a measure of project impacts on lynx. The NRLMD triggers many legal violations, including violation of the NFMA due to a failure to provide a valid proxy for population trend (6% exceptions/exemptions). The agency is also violating the NFMA by limiting the proposed action of the amendment to reducing lynx habitat, without demonstrating that application of the NRLMD as it currently exists is effective, or that effectiveness will not be reduced even though acres of application will be reduced. On the Objection below, we chronicle a host of failures of the NRLMD to conserve and promote recovery of the lynx. This conservation strategy as to be applied to the current and/or remodeled lynx habitat on the BDNF is a violation of the NEPA for claiming it promotes conservation of lynx. And it violates the NFMA and the ESA for a failure to promote conservation and recovery of the lynx. The BDNF needs to amend the NRMD to correct a vast number of deficiencies, including a failure to incorporate the current best science, as is required by the NEPA and ESA.

7. Violations that will be triggered if the Canada Lynx Forest Plan Amendment is implemented:

A. Implementation of the Canada lynx Forest Plan amendment will trigger violations of the National ENVIRONMENTAL POLICY ACT (NEPA), the National Forest Management Act (NFMA), the Administrative Procedures Act (APA), the 2012 Planning Rule, and the Endangered Species Act (ESA).

- 1. The agency cannot limit alternatives to reducing the area that the Northern Rockies Lynx Management Direction (NRLMD) because the effectiveness of this strategy remains unknown.**

As was noted in the USFWS 2017 Species Status Assessment for lynx, the effectiveness of the NRLMD remains unknown. As well, this assessment notes that the population trends of lynx in the Northern Rockies also remains unknown due to a lack of monitoring. In addressing whether the Forest Plan direction for lynx should be changed, the BDNF cannot legally avoid addressing the effectiveness of the NRLMD, which was implemented in 2009 well before much of the high quality current best science for lynx was published. If the effectiveness of this strategy is unknown, then reducing it's application on the BDNF would exacerbate any ongoing failures of the NRLMD to conserve and recover lynx, which would exacerbate potentially ongoing significant adverse effects from the NRLMD implementation. Lynx habitat protections will be reduced on 1,085,616 acres (2020 Update Table 4). The agency needs to understand the effectiveness of the NRLMD before changes in it's coverage on the BDNF is implemented.

2. The Forest Service and USFWS have never evaluated the effectiveness of the NRLMD to conserve and recover lynx while continuing to apply it to occupied lynx habitat.

The NRLMD has direction to prevent more than 30% of lynx habitat within an LAU from being in unsuitable condition as clearcuts (early stand initiation structural stage) at one time. This 30% limit on clearcutting was first developed in the Lynx Conservation Assessment and Strategy by Ruediger and others in 2000 (LCAS page 7-3) but the scientific reference for this 30% was never actually identified as the source for this 30% clearcut limit. However, this Brittell et al. (1989) source for the 30% limit on clearcutting was actually acknowledged in the NRLMD ROD at page 9 and 16, and in the NRLMD FEIS at page 72. The Brittell et al. (1989) recommendations for management of lynx habitat included a notation at page 95 that these were simply a “first step” in the evolution of a comprehensive strategy for lynx management; population monitoring procedures should be developed by resource managers to address the impact of these and other forest activities. Also, the LCAS (2000) noted at page 4 that given the limited information currently available regarding lynx ecology, this document should be reviewed and adjusted to reflect new information – to be done every 5 years. Although there have been several reviews, no review included any analysis of the 30% limit on clearcuts, even though this is mostly the entire basis for managing lynx habitat in the Northern Rockies. Even a limited look at the 30% clearcut limit demonstrates that it is an implausible means of managing lynx habitat.

-at zero years, 30% of mapped lynx forest habitat can be clearcut and be unsuitable; “stem exclusion” and “other” forest types, which comprise 59% of all remapped LAU lynx habitat (2021 Project BA Table 5) can be clearcut; potential forest habitat remaining (stem exclusion, other and multi-story forests) could potentially still comprise up to 70% of the LAU.

-as per the LCAS at pages 2-3, and Table 3 of the 2021 amendment BA, it takes from 15-30 years for a clearcut to provide trees above the snow, and thus provide “suitable” winter snowshoe hare and lynx habitat. So using the most conservative estimate of 30 years, at 30 years, another 30% of lynx

habitat can be clearcut, leaving only 40% mature forest habitat consisting of “stem exclusion”, “other”, and “multistoried forests”.

-at 60 years, another 30% of lynx habitat could be clearcut, provided this clearcutting would not include multi-storied forests, which are protected; however, any remaining “stem exclusion” and “other” forest could be clearcut; this would leave only multi-storied forests remaining within mapped habitat within LAUs, which would average 26% (2021 Project BA Table 5). This would be 26% mature forest remaining within a LAU; mature forest habitat is defined by the BDNF as forest stands at least 80 years of age as per the 2020 habitat mapping update at page 11 and 13.

So technically, the NRLMD allows the majority of mature forest to be reduced to 26% within 60 years. Actually, this overestimates the amount of mature forest required with LAUs, as multi-storied forests can be removed via exceptions and exemptions. Currently, LAUs on the BDNF as per Table 5 in the 2021 BA show 26% mature, multi-story forest (382,777 acres). With the allowed loss of 94,415 acres of forage habitat due to exceptions and exemptions (Amendment BA page 67 and BiOp page 26 Table 3, which is 88,9810 acres of forage exemptions, and 6,590 acres of forage exceptions, totaling 95,500 acres of allowed forage loss), this means the required level of multi-storied habitat for lynx within LAU is only 287,277 acres (382,777 minus 95,500 acres). This is only 19.3% of the total 1,481,830 acres of lynx habitat on the remodeled LAUs of the BDNF (Table 5 of 2021 BA). This is the only amount of mature forest required by the NRLMD.

Even though the NRLMD requires only 19.3% mature forest within mapped lynx habitat, the current best science clearly demonstrates that productive lynx habitat is comprised of well connected mature forests of up to and over 50% of the home range (Holbrook et al. 2019; Kosterman et al 2018; Olson et al. 2023). This current best science is consistent with 20-50% old growth on historical landscapes of the Northern Rockies (Lesica 1995), as well as an estimate of historical mature forest conditions by 6 lynx experts. McKelvey et al. (1990) reported in Table 15 that at 100-year fire cycles, 36% of forests would be over 100 years (mature) in age; at 150-year fire cycles, 51% of the forests would be over 100 years (mature) in age; at 200 year fire cycles, 60% of the forests would be

over 100 years (mature) of age; and at 300-year fire cycles, 71% of the forests would be over 100 years (mature) of age. As was noted in the Forest Service analyses for the forest plan amendment for lynx, 80 years was estimated as the age of mature forests (2020 updates at pages 11 and 13). Given that fire cycles will vary with different forest types, the actual level of mature forest at any one time will vary, but regardless, it will be quite high over the entire landscape.

It is clear that historically, lynx habitat across the BDNF was dominated by mature and old growth forests, with lynx distribution scattered across this landscape as per Figure 13 in Attachment # 5 of this Objection. Yet to date, neither the Forest Service nor the USFWS has provided any analysis as to why 19.3% mature multi-storied forests allowed by the NRLMD in lynx habitat within LAU is “sufficient forage habitat” and “sufficient mature forest habitat.” The current best science shows that productive lynx habitat occurs in landscapes with 50% or more mature forest habitat (Holbrook et al. 2019; Kosterman et al. 2018). This significant difference between historical lynx habitat conditions, as well as what is demonstrated by the current best science, demonstrates that the USFS and USFWS service, as per their 2021 BiOp, claim that 19.3% mature multi-storied forest habitat is “sufficient” to provide lynx conservation and recovery is a violation of the NEPA, the APA, the NFMA and the ESA.

We would also note that the BDNF in their descriptions of lynx occupancy on the BDNF emphasize that no observable increases in lynx occupancy have occurred since 2009. This is a good indicator that the NRLMD is not recovering lynx.

3. The FS cannot make determinations on the amendment revision based on a flawed USFWS BiOp (2021).

As noted above, the USFWS claims that the NRLMD as applied to the Canada lynx forest plan amendment ensures that “sufficient” foraging habitat will be available for lynx. Sufficient foraging habitat means that access is available to both stand

initiation habitat and multi-stored forest habitat via habitat connectivity. Without any actual standard for any level of habitat connectivity to be maintained within an LAU, the USFWS cannot claim that “sufficient” foraging habitat will be available to lynx. This requires that at least 50% of the LAU provides mature forest habitat that lynx can travel through to access foraging areas. The current best science clearly notes that vegetation treatments in mature forest stands results in avoidance by lynx for up to 43 years (Holbrook et al. 2018; Olsen et al. 2023). The USFS must obtain a revised BiOp from the USFWS where that agency can define specifically why the NRLMD ensures adequate access of lynx to foraging habitat via habitat connectivity.

4. The NEPA analysis by the Forest Service regarding effects of the Canada lynx forest plan amendment misrepresents impacts to lynx habitat.

The Canada lynx forest plan amendment will reduce the acreage where the NRLMD is applied from 2,711,422 to 1,625,806 acres, or by 1,085,616 acres (2020 update Table 4). The EA for the Canada lynx forest plan amendment at 22 states that the amendment is not expected to result in an increase in the amount of vegetation management on the BDNF. Yet the EA at 23 states that the existing LAUs “unnecessarily constrains active management in dry forests that would improve resiliency; therefore Alternative 1 could lead to less resiliency in our forests where forested conditions are generally most in need of treatment.

The BDNF has expansive vegetation treatments expected to occur from the present up to 2036. As defined in the BA for this remapping effort, this includes the following:

Commercial harvest: 60,000 acres

Fuels treatments: 35,100 acres

Aspen treatments: 52,500 acres

Conifer encroachment: 30,000 acres

Fire management: 120,000-150,000 acres (BA page 18).

This comes to an estimated treatment on up to 327,600 acres on the BDNF within the next 10 years. At the same time, the agency wants to eliminate requirements for lynx habitat management on 1,085,616 acres of the BDNF (2020 update Table 4). While the agency claims at page 22 of the project EA “that the amendment is not expected to result in an increase in the amount of vegetation management on the BDNF,” the agency then states at page 23 of this EA that requirements of the NRLMD “constrain” management activities. It is clear that the purpose of the remapping effort of lynx habitat on the BDNF is to escape the restrictions of the NFLMD, especially for maintaining habitat connectivity. The current best science has provided substantive data that indicates habitat connectivity within habitats used by lynx is exceedingly important to lynx ecology (Holbrook et al. 2019; Kosterman et al. 2018).

5. The NRLMD has a standard to maintain habitat connectivity within LAUs; by eliminating many LAUs, the BDNF will escape this essential requirement for lynx ecology.

The NRLMD standard ALL S1 requires the agency to “maintain” habitat connectivity within LAUs. The BDNF agrees, as per the Amendment EA at page 21, that this standard requires habitat connectivity within a LAU, and/or linkage areas. The project BA at page 35 also notes that standard ALL S1 requires that vegetation management activities must maintain habitat connectivity within a LAU and/or linkage areas. There are 22 linkage areas on the BDNF (project BiOp at 20; project BA at 29). These linkage areas are mapped in the 2005 USFWS Recovery Outline, Figure 1-1, provided in Attachment #5 of this Objection. The importance of these linkage areas is clearly demonstrated in the LCAS at 4-2, which shows the lynx habitat in the Northern Rockies extending continuously from the Canadian border down into northern portions of Utah. A better map of lynx habitat in the Northern Rockies is demonstrated in Olson et al. (2025), at

page 5 and also Figure E1. Figure E1 shows that moderate lynx habitat quality extends continuously from southwestern Montana, on the BDNF, well down into south-central Idaho.

The LCAS in the glossary defines habitat connectivity as cover in sufficient quantity and arrangement to allow for the movement of lynx; narrow forested mountain ridges or shrub-steppe plateaus may provide a linkage between more extensive areas of lynx habitat; wooded riparian communities may provide travel cover across otherwise open valley floors between mountain ranges, or lower elevation ponderosa pine or pinyon-juniper woodlands may link high elevation spruce-fir forests. The LCAS recognizes that dry forest types, such as ponderosa pine forests, or even pinyon-juniper woodlands, provide cover for habitat connectivity. And the LCAS provides extensive references to the importance of sagebrush and shrublands, and woodlands, as connecting habitat for lynx (e.g., 1-2, 2-14, 2-20, 4-8, 4-11, 4-16, 4-17, 4-20, 7-10, 7-13, 7-14, 7-17). Yet the “updated” remapping effort for lynx habitat does not identify the importance of shrublands and woodlands as providing travel cover for lynx. The exclusion of woodlands and shrublands as potentially providing important habitat connectivity for lynx was never explained by the agency in either the NRLMD or the remapping process.

The NEPA analysis of the remodeling of lynx habitat as per the Forest Plan amendment does not evaluate how elimination of LAUs will prevent habitat connectivity for lynx across the Northern Rockies. Nor is the number of linkage areas out of the total 22 on the BDNF that will be impacted by LAU removal evaluated. It is clear that if a LAU is removed, the standard ALL S1 no longer applies to that portion of the landscape. Without any analysis of remapping effects on connectivity and linkage areas, the agency has not demonstrated that significant adverse effects on lynx are going to be avoided.

There is a current example of how elimination of LAUs affects linkage areas for lynx. The Whitetail-State Creek project planned on the BDNF eliminated 5 LAUs

(103, 119, 124, 139, 151) within the project area. Due to this elimination of LAUs in this project area, the agency defined any habitat other than stand initiation and multi-story habitat as “unsuitable” lynx habitat in the project NEPA documents (USDA 2025a; USDA 2025b).

The Whitetail-State Creek NEPA documents conclusion that stem exclusion and other structural stages do not constitute lynx habitat if they occur outside an LAU is clearly arbitrary. This means that the location of these forest structures on the landscape determines if they are lynx habitat, not the quality of the habitat itself. Attachment #6 of this Objection includes 12 photos of “stem exclusion” and “other” forest types within the Fleecer Mountain area of the BDNF. According to the remapping effort for lynx habitat, these forest types within the Fleecer Mountain LAUs are lynx habitat, but these same forest types in the Whitetail-State Creek landscape are “unsuitable lynx habitat.” This contradictory definition of lynx habitat depending on where it occurs demonstrates that the BDNF remapping effort was designed to reduce management requirements for lynx conservation, not to “refine” previous mapping information.

6. The NRLMD does not define how Standard ALL S1 will be met and is thus an invalid standard.

The NRLMD has no criteria for what constitutes “maintaining” habitat connectivity within LAUs, as is required by standard ALL S1. This information is available, including from the recommendations of Brittell et al. (1989) which was the basis for the NRLMD. Brittell et al. (1989) noted that lynx habitat should contain about 30% foraging habitat and 30% travel habitat, and 6% denning habitat. All these habitats would provide connectivity due to cover levels. This would provide about 66% habitat connectivity within lynx habitat. The current best science defines adequate connectivity as 50% mature forest and 20% regenerating forests (Holbrook et al. 2019; Kosterman et al. 2018). This high level of connectivity for lynx is quite similar to that recommended about 35 years ago by Brittell et al. (1989). Yet there is no specific criteria in the NRLMD as to what

constitutes adequate connectivity. It is noted that maintaining does not mean not reducing connectivity (maintaining the status quo). The NRLMD needs to be amended to provide specific requirements for connectivity as per the current best science, in order that standard ALL S1 is a valid standard.

7. The proposed Canada lynx forest plan amendment is a violation of existing forest plan direction, and thus a violation of the NFMA, due to a failure to require habitat connectivity for lynx within identified linkage areas.

NRLMD standard All S1 requires that habitat connectivity be maintained both within LAUs and within linkage areas. There are 22 linkage areas on the BDNF (2021 project BA page 29; 2021 project BiOp page 20). These have been mapped by the USFWS 2005 Recovery Outline in Figure 1-1, which is provided in Attachment #5 of this Objection. We have made a “rough” estimate of the LAUs which are to be eliminated within these linkage areas, as the agency did not provide this information. Some errors are likely, but these estimates clearly demonstrate that a significant number of LAUs would be eliminated within linkage areas. Even if LAUs have been removed from these linkage areas, the agency is required to maintain connectivity. And without any land base from which to measure connectivity (LAUs), this connectivity requirement cannot be demonstrated. We provide the current example of the Whitetail-State Creek vegetation project in the Boulder River Landscape of the BDNF (USDA 2025a; USDA 2025b), where there was no analysis of connectivity for the affected linkage areas that connect this landscape to the north with portions of the Helena-Lewis and Clark National Forest.

We “estimate” that the following LAUs, which cover both public and private lands in the Lima Tendoy Landscape of the BDNF, would be removed within identified lynx linkages to the south, into the Caribou-Targhee National Forest in Idaho: 432, 440, 443, 444, 447, 449, 456, 461, 465, 472, 476, 481, 485, 487, 495, 499, 501, 502, 503, 504, 505, 506, 507, and 509.

We “estimate” that the following LAUs within the Boulder River Landscape would be removed within the identified lynx linkage areas that connect this portion of the BDNF to the Helena-Lewis and Clark National Forest: 118, 139, 141, 143, 151, 158, 162, 164, 169, 170, 173, 178 and 185.

Deleting these LAUs within identified linkage areas means the agency has no intention of meeting the Forest Plan direction to maintain connectivity within these linkage areas. We note that the NEPA documents for the remapping project does not define how connectivity within these linkage areas will be maintained following removal of LAUs.

8. The BDNF is violating the NEPA by claiming that removal of LAUs within identified linkage areas will not significantly impact conservation and recovery of the lynx; this is also a violation of the APA, because implying that connectivity is not important to lynx persistence is implausible.

The removal of linkage areas from LAUs in various areas of the BDNF has the potential to significantly reduce connectivity of lynx populations in the Northern Rockies. The agency has demonstrated in the Whitetail-State Creek NEPA documents (USDA 2025a; USDA 2025b) that when LAUs are removed, not requirements for connectivity remain. At the same time, it is repeatedly noted in the NEPA analysis for the remapping effort that the BDNF plays an important role in lynx dispersal. This dispersal role is clearly evident in the location of lynx habitat on the BDNF in the Northern Rockies, where Figure 1-1 (Attachment #5 of this Objection) clearly shows the BDNF to be in the relative middle of lynx habitat in the Northern Rockies. Without any analysis of this impact, the BDNF has still determined that removing LAUs from various linkage areas, along with the agency’s interpretation that this removal eliminates any requirements to maintain habitat connectivity, will not significantly impact lynx conservation and recovery. Claiming no significant adverse impacts will occur without providing the supporting analysis is a violation of the NEPA.

9. The NRLMD 30% allowance for clearcuts being in unsuitable condition for lynx and snowshoe hares is a violation of the ESA, the NEPA, the NFMA and the APA for the following reasons.

The NRLMD's failure to restrict the size and density of clearcuts within mapped lynx habitat is a failure to conserve and promote recovery of lynx. Attachment #4 of this Objection summarizes the size of clearcuts proposed and/or planned within BDNF logging projects. For the Selway Saginaw project, there are 22 clearcuts over 40 acres in size planned, ranging from 43-369 acres with an average size of 160 acres. For the Pintlar Face project, there were 29 clearcuts over 40 acres in size, ranging from 51-473 acres. For the Boulder Lowland project, there were 17 clearcuts over 40 acres in size ranging from 51-473 acres. And for the Fleecer Mountains project, there were 10 clearcuts over 40 acres in size, ranging from 44-131 acres.

Even though the NRLMD ROD and FEIS cite the Brittell et al. (1989) lynx recommendations as the foundation for allowing 30% of lynx habitat to be clearcut at any one time, the recommended limits on clearcutting were not included. These other recommendations were in fact never even identified in the NRLMD, nor any rationale provided to the public as to why these other clearcutting recommendations were not incorporated into the NRLMD. This "selective" use of Brittell et al. (1989) recommendations on clearcutting, without any acknowledgement of this selective application, is a violation of both the EPA and the ESA.

The Brittell et al. (1989) recommendations include both limiting the size and density of clearcuts. These recommendations were arbitrarily excluded from incorporation into the NRLMD. Brittell et al. (1989) recommended limiting clearcuts to 40 acres or less. And Brittell et al. (1989) also recommended limiting the density of clearcuts in lynx habitat. Those recommendations would limit openings to no more than 30% of every section of habitat, or 640 acres. This means that as per Brittell et al. (1989), any given 640 acres of lynx habitat could

have no more than 192 acres of clearcuts (30% times 640 acres = 192 acres). This limit could easily be exceeded if just one large clearcut was created in 640 acres of lynx habitat. Any clearcut exceeding 192 acres in size would be inconsistent with the Brittell et al. (1989) recommendations. Yet the agency is creating clearcuts up to 473 acres; this would exceed the Brittell et al. (1989) limit of clearcuts by almost 2.5 times. were created within one section of lynx habitat.

The NRLMD never provided any scientific basis for allowing clearcuts over 40 acres in size, or to allow an unlimited density of clearcuts within lynx habitat. Yet there are a number of reasons why clearcuts should be restricted in lynx habitat. The current best science (Holbrook et al. 2019; Kosterman et al. 2018) have found that productive lynx breeding habitat has only about 5% open habitat. This includes both natural and man-made openings, which is consistent with Brittell et al. (1989) which calls unsuitable lynx habitat as both man-made and natural openings. The NRLMD allows up 30% of mapped lynx habitat to be clearcut in an unsuitable condition at any given time, which is 6 times higher than identified by the current best science (5%). By allowing a huge proportion of lynx habitat to be in unsuitable openings, the NRLMD fails to conserve lynx and promote recovery. An example of the impact of clearcuts within lynx habitat is provided by Squires et al. (2006 page 20); this landscape map shows how lynx were recorded using both clearcut and uncut forests; there is a clear avoidance of lynx use within clearcuts. This avoidance of clearcuts has been substantiated by the current best science. Holbrook et al. (2018) and Olson et al. (2023) reported that lynx avoid clearcuts for at least 10 years.

The above figure in Squires et al. (2006) clearly demonstrates avoidance of clearcuts by lynx. The Brittell et al. (1989) recommendations noted that lynx tend to avoid crossing openings wider than 300 feet. More recently, Squires et al. (2010) reported that the average crossing distance of lynx across openings was 327 feet. Yet the NRLMD has no restrictions on the size of openings to ensure lynx will travel across them.

As we noted in section 3 of this Objection above, there has never been any analysis as to why the 30% clearcut allowance will maintain “sufficient” lynx foraging habitat. This allowance, along with the allowed exceptions and exemptions, could provide on average only 19.3% lynx foraging habitat within mature forests.

The NRLMD does not evaluate how the effects of 30% clearcut areas within mapped lynx habitat affect lynx mortality via predation. Squires et al. (2006) reported that at least 22% of lynx mortality was caused by predation from mountain lions, while 11% mortality was of unknown causes, which could include predation. Yet the loss of hiding cover for lynx and their growing kittens when 30% of lynx habitat lack cover was never evaluated in the NRMLD. This conservation strategy completely ignores the requirement of lynx for hiding cover from predators.

The NRLMD also does not address clearcutting effects on snowshoe hares, the primary prey for lynx. Clearcuts fragment snowshoe hare habitat even though they may not occur in multi-storied forests. As noted by Walker (2005) and Lewis et al. (2011), openings fragment snowshoe hare matrix habitat that connects high quality habitat patches. Travel in matrix noncover areas increases predation rates as hares move between good-quality habitat patches. These increased predation rates in turn may render suitable more dense habitat patches of multi-storied forests as “sink” habitats due to a lack of immigration (Griffin and Mills 2009). The larger the clearcut opening, the more snowshoe hare habitat that will be affected by cover losses. The average snowshoe hare territory size is generally no more than 4 acres (Olsen et al. 2023). A clearcut of 473 acres will certainly create insurmountable travel for snowshoe hares (118 times their average home range use), making adjoining suitable snowshoe hare habitats isolated and vulnerable to extinction.

The NRLMD also fails to evaluate clearcutting effects on both snowshoe hares and lynx in regards to long-term availability of downed logs (coarse woody debris).

The importance of CWD was noted by Brittell et al. (1989) in that it provides hiding cover for snowshoe hares and stalking cover for lynx. The 2021 BiOp for the remapping project noted at page 29 that beetle-killed stands provide jackstraw-type structure of downed trees and snags once the trees fall which would provide both denning habitat for lynx and cover for snowshoe hares forest-wide. The LCAS noted that timber harvest will reduce CWD (6-3) but this did not play any apparent role in allowance of 30% clearcut areas at any one time, or the progressive elimination of mature forest habitat from clearcutting over time. The LCAS provides a number of photos showing high levels of down and jack-strawed logs in lynx habitat (e.g., 1-4, 5-2, 7-3, 7-6) which provide denning habitat for lynx. When a forest stand is clearcut, almost all potential for CWD is lost (e.g., clearcut photo in Attachment 6 of this Objection), and for lynx, this loss is essentially irretrievable as it will take at least 80 years for a forest stand to reach maturity and begin to experience pine beetle epidemics again. In effect, a key habitat element for both snowshoe hares and lynx is permanently lost from clearcuts.

The NRLMD also failed to evaluate how clearcutting affects the density of regeneration within affected areas. AS was noted by McKelvey et al. (1990), "Snowshoe hares generally occur in areas of dense forest cover, including shrubs and "doghair" thickets of small trees; these structures are common in naturally regenerating areas after fires, but do not result from standard even-aged forestry practices; thus we believe that natural regeneration and stand development will likely benefit hares, and ultimately lynx. The LCAS at 2-6 includes a photo of a massive density of seedlings that resulted from fire. Even the LCAS at 2-6 notes that a high density of seedlings in clearcuts was 4,500 stems per acre. As is shown in Attachment #5 for a roadside hazard clearcut in the Fleecer Mountain area, seedling density was not remotely close to 4,500 stems per acre. It is likely that most clearcuts on the BDNF will not provide suitable seedling/sapling density in 30 years to provide snowshoe hare and lynx winter habitat. This potential was never evaluated in the NRLMD FEIS. Yet the NFLMD guideline VEG G1 recommends logging within the stem-exclusion, closed-canopy structural stage in order to recruit a high density of conifers. And NRLMD Standard VEG S6 notes that in LAUs where VEG S1 is met (less than 30% clearcut of lynx habitat), timber

harvest is allowed in areas that have the potential to improve snowshoe hare habitat to increase understory development where this is lacking. To date, the NRLMD has never demonstrated that clearcutting will create winter snowshoe hare or lynx habitat within 30 years, so the beneficial effect of clearcutting to snowshoe hares and lynx has never been demonstrated, even though this is a recommended conservation strategy.

The NRLMD also fails to evaluate the long-term effects of clearcutting as compared to natural forest fires. As was noted by McKelvey et al. (1990), fires leave large amounts of woody material standing and down. The difference between CWD between clearcuts and burned forests is so massive that any claims that clearcuts replicate natural fires is a violation of the NEPA.

The NRLMD also fails to evaluate the long-term effects of clearcutting on forest plan succession. As was noted by Holbrook et al. (2017a), older forest stands with a combination of spruce/fir and lodgepole pine create optimum habitat for snowshoe hares by providing cover (spruce/fir trees) while at the same time also providing optimal conifer forage (lodgepole pine seedlings and saplings). Malcolm (2012) clearly defined these significant benefits to snowshoe hares and lynx through natural forest succession, including after bark beetle epidemics, due to the creation of high habitat diversity in both structure and tree species diversity (including spruce/fir trees). When a forest stand is clearcut, the progression of these high quality habitats for both snowshoe hares and lynx are stopped, and are essentially irretrievable as per lynx conservation. It will take at least 80-100 years for these lodgepole pine stands to again become subject to pine beetle infestations, which will open stands to allow development of spruce and fir trees. As was noted by Collins et al. (2011), the potential for spruce and fir trees to develop in clearcuts is well below this same potential via natural succession. In effect, clearcutting lodgepole pine stands creates an irretrievable habitat loss for lynx. This irretrievable habitat loss is never addressed in the 30% allowance of clearcutting in lynx habitat by the NRLMD.

10. The USFS and USFWS failed to provide any scientific documentation for limiting LAUs to those areas where there is at least 6400 acres of primary vegetation, which includes subalpine fir, spruce, and lodgepole pine cover types; this methodology eliminates lynx habitat within linkage areas necessary for dispersal of lynx within the Northern Rocky Mountains.

The LCAS in 2000 at page 7-4 defined a requirement that LAUs contain at least 6400 acres of primary vegetation. No scientific reference was provided to define the basis for this requirement. The LCAS at S-3 defines primary vegetation as subalpine fir, spruce, and lodgepole pine cover types, while secondary habitat is defined as cool, moist Douglas-fir, grand fir, western larch, and aspen. The BDNF remapping process included this 6400 acres within LAUs as a requirement for any given LAU (remapping update at pages 3, 9). This requirement was also noted in the remapping EA at page 12. As with the LCAS, no scientific reference was provided to support use of this criteria for LAUs, in violation of the NEPA and the ESA. In addition to this 6400 acre requirement for LAUs, any secondary habitat, including dry forest types as ponderosa pine and climax lodgepole pine, had to be within 300 meters of primary habitat in order to be included within an LAU. As a result of this 6400 acre requirement for LAUs, the remapped LAUs are 92.8% primary vegetation, and 7.2% secondary vegetation.

Requiring LAUs to contain on average 93% primary vegetation is not consistent with the current best science. Holbrook et al. (2018) defined female lynx home ranges as averaging 5% open, 26% sparse, 49% mature, and 19% regenerating habitat. Kosterman et al. (2018) defined productive lynx core habitat as containing 4% open areas, 10% sparse, 49% mature forest, and 37% regenerating forests. The Forest Service did not define how their requirement of a LAU for 6400 acres of spruce/fir/lodgepole pine cover types is consistent with the habitat within lynx home ranges as defined by this current science (Id.). At best, this science defines lynx home ranges as containing on average 31% open and sparse habitat, while core areas contain 14% open and sparse habitat. These verified habitat levels within lynx home ranges are inconsistent with the Forest Service's

mapping where apparently on average 93% of lynx home ranges must have primary vegetation, which would be general forest habitat (not sparse or open). It is clear that the Forest Service's use of a the 6400 acre rule for primary vegetation is an invalid habitat requirement which drastically reduces identified lynx habitat on the BDNF. We also note that the current best science does not define lynx habitat based on "primary and secondary vegetation." Kosterman et al. (2018) defined lynx habitat in Table 1 as open, sparse, small-diameter regenerating forest, large-diameter regenerating forest, and mature forest. Holbrook et al. (2018) defined lynx habitat in Table 3 as stand initiation (open), sparse, advanced regeneration, and mature. The initial description of lynx habitat in the LCAS in 2000, including without any references as to the basis for this requirement, has remained without any changes for 25 years, in spite of current science which provides not only much more definitive definitions of lynx habitat, but also defines the average of these habitats within lynx home ranges. The agency did not ever address why the unreferenced 6400 acre rule for primary vegetation, instead of the current best science, was used for the BDNF remapping, in violation of the NEPA and the ESA.

A significant impact of the agency's use of the 6400 acre primary habitat rule, in addition to a failure to define lynx habitat by the current best science, is the end result that a large number of LAUs within linkage areas were deleted, in a large part because they lacked the 6400 acres of primary vegetation. This conflicts with the recognized dispersal value of deleted LAUs within linkage areas. Without any requirements to maintain connectivity within these deleted LAUs, even when they are located within identified linkage areas, the BDND is directly degrading the ability of the forest to maintain dispersal of lynx within linkage areas.

The limiting of LAUs to largely just primary and some secondary vegetation also ignores the connectivity value noted many times in the LCAS of woodlands and shrublands to promote habitat connectivity for lynx, as well as to provide alternate prey sources at certain times, such as when jackrabbit populations are high within shrublands. Again, the agency is clearly using very limited definitions of lynx habitat in order to reduce the requirements on the BDNF to manage for

lynx conservation and recovery, in violation of the NFMA and the ESA. The agency is also violating the NEPA by providing a false rationale for reducing habitat management of lynx.

11. The Forest Service and USFWS are violating the NFMA by using a false proxy, or habitat exceptions and exemptions for lynx, as a measure of population trend; they are also violating the NFMA by a failure to monitor lynx population trends within occupied habitat; also in violation of the NEPA and the ESA, the 6% allowed habitat loss was never evaluated to demonstrate its impact on lynx habitat sufficiency.

To date, the Forest Service and USFWS have not demonstrated that the 6% allowance of removal of lynx foraging habitat within WUI provides a measure of lynx population trend. This is an arbitrary proxy with no connection to lynx populations. Worse, this 6% proxy means that mature forest habitat within LAUs only has to be 19.3% of lynx habitat. This allowance of a 6% habitat loss was never evaluated for the NRLMD, in violation of the NEPA and the ESA. Nor has the Forest Service monitored actual lynx population trends, in violation of the NFMA. This means there is no actual ability of the agencies to assess the effectiveness of the NRLMD to conserve and recover lynx. As such, the NRLMD has no verified ability to conserve and recover lynx. This triggers violations of the NFMA, NEPA and ESA.

12. The Forest Service failed to include an amendment of the NRLMD to address the changed definition of the WUI in the proposed Canada lynx forest plan amendment.

The HFRA definition of the WUI is Forest Plan direction as per the NRLMD. However, In spite of changing this definition in the proposed Canada lynx forest plan amendment, the WUI definition was simply changed without any forest plan amendment, in violation of the NFMA.