High Country Conservation Advocates ● The Wilderness Society ● Center for Biological Diversity ● Rocky Smith ● EcoFlight ● Great Old Broads for Wilderness ● Rocky Mountain Wild ● Colorado Native Plant Society ● Rocky Mountain Recreation Initiative ● Wild Connections ● Quiet Use Coalition ● Central Colorado Wilderness Coalition ● San Luis Valley Ecosystem Council

November 18, 2019

Brian Stevens
Team Leader
BLM Gunnison Field Office
210 West Spencer Ave., Suite A
Gunnison, CO 81230
Via email to bwstevens@blm.gov

Re: North Powderhorn Fuels Project

Dear Mr. Stevens:

The following are the comments of High Country Conservation Advocates (HCCA), The Wilderness Society, Center for Biological Diversity, Rocky Smith, EcoFlight, Great Old Broads for Wilderness, Rocky Mountain Wild, Colorado Native Plant Society, Rocky Mountain Recreation Initiative, Wild Connections, Quiet Use Coalition, Central Colorado Wilderness Coalition, Center for Biological Diversity, and San Luis Valley Ecosystem Council on the proposed North Powderhorn Fuels Project, as described in the Scoping Letter (SL) of October 18, 2019 and the Draft Proposed Action and Alternatives (DPAA). HCCA is located in Crested Butte, Colorado and has over 900 members. HCCA was founded in 1977 to protect the health and natural beauty of the land, rivers, and wildlife in and around Gunnison County now and for future generations. Thank you for the opportunity to comment on this proposal.

We may be able to support Alternative C should the agency provide more information clearly indicating that treatments outside of the wilderness and WSAs could be justified and, with mitigation, be acceptable.[1] We could also support an alternative that allows non-motorized prescribed burning in ponderosa stands within the Powderhorn Wilderness and Wilderness Study Areas, if such treatments would result in treated areas resembling what would exist if natural fire disturbances had been allowed to occur.

I. CLARIFY HOW THE PROJECT'S PURPOSE AND NEED WOULD BE ACHIEVED

The SL for this project leads with the statement that the agency is preparing an EA to "reduce fuel loading in the Powderhorn Wilderness using various vegetative treatments. These treatments would consist of identifying prescribed fire units, mechanically thinning the forest, holding timber sales and mastication work."[2] But mechanical thinning, timber sales, and mastication generally are prohibited in wilderness areas.[3] Please clarify the relationship between actions within and outside of the wilderness. If the purpose is to reduce fuel loading in the Powderhorn Wilderness, then how would treatments in non-wilderness accomplish that? Likewise, how do mechanical uses in the Powderhorn Wilderness comply

[1] Alternative C is defined in DPAA at 7 as: "No Action in Wilderness/WSA. No Prescribed fire treatments would be implemented inside the Wilderness/WSA areas."
[2] SL at 1.
[3] See 16 U.S.C. 1133(b) and (c); BLM Manual M6340 at 1-27 (2012). The use of any motorized equipment is prohibited. Exceptions to this prohibition are limited. See detailed discussion in section III below.

with The Wilderness Act? How would the proposed treatments be consistent with maintaining or improving wilderness character? And what treatment methods are targeted for the different timber types? For example, prescribed burning is not scientifically supported for spruce-fir forests in southcentral Colorado, but is for ponderosa under certain conditions.[4] The available documents for this project are vague as to what type of treatments are proposed where and why, which precludes a meaningful opportunity for public comment.

The SL's focus on reducing fuel loading in the Powderhorn Wilderness is also different than the purpose identified in the DPAA. The latter states: "The purpose of the proposed action is to return timber stands to an earlier successional development stage and to promote fine scale heterogeneity across the project area."[5] Reducing fuel loading in high-elevation Engelmann spruce and returning lower-elevation ponderosa stands to an earlier development stage are very different things. Regardless, it is unclear how the purpose and need are related to maintaining or improving wilderness character. Please clarify the exact purpose and need for this project, and why it is deemed necessary by BLM across almost 54,000 acres of wilderness and Wilderness Study Area (WSA), much of which is likely within its historic natural range of variability.

Lastly, we ask that you please provide detailed maps of what types of treatments would be planned for what specific areas. The only maps currently available on the project website do not differentiate between tree species, or show specific locations for treatments. One map shows a Vegetation Condition Assessment, denoting area with "deficit" "similar" or "surplus", with no information on how these determinations were made, nor the scientific basis for such determinations. Please also provide maps showing locations of proposed "temporary" roads.

II. TREATMENTS IN SPRUCE FORESTS ARE NOT NEEDED

BLM states: "The current overstocked conditions and mortality in Engelmann spruce stands has created a situation where fire intensity and severity in future fires will increase from low/moderate to high intensity and severity."[6] Managing wildfires on the landscape will not be significantly improved by the proposed action. In high-elevation forests, high-severity wildfires are the norm, so bark beetle mortality such as that in and around the project area would not make those fires more severe than fires occurring in the absence of bark beetle outbreaks. In general, weather and climate are the key drivers of fire occurrence and severity; large severe fires are more likely when it's hot, dry and windy, regardless of beetle outbreaks.[7]

> Subalpine forests of . . . Engelmann spruce . . . fall into the weather-limited category where *tree-thinning prescriptions would not be expected to significantly decrease fire*

[4] See discussion in section II below.
[5] DPAA at 2.
[6] Id. at 1.
[7] Robert A. Andrus, Thomas T. Veblen, Brian J. Harvey, Sarah J. Hart. *Fire Severity Unaffected by Spruce Beetle Outbreak in Spruce-Fir Forests in Southwestern Colorado*. Ecological Society of America, at 6. Attachment 1.

> *risk*. More specifically, fires in subalpine forest are naturally large, catastrophic, and relatively infrequent.[8]

To date, the majority of studies have found no increase in fire occurrence, extent, or severity following outbreaks of spruce beetle in Colorado, Wyoming, and other areas.[9] The best available evidence indicates that neither area burned by nor severity of fires is being directly driven by increases in beetle caused tree mortality.[10] Data show that beetles have little influence on the occurrence[11] or severity of forest fires in the 10 to 15 since the trees died.[12]

Beetle-kill forests are surprisingly rich in biodiversity.[13] High-severity fires often have ecological benefits, and are the norm in many systems, such as spruce-fir forests. Severe fire in beetle kill is not necessarily ecologically catastrophic, but rather a natural mechanism of renewal and diversity. The "snag forest" left behind from spruce-bark beetle infestations is a favorable habitat for many invertebrates and vertebrates because of the creation of canopy gaps and enhanced growth of understory plants. "Outbreaks create snags that may be used by various birds and mammals, including woodpeckers, owls, hawks, wrens, warblers, bats, squirrels, American marten and lynx."[14] By removing the trees, you remove this benefit, and truncate the ecological processes providing the benefit.

> While thinning has the potential to reduce tree stress, which can reduce susceptibility to insect attack, it also has the potential to bring about other conditions that can increase susceptibility. For example, thinning may injure surviving trees and their roots, which can provide entry points for pathogens and ultimately reduce tree resistance to other organisms . . . . Although thinning can be effective in maintaining adequate growing space and resources, there is accumulating evidence to suggest that tree injury, soil compaction, and temporary stress due to changed environmental conditions caused by thinning may increase susceptibility of trees to bark beetles and pathogens . . . .[15]

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[8] Jason Sibold, PhD., Testimony before Congress, April 11, 2013, at 2 (emphasis added). Attachment 2.

[9] E. g., Scott H. Black, Dominik Kulakowski, Barry R. Noon, Dominick A. DellaSala. *Do Bark Beetle Outbreaks Increase Wildfire Risks in the Central U.S. Rocky Mountains? Implications from Recent Research*. Natural Areas Journal, 33(1):59-65 (2013), at 59. Attachment 3.

[10] Robert A. Andrus, Thomas T. Veblen, Brian J. Harvey, Sarah J. Hart. *Fire Severity Unaffected by Spruce Beetle Outbreak in Spruce-Fir Forests in Southwestern Colorado*. Ecological Society of America.

[11] Hart, S.J., Schoennagel, T., Veblen, T.T., & Chapman, T.B. 2015. *Area burned in the western United States is unaffected by recent mountain pine beetle outbreaks*. Proceedings of the National Academy of Sciences. 112(14): 4375-4380. Attachment 4.

[12] Harvey, B.J., Donato, D.C., Turner, M.G. 2014. *Recent mountain pine beetle outbreaks, wildfire severity, and postfire tree regeneration in the US Northern Rockies*. Proceedings of the National Academy of Sciences. 111(42): 15120-15125. Attachment 5.

[13] *See* http://www.durangoherald.com/article/20160302/NEWS06/160309880/Beetle-kill-zones-surprisingly-rich-in-biodiversity (last visited November 13, 2019).

[14] *Id*.

[15] Scott H. Black, Dominik Kulakowski, Barry R. Noon, Dominick A. DellaSala. *Do Bark Beetle Outbreaks Increase Wildfire Risks in the Central U.S. Rocky Mountains? Implications from Recent Research*. Natural Areas Journal, 33(1):59-65 (2013), at 62.

Please provide scientific justification for proposals to treat spruce and mixed-conifer forest in the project area, consistent with the Wilderness Act where applicable. Any treatment, even if ecologically justified, would be difficult to implement in some of the more remote locations of the project area.

For ponderosa stands outside of the wilderness and WSA boundaries, we ask that you prioritize prescribed fire over mechanical treatments. Generally, HCCA encourages the use of fire for aspen and ponderosa stands but not for spruce-fir stands. Prescribed burning is not scientifically justified in Engelmann spruce forest, and should not be pursued there. Fire in spruce-fir stands is not appropriate because such stands did not evolve with frequent fire. The fire return interval in these stands is very long, often 250-450 years, and trees 500 to 600 years old are not uncommon. Restoration projects like those proposed are therefore unnecessary and unjustified in these ecosystems. On the other hand, prescribed burning to restore ponderosa habitat could be warranted. If the agency can still accomplish its purpose to "return timber stands [dominated by ponderosa pine] to an earlier successional development stage and to promote fine scale heterogeneity across the project area"[16] without utilizing mechanical equipment within the wilderness and WSA boundaries, then we support it doing so to the extent it is necessary to maintain or improve wilderness character.

Note, however, that not all stands containing ponderosa pine were primarily affected by a low-intensity fire regime, maintaining open, park-like stands. For example, Kaufmann et al, 2006[17], stated:

> The idea that a historical fire regime of primarily low-severity fires maintained savannas and open woodlands applies only to portions of the lowest elevations of the Colorado Front Range, and generally does not apply to most of the middle and higher elevations.

Sheriff and Veblen, 2006[18], found that:

> Below 1,950 m [6,396 feet], the high number of fire scars, scarcity of large post-fire cohorts, and lack of synchronous tree mortality or growth releases, indicate that historic fires were of low severity. In contrast, above 2,200 m [7,218 feet], fire severity was greater but frequency of widespread fires was substantially less. At 18 sites above 1,950 m [7,216 feet], 34 to 80% of the live trees date from establishment associated with the last moderate- to high severity fire.

These studies are from the Front Range of Colorado and may not be precisely applicable to the project area. However, the principle established by these studies *is* likely applicable: only the lowest elevations

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[16] DPAA at 2.

[17] Kaufmann, Merrill R., Thomas T. Veblen, and William H. Romme. 2006. *Historical fire regimes in ponderosa pine forests of the Colorado Front Range, and recommendations for ecological restoration and fuels management*. Front Range Fuels Treatment Partnership Roundtable, findings of the Ecology Workgroup. www.frftp.org/roundtable/pipo.pdf. Attachment 6.

[18] Sherriff, Rosemary L. and Thomas T. Veblen, 2006. *Ecological effects of changes in fire regimes in Pinus ponderosa ecosystems in the Colorado Front Range.* Journal of Vegetation Science 17: 705-718, 2006. Attachment 7.

of stands containing ponderosa pine were primarily affected by a low-intensity fire regime. Areas of this timber type at higher elevations likely had a mixed fire regime, i. e., one that historically had low-, moderate-, and high-intensity fires. It is likely that a sizable portion of the project area is on north- or east-facing slopes, where fire was less frequent. Under the natural range of variability, these areas would at times not have fire for many decades, allowing a higher level of fuel to accumulate, which in turn led to some less frequent moderate- and high-intensity fires.

BLM needs to determine the fire history of stands in the ponderosa pine/mixed conifer type within the project area, and show how any proposed treatment is ecologically desirable.

III. AVOID MOTORIZED USE IN WILDERNESS AND WILDERNESS STUDY AREAS

The SL states that BLM is considering an alternative to allow prescribed fire units in the Powderhorn Wilderness and WSAs. The BLM concludes: "*These units in the wilderness and WSA would have no mechanical aspect to them*."[19] But the DPAA directly contradicts this, stating:

> "[t]he use of helicopters in the Wilderness and WSA would decrease the number of ground forces needed to complete this project . . . . Mechanical equipment use in the wilderness and WSA would be limited to . . . Helicopters . . . Portable Weather Stations . . . Portable Repeaters . . . Chainsaws . . . UAS Unmanned Aircraft Systems . . . [and] FLE Fireline Explosive."[20]

This contradicts the SL declaration that operations in wilderness and WSAs would have no mechanical aspect to them. BLM should not allow motorized use in the Powderhorn Wilderness and adjacent WSAs unless it is supported by a complete minimum tool analysis (e.g. via a minimum requirements decision guide). The conclusory statements in the DPAA are wholly inadequate to justify an exception for motorized use.

The Wilderness Act allows the use of prescribed fire, subject to explicit parameters. "Prescribed fires can be used in wildernesses only to clearly enhance the land's wilderness values, including restoring natural vegetative communities."[21] But exceptions for motorized use are limited, and not applicable for this project, as discussed below. In addition, BLM direction is clear: "Fuel treatment [by thinning or removing native vegetation] is not allowed in wilderness, except in rare circumstances."[22] And: "Due to the controversial nature of fuel treatments and the complexities of analyzing the effects of these on the totality of wilderness character, when they are to be used as a replacement for wildland fire they may require analysis through an EIS."[23]

Please analyze and explain how mechanical fuel treatments in the Powderhorn Wilderness Area and WSAs and the proposed documentation of potential effects in an EA comply with these requirements. The use of motorized equipment, such as helicopters and chainsaws, and extensive vegetation

[19] SL at 1 (emphasis added).
[20] DPAA at 5-6.
[21] BLM Manual M6340 at 1-25 (2012).
[22] Id. at 1-27.
[23] Id.

treatment could have a strongly adverse impact to the wilderness character of the Powderhorn Wilderness and WSAs, which should be analyzed and disclosed in an EIS if the project proceeds as currently proposed.

The Wilderness Act is explicit in its list of prohibited actions: "Except as specifically provided for in this Act, and subject to existing private rights, there shall be no . . . motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area."[24]

BLM regulations are likewise explicit:

> "Except as specifically provided in the Wilderness Act […] in BLM wilderness areas you must not: . . . (d) Use motorized equipment; or motor vehicles, motorboats, or other forms of mechanical transport; (e) Land aircraft, or drop or pick up any material, supplies or person by means of aircraft, including a helicopter . . . ; (f) Build, install, or erect structures or installations, including . . . electronic installations, and similar structures . . . ; (g) Cut trees . . . ."[25]

Prohibited motorized equipment includes "chainsaws."[26] Use of motorized equipment, including chainsaws, may only be allowed in wilderness areas if:

> ". . . it is associated with a valid existing right . . . , if necessary to meet minimum requirements for the administration of the area for the purpose of the Wilderness Act . . . including measures required in emergencies involving the health and safety of persons within the area, allowed under a special provision of Section 4(d) of the Act, or explicitly identified in the legislation designating a particular wilderness."[27]

Landing of aircraft is prohibited, including "[b]ringing down to the surface of the earth (land, water, snow, or ice) any means of transportation through the air, whether or not it is motorized, or anything attached to or carried by such aircraft during or after a flight."[28] "Landing" includes dropping or picking up any material, supplies or person by means of aircraft, although it does not include overflights.[29] Aircraft include, but are not limited to: ". . . helicopters, fixed-wing airplanes, parachutes, hang-gliders, parasails, kite-sails, and motorized remotely-controlled flying machines (such as drones)."[30]

Prohibited Installations include: "Anything made by humans that is not intended for human occupation and is left behind when the installer leaves the wilderness."[31]

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[24] 16 U.S.C. § 1133(c).
[25] 43 C.F.R. § 6302.20(d).
[26] 43 C.F.R. § 6301.5.
[27] BLM Manual M6340 at 1-23 (2012).
[28] Id. at 1-14.
[29] Id.
[30] Id.
[31] Id. at 1-15.

> "'Installations' can be stationary (including, but not limited to: weather stations, physical geocaches, and trail signs) or mobile (including, but not limited to, radio collars or other remote tracking devices when they are installed in the wilderness). Installations may only be allowed in wilderness areas if they are associated with a valid existing right . . . , if necessary to meet minimum requirements for the administration of the area for the purpose of the Wilderness Act . . . , including measures required in emergencies involving the health and safety of persons within the area, allowed under a special provision of Section 4(d) of the Act, or explicitly identified in the legislation designating a particular wilderness."[32]

If the agency insists that mechanical aspects are necessary to meet minimum requirements for the administration of the area for the purpose of the Wilderness Act, then subsequent NEPA analysis must comply with the agency's Minimum Requirements Analysis (MRA) and Minimum Requirements Decision Guide (MRDG).[33] While BLM may prescribe measures to control fire, noxious weeds, non-native invasive plants, insects, and diseases,[34] exceptions are limited to those *necessary to meet minimum requirements for the administration of the wilderness area*.[35] An MRA is required whenever land managers are considering a use prohibited by Section 4(c) of the Wilderness Act of 1964. This process is organized around answering two fundamental questions: 1) is any action necessary (regardless of the tool or other use employed); and 2) if so, what is the minimum amount of a prohibited use necessary to address the issue at hand?[36]

BLM must document how the proposal is needed to meet minimum requirements for that area's administration. Specifically, *all* of the following conditions must be met:

> 1. "necessary": essential, indispensable, and inevitable
> 2. "minimum": the least possible amount, degree, or quantity
> 3. "requirement": something demanded or imposed as an obligation
> 4. "administration": the function of the BLM in exercising its land management duties; by extension this includes non-BLM employees officially acting on behalf of the BLM; "administration" includes, as the Act says, "measures required in emergencies involving the health and safety of persons within the area" […]
> 5. "purpose of this Act": to secure for the American people of present and future generations the benefits of an enduring resource of wilderness through the preservation of an area's wilderness character.[37]

While the agency may argue that there is "surplus" vegetation in the Powderhorn Wilderness, seral conditions that BLM finds unfavorable do not warrant wholesale disregard for the Wilderness Act. Simply put, based on the limited information presented, this project is not essential, indispensable, and

[32] Id.
[33] BLM Manual M6340 at Appendix B-1 (2012).
[34] 43 C.F.R. § 6304.22.
[35] 43 C.F.R. § 6303.1.
[36] BLM Manual M6340 at Appendix B-1 (2012).
[37] Id. at B-2.

inevitable to meet the minimum requirements for the Powderhorn Wilderness's administration. Therefore, the Wilderness Act prohibits the use of motorized equipment or permanent structures for this proposal.

IV. AVOID NEW ROAD CONSTRUCTION

We strongly urge BLM to avoid new road construction in its implementation of this project. BLM states:

> If needed, existing roads used to remove forest products would be maintained and improved. No new permanent roads would be created by specific projects. All temporary roads created for access and forest product removal would be closed upon completion of the treatment. Road closures would be done with natural surrounding materials such as large rocks or logs, and buck and rail fences where appropriate. Roads would then be posted as closed to vehicle access. All road closures would be coordinated with current and future travel management plans.[38]

Most of the Gunnison Basin is under tremendous recreation pressure as new technologies and increased visitation proliferate on the landscape. Creating new routes, even if "temporary", carries significant risks for unauthorized use. These roads would present a new – and tempting – opportunity for unlawful recreational use that, once established, would be difficult to terminate. Both BLM and Forest Service already struggle to manage recreation impacts on surrounding public lands, and the agency must analyze its ability to manage illegal motorized use.

The best available science shows that road construction – even for temporary roads – causes erosion, soil compaction, and other alterations in forest geomorphology and hydrology which can seriously impair water quality and aquatic species viability.[39] Roads disturb and fragment wildlife habitat, altering species distribution, interfering with critical life functions such as feeding, breeding, and nesting, and resulting in loss of biodiversity. Roads facilitate increased human intrusion into sensitive areas, resulting in roadkill, poaching of rare plants and animals, human-ignited wildfires, introduction of exotic species, and damage to archaeological resources. And these impacts are not temporary, even if the roads are labelled as such. Thus, the nature and location of the road network to be used and constructed is critical to understanding this project's impacts.

In its EA, the agency must analyze the direct, indirect, and cumulative impacts that road construction, reconstruction, and use would have on the environment. This analysis must consider the road network's impacts to wildlife, watersheds, and recreation, as well as the cost of development, maintenance, and decommissioning. The EA should also specifically identify those specific roads that it is proposing to maintain or improve, the methods for doing so, and the specific environmental impacts that would result.

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[38] DPAA at 4.

[39] For an overview on the impacts of roads, *see*, *e.g.*, S. Trombulak & C. Frissell, *Review of ecological effects of roads on terrestrial and aquatic communities*, Conservation Biology 14:18-30 (2000), Attachment 8; The Wilderness Society, *Transportation Infrastructure and Access on National Forests and Grasslands: A Literature Review* (May 2014), Attachment 9; and Gucincki et al., *Forest Roads: A Synthesis of Scientific Information*, Forest Service General Technical Report PNW-GTR-509 (May 2001), Attachment 10.

V. PROTECT CANADA LYNX

The proposed action would likely degrade lynx habitat, and BLM must ensure compliance with the Endangered Species Act. Lynx habitat is ubiquitous in and around the project area. Should this project proceed, it is essential that BLM maintain habitat and connectivity for lynx. Other than addressing hazard trees near roads and human infrastructure, there should be no treatments in any lynx linkage areas, including areas that facilitate travel between lynx analysis units.[40] Note that the project area is close to the Slumgullion Linkage, which is described as follows:

> "This linkage area includes the Spring Creek and Indian Creek areas. It provides a north-south connection between Lake City to the Creede area, with threats that include highway crossing problems (Hwy 149)."[41]

Outside of lynx linkage areas, the proposed actions must not create large openings. Lynx avoid areas that have been clear-cut, logged, and even thinned. If open areas are greater than 100 meters in size, lynx movement patterns may be affected.[42]

Squires et al, 2010, found that lynx in Montana "avoided recent clear-cuts or other open patches."[43] "In winter, lynx do not appear to hunt in openings . . . ."[44] Thinning young stands reduces the horizontal cover needed by snowshoe hare, lynx' favorite prey. This could lead to a considerable reduction in hare.[45] Thinning and other treatments would reduce the quality of lynx habitat or even render some of it unsuitable, and could reduce habitat connectivity across the landscape.

Spruce-fir forests are typically multi-aged, i. e., they have younger trees beneath older midstories and/or overstories, a structure that forms good lynx habitat. Moreover, Squires' research found that lynx on the nearby Rio Grande National Forest were still using stands with substantial Engelmann spruce mortality.[46] Spruce trees killed by bark beetles often remain standing for decades. When they do fall down, they form denning habitat. Stands with a relatively dense understory will be used by lynx, even if there is a

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[40] Linkages are defined in the 2013 (latest) version of the Canada Lynx Conservation Assessment and Strategy as: "Areas that facilitate movements of lynx beyond their home range, such as dispersal, breeding season movements or exploratory movements. Linkage areas may incorporate topographic features that tend to funnel animal movements and may encompass areas of non-lynx habitat." Id. at 125.

[41] Southern Rockies Lynx Management Direction (commonly known as the "Southern Rockies Lynx Amendment") FEIS at D-4.

[42] Canada Lynx Conservation Assessment and Strategy, 3rd ed., at 77.

[43] Squires, John R., Nicholas J. Decesare, Jay A. Kolbe, and Leonard F. Ruggiero, 2010. *Seasonal Resource Selection of Canada Lynx in Managed Forests of the Northern Rocky Mountains.* Journal of Wildlife Management 74(8):1648–1660; 2010; DOI: 10.2193/2009-184, at 1648. Attachment 11.

[44] ILBT, 2013. Interagency Lynx Biology Team. 2013. *Canada Lynx Conservation Assessment and Strategy*. 3rd edition. USDA Forest Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, and USDI National Park Service. Forest Service Publication R1-13-19, Missoula, MT. 128 pp. at 28; citations omitted. Available at https://www.fs.fed.us/biology/resources/pubs/wildlife/LCAS_revisedAugust2013.pdf.

[45] See ILBT, 2013, at 72-73.

[46] See: Squires, John, 2018. *Habitat Relationships Of Canada Lynx In Spruce Bark Beetle-Impacted Forests* Analysis Summary – 19 March 2018. John Squires, Research Wildlife Biologist, USDA, Rocky Mountain Research Station, 800 E. Beckwith Ave., Missoula, MT 59801. Attachment 12.

dead overstory, because the understory forms the dense horizontal cover needed by lynx and its main prey, snowshoe hare. Any treatment, whether mechanical, fire, or both, would damage this understory and thereby degrade or destroy lynx habitat.

Cutting trees reduces future dead and down logs, some of which form denning habitat for lynx. Where trees are cut, some logs should be retained for possible lynx denning habitat.[47] Retaining down dead will also benefit other wildlife species, especially marten, and soils, by retaining material that will reduce erosion and slowly decay into new soil. Treatments in any area should avoid advance regeneration, The young trees may provide, now or in the future, the dense horizontal cover needed by snowshoe hare, lynx' favorite prey.

Roads needed for the project would, at least in the short-term, fragment habitat for lynx. These roads may not be successfully closed or decommissioned after project completion, meaning they will get used by motor vehicles, extending the duration of habitat fragmentation. Though lynx are believed to not avoid use of habitat along roads with low usage, they do appear to avoid use of denning habitat in these areas. Also roads facilitate human access, especially during hunting season, which could result in higher lynx mortality. Overall, the proposed treatment and the roads needed for it will reduce habitat connectivity in the project area.

VI. PROTECT OTHER WILDLIFE

The entire project area provides outstanding habitat for a variety of wildlife. I have personally seen bobcats, large herds of elk, mule deer, and ptarmigan within the project area.[48] The following wildlife habitats as mapped by CPW are within the project area:

- Bighorn Sheep Migration Corridor, Severe Winter Range, Winter Range[49]
- Elk Winter Concentration Area, Winter Range, Summer Concentration Area[50]
- Mule Deer Winter Range[51]

BLM must thoroughly analyze and disclose the project's impact on these species, their habitat, and the recreation and economics (especially for big game hunting) associated with them. Removing trees, even dead ones, will generally reduce hiding cover for deer and elk. Sizable blocks of undisturbed, moderately dense trees form very important security cover for these species. Logging would fragment these blocks.

It is important to identify if any of the proposed treatment areas include any of the following characteristics. If so, restrictions, exclusions, design requirements, and/or seasonal restrictions should then be implemented as needed to protect these areas. These areas/features include: "riparian areas, existing WSAs, Slumgullion Earthflow National Natural Landmark ACEC, areas exhibiting erodible soils,

[47] See SRLA Guideline VEG G 11, SRLA ROD at Attachment 1-5.
[48] See Attachment 13.
[49] See Attachment 14.
[50] See Attachment 15.
[51] See Attachment 16.

crucial big game winter range, elk calving areas, within SMRAs, on areas where slopes exceed 35 percent, or for non-game wildlife habitat and recreation mgmt."[52]

According to the Gunnison RMP ROD, no timber harvesting is allowed April 16 to June 30 in elk calving areas to prevent disturbance.[53] The ROD also requires BLM to maintain 200-acre blocks of undisturbed forest around all goshawk nests and two slash piles and five logs 20" or greater DBH per acres for small mammals, black bears, and pine martens.[54]

Constructing roads would allow deeper penetration of motor vehicles into deer and elk habitat, increasing the disturbance to the animals and decreasing the effectiveness of their habitat. While roads used for the project may be closed to the public, closures are often removed or circumvented by hunters and recreationists and others determined to drive further into an area. Thus the presence of new roads could lead to increased hunting pressure and decreased habitat effectiveness, possibly driving deer and elk out of the area, at least during project implementation. These potential impacts must be analyzed and disclosed in any subsequently prepared NEPA analysis.

VII. PROTECT SOILS

The use of heavy equipment for commercial timber harvest is likely to damage soils, by compacting or displacing them, especially at landings and on skid trails and temporary roads. Areas so affected should be repaired, but care must be taken not to damage tree roots that protrude from, or are near, the soil surface.

Areas with detrimental compaction, displacement, severe burning, or erosion must not be treated until the areas are recovered or mitigation measures have been successfully applied.[55]

It is important to guard against negative impacts to soils as a result of the proposed treatment and any negative affects it could have on watersheds. Particularly concerning to us is construction and use of roads for access to treatment areas. New roads would likely increase the connected disturbed area, leading to increased sedimentation of streams.[56]

VIII. PROTECT RARE PLANTS AND FIGHT NOXIOUS WEEDS

Ground disturbance, such as felling, skidding, burning, road construction/increased use, can lead to the introduction and spread of noxious weeds. This must be counteracted through treatment and surveying prior to the commencement of any activities. Noxious weeds must be eradicated to the greatest extent possible prior to any ground disturbance. Survey and eradication efforts should continue for at least two full growing seasons after completion of the proposed activity in treated areas. Any areas where it is not practicable to eradicate existing weed populations should be avoided.

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[52] Gunnison BLM Resource Management Plan (RMP), at 1-5.
[53] Gunnison BLM Record of Decision (ROD), at 2-4.
[54] Id. at A-3.
[55] For guidance see The Forest Service's Soil Management Handbook, FSH 2509.18, R2 Supplement No. 2509.18-92-1, at 2.2 (4).
[56] For guidance on protecting watersheds, see the Forest Service's Watershed Conservation Practices Handbook, FSH 2509.25.

A qualified botanist that can identify populations of rare plants should survey any proposed treatment area prior to treatment. If rare plants are present, BLM should implement at least a 100 foot buffer of no disturbance to safeguard the population and allow for expansion.

IX. RETAIN LARGE TREES

Many trees in the project area are likely to have small diameter. Any larger diameter trees are thus very important, and need to be identified and retained. The removal of large, merchantable trees from forests does not reduce fire risk and may, in fact, increase such risk, as smaller trees ignite with less heat. Large-diameter ponderosa pine and Douglas-fir, having thick bark, are particularly resistant to ignition. Large trees are insurance for the future – they are critical to ecosystem resilience. Targeting smaller trees and leaving both large trees and snags standing addresses the core of the fuels problem. HCCA recommends that fuel reduction efforts be limited to removing trees less than 5" in diameter. We further recommend that not all trees in the smaller diameter classes be removed, as younger, smaller trees are needed to replace older, larger trees as the latter die out.

X. SLASH DISPOSAL

If slash is chipped, depth should be limited to about two inches and cover not more than about 15 percent of a unit. Chips would prevent vegetation from sprouting, and could consume a considerable amount of soil nitrogen during decomposition. The same or similar limitation should apply if slash is "masticated", i. e., made into chunks.

XI. MINIMIZE WINDTHROW

Removing trees, even dead standing ones, may reduce the wind firmness of the stands where cutting takes place, leading to trees blowing down after cutting. Any spruce blowdown would be especially undesirable because spruce bark beetles breed heavily in such material. All cutting units must be carefully designed to minimize windthrow.

XII. MONITORING

We ask that BLM adopt a robust monitoring regime to analyze and assess the proposed treatments' effectiveness. Specific aspects needed for monitoring, at a minimum, are:

1. Ponderosa and Engelmann spruce regeneration;
2. Watersheds and soils, including connected and disturbed area and stream sediment;
3. Noxious weed introduction and spread;
4. Effectiveness of mitigation measures;
5. Road and route closures and remediation;
7. Lynx habitat and use; and,
8. Soils (compaction in areas were heavy machinery or burning occurred).

Monitoring is extremely important and must be part of any proposed project. Prior to treatments it is critical that baseline data (including photos) are taken to provide a barometer for comparing with post-treatment conditions. Control areas (areas not treated) should also be established to provide for comparison to treated areas.

XIII. CONCLUSION

BLM's proposed action does not appear to be consistent with maintaining or improving wilderness character. HCCA and the undersigned organizations may be able to support Alternative C, should the agency provide more information clearly indicating that treatments outside of the wilderness and WSAs could be justified and, with mitigation, be acceptable. At the same time, we urge that our recommendations above be incorporated into the EA, project design, and decision on the project. The NEPA document for the project should be published for public comment prior to a decision on the project.

Thank you for your consideration.

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