August 3, 2026

Concetta Brown
NEPA Specialist
Manti-La Sal National Forest
115 West Canyon Road
Ferron UT 84523

Dear Ms. Brown,

Thank you for this opportunity to comment on the Manti-La Sal National Forest Restoration and Fuels Reduction Prescribed Fire Project Please accept these comments from me on behalf of the Alliance for the Wild Rockies, Native Ecosystems Council, and Wildlands Defense.

We believe that the Forest Service must complete a full environmental impact statement (EIS) for this Project because the scope of the Project will likely have a significant individual and cumulative impact on the environment. Alliance has reviewed the statutory and regulatory requirements governing National Forest Management projects, as well as the relevant case law, and compiled a check-list of issues that must be included in the EIS for the Project in order for the Forest Service's analysis to comply with the law. Following the list of necessary elements, Alliance has also included a general narrative discussion on possible impacts of the Project, with accompanying citations to the relevant scientific literature. These references should be disclosed and discussed in the EIS for the Project or in the final EA if you refuse to write an EIS.

I. NECESSARY ELEMENTS FOR PROJECT EA or EIS:

A. Disclose all Manti-La Sal National Forest Plan requirements for logging/burning projects and explain how the Project complies with them;

B. Disclose the acreages of past, current, and reasonably foreseeable logging, grazing, and road-building activities within the Project area;

C. Solicit and disclose comments from the Utah Division of Wildlife Resources regarding the impact of the Project on wildlife habitat;

D. Solicit and disclose comments from the Utah Department of Environmental Quality regarding the impact of the Project on water quality;

E. Disclose the biological assessment for the candidate, threatened, or endangered species with potential and/or actual habitat in the Project area;

F. Disclose the biological evaluation for the sensitive and management indicator species with potential and/or actual habitat in the Project area;

G. Disclose the snag densities in the Project area, and the method used to determine those densities;

H. Disclose the current, during-project, and post-project road densities in the Project area;

I. Disclose the Manti-La Sal National Forest's record of compliance with state best management practices regarding stream sedimentation from ground-disturbing management activities;

J. Disclose the Manti-La Sal National Forest's record of compliance with its monitoring requirements as set forth in its Forest Plan;

K. Disclose the Manti-La Sal National Forest's record of compliance with the additional monitoring requirements set forth in previous DN/FONSIs and RODs on the Manti-La Sal National Forest;

L. Disclose the results of the field surveys for threatened, endangered, sensitive, and rare plants in each of the proposed units;

M. Disclose the level of current noxious weed infestations in the Project area and the cause of those infestations;

N. Disclose the impact of the Project on noxious weed infestations and native plant communities;

O. Disclose the amount of detrimental soil disturbance that currently exists in each project area from previous cutting, burning and grazing activities;

P. Disclose the expected amount of detrimental soil disturbance in each unit after ground disturbance and prior to any proposed mitigation/remediation;

Q. Disclose the expected amount of detrimental soil disturbance in each unit after proposed mitigation/ remediation;

R. Disclose the analytical data that supports proposed soil mitigation/ remediation measures;

S. Disclose the timeline for implementation;

T. Disclose the funding source for non-commercial activities proposed;

U. Disclose the current level of old growth forest in each third order drainage in the Project area;

V. Disclose the method used to quantify old growth forest acreages and its rate of error based upon field review of its predictions;

W. Disclose the historic levels of mature and old growth juniper in the Project area;

X. Disclose the level of mature and old growth juniper necessary to sustain viable populations of dependent wildlife species in the area;

Y. Disclose the amount of mature and old growth juniper that will remain after implementation;

Z. Disclose the amount of current habitat for juniper- sagebrush dependent species in the Project area;

AA. Disclose the amount of big game (moose and elk) hiding cover, winter range, and security during Project implementation;

BB. Disclose the amount of big game (moose and elk) hiding cover, winter range, and security after implementation;

CC. Disclose the method used to determine big game hiding cover, winter range, and security, and its rate of error as determined by field review;

DD. Disclose and address the concerns expressed by the ID Team in the draft Five-Year Review of the Forest Plan regarding the failure to monitor population trends of MIS, the inadequacy of the Forest Plan old growth juniper standard, and the failure to compile data to establish a reliable inventory of sensitive species on the Forest;

EE. Disclose the actions being taken to reduce fuels on private lands adjacent to the Project area and how those activities/or lack thereof will impact the efficacy of the activities proposed for this Project;

FF. Disclose the efficacy of the proposed activities at reducing wildfire risk and severity in the Project area in the future, including a two-year, five-year, ten-year, and 20- year projection;

GG. Disclose when and how the Manti-La Sal National Forest made the decision to suppress natural wildfire in the Project area and replace natural fire with logging and prescribed burning;

HH. Disclose the cumulative impacts on the Forest-wide level of the Manti-La Sal's policy decision to replace natural fire with logging and prescribed burning;

II. Disclose how Project complies with the Roadless Rule;

JJ. Disclose the impact of climate change on the efficacy of the proposed treatments;

KK. Disclose the impact of the proposed project on the carbon storage potential of the area;

LL. Disclose the baseline condition, and expected sedimentation during and after activities, for all streams in the area;

MM. Please disclose how this project will enhance wildlife habitat;

NN. Please disclose how this project will degrade wildlife habitat;

OO. Please explain the cumulative impacts of this proposed project.

PP. Disclose maps of the area that show the following elements:

1. Past, current, and reasonably foreseeable logging units in the Project area;

2. Past, current, and reasonably foreseeable grazing allotments in the Project area;

3. Density of human residences within 1.5 miles from the Project unit boundaries;

4. Hiding cover in the Project area according to the Forest Plan definition;

5. Old growth forest in the Project area;

6. Big game security areas;

7. Moose winter range;

Lynx

Even though the Forest Plan assessment says they move through the Abajos Mountains the EA and the wildlife report to not analyze or even mention lynx in violation of NEPA, NFMA, and the APA.

Please disclose the last time the Project area was surveyed for Mexican spotted owls, northern goshawk, and lynx.

Please disclose how often the Project area has been surveyed for Mexican spotted owls, northern goshawks, and lynx.

Would the habitat be better for Mexican spotted owls, northern goshawks, and lynx if roads were removed in the Project area?

Please provide us with the full BA for the Mexican spotted owls, northern goshawks, and lynx.

We request a more detailed analysis of the impacts to fisheries and water quality, including considerations of sedimentation, increases in peak flow, channel stability, risk of rain-on- snow events, and increases in stream water temperature. Please disclose the locations of seeps, springs, bogs and other sensitive wet areas, and the effects on these areas of the project activities. Where livestock are permitted to graze, we ask that you assess the present condition and continue to monitor the impacts of grazing activities upon vegetation diversity, soil compaction, stream bank stability and subsequent sedimentation. Livestock grazing occurs in the Project area and causes sediment impacts, trampled or destabilized banks, increased nutrient loads i, and decreased density, diversity, and function of riparian vegetation that may lead to increased stream temperatures and further detrimental impacts to water quality.

Will all WQLS streams in the project area have completed TMDLs before a decision is signed?

Please demonstrate that the project will comply with NEPA by having detailed maps where the logging and burning will occur. If you are building any roads or skid trails please tell the public where these will be.

The Forest Service did not respond to our comments in violation of NEPA.

The Forest Service did not demonstrate that it is following the plain language of the Forest Plan monitoring requirements in violation of the Forest Plan and NFMA. The Forest Plan requires monitoring of population trends for MIS to ensure the Forest Plan standards are working.

The project is in violation of the Forest Plan Disclose the amount of big game (moose and elk) hiding cover, winter big game (moose and elk) hiding cover, winter range, and security.

The Skyline project is in violation of NEPA, NFMA, the ESA, the Migratory Bird Treaty Act and the APA. The EA failed to complete "hard look" and "cumulative effects" analysis and provide effective alternatives.

The Forest Service is violating NEPA by not telling the public where, when and what they will do and the effect of the project in violation of NEPA, NFMA and the APA. The Forest Service often refers to this new attempt to violate NEPA, "conditions based management."

Another reason that an EIS is need is to analyze the cumulative impacts is that the Skyline project's burning, manipulation and logging project represent a foreseeable large-scale loss and fragmentation of habitat for many sensitive species, declining migratory birds, native carnivores and other wildlife.

The Prescribed Fires turned wildfires in New Mexico - one of which was a pile burn that smoldered and then blew up -have highlighted serious risks with activities involved in this project. (I assume they will be pile burring in some of these aspen 'treatments"? An EIS is needed to analyze the threat of the prescribed fires getting out of control.

https://www.krqe.com/news/wildfires/officials-calf-canyon-fire-caused-by-pile-burn/

The EA did not adequately analyze the effects of smoke from the prescribed burns on human health. The failure of the Forest Service to analyze this in violation of NEPA, NFPA, the Clean Air Act and the APA.

We also incorporate the following column by George Wuerthner into our comments.

Why Prescribed Burning Is Seldom Effective

thewildlifenews.com/2021/09/29/why-prescribed-burning-is-seldom-effective/

George WuerthnerSeptember 29, 2021

Prescribed burning is often seen as a way to reduce to the large climate-driven blazes now occurring across the West, however, there are many problems that proponents fail to acknowledge. Photo George Wuerthner

It seems everyone is grasping for some "solution" to big fires. And one of the common assertions is that more prescribed burning would reduce fire spread and allow firefighters to knock down a blaze.

Increasingly we also hear that tribal people kept fires from becoming large by the frequent burning of the landscape–as if this was a secret tool no one in the fire fighting agencies knew about. The evidence suggests that tribal burning likely reduced fuels in the IMMEDIATE area around villages but seldom influenced the larger landscape fire rotation. You can read more

on this at https://www.thewildlifenews.com/2020/11/23/indigenous-burning-myths-and-realities/

A prescribed burn, whether done by Indians for cultural purposes or a firefighter with a drip torch, may reduce fuels for a short period. And if a fire were to encounter the burn when fuels were reduced, it might influence fire spread. However, one of the problems with prescribed burning (as well as thinning forests) is the likelihood that any blaze will encounter a "fuel reduction" when it may be effective at influencing fire spread is exceedingly rare. So most prescribed burns (as well as thinning) have no influence whatsoever.

In addition, the very fire people are anxious to stop or control are those burning under extreme fire conditions. These conditions include high temperatures, low humidity, drought and most importantly high winds. High winds, often blow embers over and through "fuel reductions" like prescribed burns. In other words, even if such prescriptions worked under low to moderate fire weather conditions, fuel reductions including thinning and prescribed burning typically fail to alter fire spread due to wind transport of embers.

Just burning enough of the landscape to have any influence on wildfires is also problematic. The window when burning is safe is frequently very narrow. Concerns about smoke dispersal add to the limitations.

Furthermore, there is always a chance that a prescribed burn will get away and burn far more of the landscape, including homes, prescribed burning increases the chances of fire losses. Due to the low possibility that any blaze will encounter a prescribed burn during the period when it could change fire behavior whether you would reduce the acreage charred is questionable.

A prescribed burn could get away from fire fighters and burn significant acreage as occurred with the Davis Fire near Canyon Creek, Montana and the Cerro Grande prescribed burn that destroyed homes in Los Alamos, New Mexico. When such planned ignitions get away from fire fighters due to changing weather conditions, the District Ranger or Park Supervisor or other responsible agency personnel get blamed for the destruction of property.

This area on the Deschutes National Forest was prescribed burn the previous season. The regrowth of grasses (fine fuels) is now denser than what existed before the burn. Photo George Wuerthner

The other problem with prescribed burning is that in many ecosystems, burning stimulates plant growth. This additional biomass results from the removal of competing vegetation and release more nutrients, water, and sunlight for the remaining plants. Consequently, within a few years of a prescribed burn, you will often get more fine fuels like grass, shrubs, and small trees than before the burn.

In addition, frequent burning was not the dominant fire regime in many ecosystems. Chaparral, sagebrush, and higher elevation conifer forests like fir, lodgepole, spruce, and others all had naturally long fire rotations and intentionally burning them harms them.

I repeatedly see around the West that agencies will perform a prescribed burn and never bother with the follow-up maintenance. While prescribed burning could be effective if strategically located by communities and repeated continuously, this seldom occurs.

The following two photos demonstrate this idea. The first photo was taken a week after the Bridger Foothills Fire swept across forests, hayfields, and pastures in September 2020. Note that the hayfield has very little grass after being mowed. But strong winds drove the fire across even one-inch stubble. The second photo taken in nearly the exact location shows how

rapidly the grass regrew after a fire. In other words, without continuous "maintenance," the burn would have little impact on slowing or stopping a fire.

Area burned by Bridger Foothill Fire near Bozeman in September 2020. Photo George Wuerthner

Same location (note the burnt fence post) a year later where grass (fuel) regrew. Photo George Wuerthner

All this said I don't oppose the strategic use of prescribed burning so long as people recognize the limitations. Reducing fuels around communities and homes can be effective if and when a blaze threatens structures. However, the idea that somehow prescribed burning is an effective panacea that can reduce or preclude climate-driven blazes is questionable.

Please find attached, the Rosenberg paper on migratory bird declines which concluded, Our results signal an urgent need to address the ongoing threats of habitat loss, agricultural intensification, coastal disturbance, and direct anthropogenic mortality, all exacerbated by climate change, to avert continued biodiversity loss and potential collapse of the continental avifauna.

The Restoration and Fuels Reduction Prescribed Fire Project needs to comply with the Migratory Bird Treaty Act and analyze the effect of the project on birds.

The EA provides little additional information on where burnings, logging will be or how the specifics on how the burning will occur. The EA is programmatic in that they want to log whenever and wherever for the next 20 years with no public over site of their activities. The EA does not take a hard look at the potential impacts of the project. This is a violation of NEPA, NFMA, the APA, and the ESA.

Please see the article below for a ruling on a similar error by the Forest Service.

Federal court blocks timber sale in Alaska's Tongass National Forest

https://www.adn.com/alaska-news/2020/06/25/federal-court-blocks-timber-sale-in-alaskas-tongass-national-forest/

JUNEAU — A federal judge has blocked what would have been the largest timber sale in Alaska's Tongass National Forest in decades.

Wednesday's ruling ends the U.S. Forest Service's plan to open 37.5 square miles of old-growth forest on Prince of Wales Island to commercial logging, CoastAlaska reported.

The ruling by Judge Sharon L. Gleason also stops road construction for the planned 15-year project.

Conservationists had already successfully blocked the federal government's attempt to clear large amounts of timber for sale without identifying specific areas where logging would have occurred.

Gleason allowed the forest service to argue in favor of correcting deficiencies in its review and moving forward without throwing out the entire project, but ultimately ruled against the agency.

Gleason's ruling said the economic harm of invalidating the timber sales did not outweigh "the seriousness of the errors" in the agency's handling of the project.

The method used in the Prince of Wales Landscape Level Analysis was the first time the agency used it for environmental review on an Alaska timber sale.

The forest service, which can appeal the decision, did not return calls seeking comment.

Gleason's decision affects the Prince of Wales Island project and the Central Tongass Project near Petersburg and Wrangell.

The ruling triggers a new environmental review under the National Environmental Policy Act, said Meredith Trainor, executive director of the Southeast Alaska Conservation Council.

The ruling in the lawsuit brought by the council includes a requirement for public input on specific areas proposed for logging, Trainor said.

Tessa Axelson, executive director of the Alaska Forest Association, said in a statement that the ruling "threatens the viability of Southeast Alaska's timber industry."

Please see the following article by the American Bar Association about the use of Condition-Based Management.

May 10, 2021

The U.S. Forest Service's Expanding Use of Condition-Based Management: Functional and Legal Problems from Short-Circuiting the Project-Planning and Environmental Impact Statement Process

Andrew Cliburn, Paul Quackenbush, Madison Prokott, Jim Murphy, and Mason Overstreet

https://www.americanbar.org/groups/environment_energy_resources/publications/fr/20210510-the-us-forest-services-expanding-use-of-condition-based-management/

Condition-based management (CBM) is a management approach that the U.S. Forest Service has increasingly used to authorize timber harvests purportedly to increase flexibility, discretion, and efficiency in project planning, analysis, and implementation. The agency believes it needs this flexible approach because sometimes conditions on the ground can change more quickly than decisions can be implemented. In practice, however, CBM operates to circumvent the National Environmental Policy Act (NEPA) review framework by postponing site-specific analysis until the Forest Service implements the project, which effectively excludes the public from site-specific decisions, reduces transparency, and removes incentives for the agency to avoid harming localized resources. The practice should be curtailed by the Biden administration

NEPA requires federal agencies including the Forest Service to provide the public with "notice and an opportunity to be heard" in the analysis of "specific area[s] in which logging will take place and the harvesting methods to be used." Ohio Forestry Ass'n v. Sierra Club, 523 U.S. 726, 729–30 (1998). Site-specific public involvement can significantly improve projects because the agency may be unaware of harmful impacts or resource concerns until the public flags them during the environmental analysis

process. Nationally, the Forest Service drops about one out of every five acres it proposes for timber harvest based on information or concerns presented during the NEPA process, often due to public comments regarding site-specific information. Public Lands Advocacy Coalition, Comments on Proposed Rule, National Environmental Policy Act (NEPA) Compliance (June 13, 2019) (analyzing 68 projects that relied on environmental assessments).

The Forest Service appears to be abandoning the site-specific analysis model in favor of CBM. CBM projects use an overarching set of "goal variables"—predetermined management criteria that guide implementation—that Forest Service staff apply to on-the-ground natural resource "conditions" encountered during the course of project implementation, a period that can span years or even decades: essentially, when the Forest Service finds X resource condition on the ground, it applies Y timber harvest prescription. However, basic information regarding the project's details—such as unit location, timing, roadbuilding, harvesting methods, and site-specific environmental effects—is not provided at the time the Forest Service conducts its NEPA environmental review (when the public can weigh in), nor when it gives its final approval to a project (when the public can seek administrative review). Instead, site-level disclosures are made after NEPA environmental and administrative review is complete, depriving the public of opportunities to comment and influence the decision based on localized conditions.

While CBM is not a new management tool, the Forest Service has employed it for over a decade and it was used sparingly during the Obama administration. However, its use accelerated during the Trump administration and shows no sign of slowing. To date, dozens of Forest Service projects across the country have used CBM. See, e.g., Red Pine Thinning Project, Ottawa National Forest; Medicine Bow Landscape Vegetation Analysis, Medicine Bow-Routt National Forest; Sage Hen Integrated Restoration Project, Boise National Forest.

As the Forest Service's use of CBM continues, questions remain about its legality. Public-lands advocates argue that CBM violates NEPA's mandate that agencies take a hard look at the consequences of their actions before a project commences. This "look before you leap" approach was the primary purpose of NEPA and remains the statute's greatest strength. NEPA works by requiring an agency to consider alternatives and publicly vet its analysis whenever its proposal may have "significant" environmental consequences,

42 U.S.C. § 4332(2)(C), or implicates "unresolved conflicts" about how the agency should best accomplish its objective. Id. at § 4332(2)(E). However, CBM allows the Forest Service to circumvent the effects analysis process when exercising discretion about where and how to log decisions that often may have "significant" environmental consequences.

Only two federal cases have addressed CBM's legality. In WildEarth Guardians v. Connor, 920 F.3d 1245 (10th Cir. 2019), the Tenth Circuit approved a CBM approach for a logging project in southern Colorado in Canada lynx habitat. The environmental assessment utilized CBM and analyzed three different alternatives, one of which was a worst-case scenario. For the worst-case scenario, the Forest Service assumed that the entire lynx habitat in the project area would be clear-cut. The Forest Service "took the conservative approach" because it "did not know precisely" where it would log in the lynx habitat areas. WildEarth Guardians, 920 F.3d at 1255. Based on this conservative approach, coupled with a comprehensive, region-wide lynx management agreement and its associated environmental impact statement, the court agreed with the Forest Service that its future site-specific choices were "not material" to the effects on lynx—i.e., that no matter where logging occurred, "there would not be a negative effect on the lynx." Id. at 1258–59.

However, a second case addressing CBM found that site-specific analysis was needed to satisfy NEPA's "hard-look" standard. In Southeast Alaska Conservation Council v. U.S. Forest Service, 443 F. Supp. 3d 995 (D. Ak. 2020), the court held that the Forest Service's Prince of Wales Landscape Level Analysis Project—a 15-year logging project on Prince of Wales Island in the Tongass National Forest—violated NEPA. The project would have authorized the logging of more than 40,000 acres, including nearly 24,000 acres of old growth, along with 643 miles of new and temporary road construction, but it "d[id] not include a determination—or even an estimate—of when and where the harvest activities or road construction . . . w[ould] actually occur." Id. at 1009. The court found that this analysis was not "specific enough" without information about harvest locations, methods, and localized impacts. Id. at 1009–10. The court further held that a worst-case analysis could not save the project, because site-specific differences were consequential. Id. at 1013.

The Forest Service's widespread use of CBM also creates compliance challenges under the Endangered Species Act (ESA). Section 7(a)(2) of the ESA requires federal agencies to consult with the Fish and Wildlife Service

and/or National Marine Fisheries Service whenever a proposed action "may affect" listed species or destroy or adversely modify its critical habitat to ensure that the action is "not likely to jeopardize" these species. 16 U.S.C. § 1536. CBM conflicts with that statutory requirement because it does not allow agencies to properly determine whether an action "may affect" or is "likely to jeopardize" a listed species when the consulting agencies do not know the specifics of when or where the action will be implemented, or what the site-specific impacts of the action may be.

For some projects, the Forest Service has tried to avoid this tension by conducting section 7 consultation prior to each phase of a CBM project, but this approach has run headlong into the general rule against segmenting project consultation duties under the ESA. See, e.g., Conner v. Burford, 848 F.2d 1441, 1457 (9th Cir. 1988). With few exceptions, section 7 consultation must cover the overall effects of the entire project at the initial stage before the project can commence. Thus, regardless of whether agencies choose to consult up front or to consult in stages, the Forest Service is likely to face significant legal hurdles when its CBM project "may affect" listed species.

CBM is not only legally dubious, but also unnecessary. The Forest Service already has NEPA-compliant methods to deal with situations that require a nimble response to the needs of a dynamic landscape. In these cases, the Forest Service can complete a single "programmatic" analysis to which future site-specific decisions will be tiered. This programmatic approach allows the Forest Service to speed the consideration and implementation of site-specific, step-down proposals. Unlike CBM, this approach allows for public review of site-specific decision-making and administrative review of those decisions.

Surveying the regulatory horizon, the future of CBM in the Forest Service system is uncertain. The national forests face a host of complex challenges including climate-related crises, insect and forest pestilence, protecting and restoring biodiversity, and wildfire management. These challenges are made worse by budget and staff restrictions. Without adequate funding, the Forest Service must rely on imperfect tools like commercial logging, which can cause more harm than good in the wrong places.

But this is not the time to shortchange the most consequential decisions that the agency must make: determining where and how to act. During the final two years of the Trump administration, the Forest Service attempted to explicitly codify CBM provisions in revisions to its NEPA regulations,

although those provisions were dropped from the final rule. Simultaneously, other federal land-management agencies like the Bureau of Land Management have started to use CBM analogues in their NEPA-related planning documents. Although it is still early, the Biden administration's newly appointed Council on Environmental Quality team has yet to weigh in on CBM. If use of CBM continues in a manner that undermines public participation and NEPA's "hard look" standard, some of our riskiest land management projects may not receive proper environmental oversight.

The project is not taking a hard look as required by NEPA. Please withdraw the EA until site specific prescriptions and unit boundaries are firmed up, then issue and take comments on an EIS with appropriate prescriptions.

We attached the Federal District Court of Alaska's ruling on condition-based management to our earlier comments.

Please find attached an order by the federal district court of MT on a conditions based management project called South Plateau.

The project is in violation of NFMA, the ESA, the Forest Plan, and the APA. The Forest Service's response states the project was intentionally designed to not tell the public when and where the Forest Service plans log and burn.

The Forest Service violates NEPA because it fails to take a hard look at the Skyline Project's impacts on the environment and fails to disclose sufficient information to the public.

NEPA requires the Forest Service to discuss direct, indirect, and cumulative

effects of the Project. 40 C.F.R. §§ 1502.16; 1508.1(g).

NEPA requires that agencies take a "hard look" at the environmental

consequences of its proposed actions before the agency chooses a particular

course of action, without favoring a pre-determined outcome.

NEPA further requires that relevant information be made available to the public so that they may play a role in both the decision making and implementation of the Project.

The Forest Service does not provide site-specific information about the Skyline Project or its impacts. The Skyline EA does not disclose specific locations where logging, road construction, or prescribed burns will occur within the Project area.

The EA does not adequately address the direct, indirect, and cumulative effects of the Project on the human environment.

The Forest Service therefore violates the hard-look and public disclosure requirement of NEPA and fails to provide sufficient site-specific information or analysis about the Project and it's impacts to foster informed decision making and public participation.

The Forest Service therefore violates NEPA and is not in accordance with law and without observance of procedure required by law under the APA.

We attached the petition to list the piton jay for protection under the Endangered Species Act to our earlier comments.

The EA does not identify why burning juniper and shrubs enhances wildlife habitat. There is no information in the EA that defines why a lack of fire has degraded wildlife habitat. One has to assume that the presence of juniper woodlands is considered an adverse impact on wildlife, and if burned up, would improve wildlife habitat. We have cited a number of publications, just as examples, that in fact identify the high value of juniper woodlands to wildlife. This value includes forage for mule deer, a species that is to be emphasized on this identified winter range. The value of juniper species to mule deer was identified long ago. For example, Lovaas (1958) reported that the primary winter forage for mule deer in the Little Belt Mountains of Montana were several species of juniper. More recently, this importance was again identified in a published research article. Coe et al. (2018) reported that juniper trees are important to mule deer on their winter ranges in Oregon. There is no information in the notice that indicates why juniper removal will benefit mule deer or elk or any wildlife.

Juniper woodlands are also important habitat for many nongame birds (Coop and Magee undated; Reinkensmeyer 2000; Magee et al. 2019).. Coop and Magee (undated) noted that juniper removal treatments substantially reduced the occupancy of pinon-juniper specialists and conifer obligate species, including the pinyon jay. There is one such species, the pinyon jay, is a species of conservation concern who is associated with juniper habitats (Boone et al. 2018); this paper warns of the detrimental impacts to this declining species due to juniper thinning projects. More recently, please find

attached, Magee et al. (2019) who reported that juniper removal projects resulted in decreased occupancy of many associated bird species, including the pinyon jay. These research reports are consistent with a 2000 report by Reinkensmeyer that juniper woodlands provide important habitat for many bird species, with bird species diversity and density increasing as woodlands progress into old growth juniper. Given the documented high value of old growth juniper forests to wildlife, the EA at a minimum needed to discuss how old growth juniper is being managed in this landscape. The Intermountain Region recognizes old growth juniper (Hamilton 1993). Please find "Mature and Old-Growth Forests: Definition, Identification, and Initial Inventory on Lands Managed by the Forest Service and Bureau of Land Management" attached where they define old growth juniper as being 200 or more years old. How much old growth juniper is believed as essential for optimal non-game bird management, and where is this old growth juniper going to be maintained in the project?

The following recommendations by were not considered or even mentioned in the EA, DDN and FONSI in violation of NEPA, NFMA, the APA, and the Migratory Bird Treaty Act.

Please find attached "Conservation Strategy for the

Pinyon Jay (Gymnorhinus cyanocephalus)"

This strategy was developed by the Pinyon Jay Multi-State Working Group, led by Scott Somershoe, Land Bird Coordinator, Migratory Bird Program, Legacy Region 6, U.S. Fish and Wildlife Service, Lakewood, Colorado.

Please find their full report attached.

Please see the excerpt below describing the considerations of the location of Woodland Treatments which the EA did not consider in violation of NEPA, NFMA, the APA and the Forest Plan.

Considerations for the Location of Woodland Treatment Projects

Pinyon Jay use of the landscape within a flock's home range is likely to vary across a dailycycle, a seasonal cycle, and possibly across years. Although it is important to model Pinyon Jay habitat and occupancy at multiple scales (Johnson et al. 2014, 2015, 2016, 2017), standardized, site-specific assessments to determine whether Pinyon Jays are present in a proposed treatment area and how they are using the habitat may be especially useful in informing management at the treatment scale. These assessments can include surveys to locate nests during the breeding season (e.g.; "clearance surveys", as typically used for Migratory Bird Treaty Act [MBTA] compliance) or other surveys to identify whether Pinyon Jays use the area for other activities, such as caching or foraging.

Vegetation thinning within a traditional nesting colony site can cause the birds to abandon treated areas (Johnson et al. 2018b) or alter the suitability of the habitat (Johnson et al. 2019), and complete removal of the colony site

removes nesting substrate altogether. Therefore, avoiding treatment of nest colony sites is recommended. Pinyon Jays often use the same generalarea each year for nesting, with colony site shifts of up to 550 yards (~500 meters) between years

(Marzluff and Balda 1992, Johnson et al. 2017c, J. Boone and E. Ammon, pers. comm.). Thus, a buffer of undisturbed habitat of 550 yards (~500 meters) around a known breeding colony is recommended and allows for typical colony shifts across years (Johnson et al. 2017c).

The Working Group website (https://www.partnersinflight.org/resources/pinyon-jay-working-group/) provides information about how to conduct clearance surveys for Pinyon Jays. Similar guidance is available from Natural Heritage New Mexico (Petersen et al. 2014) and Great Basin Bird Observatory (www.gbbo.org). Additional information and assistance with conducting more generalized occupancy surveys that incorporate caching and foraging habitat use can be obtained by contacting partners in the Working Group with Pinyon Jay survey experience.

Page 42 of the project wildlife report states:

Some colonies were even found within or adjacent to pinyon juniper treatments of varying ages.
That said, not all colonies move between years and we have found many flocks using the same areas for breeding between years.
o During UDWR 2019-2022 surveys, pinyon jays were almost exclusively detected in pinyon-juniper woodlands and were rarely if ever found at higher elevations during the breeding season (surveys were conducted March-May). Once surveyors started seeing Douglas-fir or ponderosa pine

pinyon jays were rarely found. Typical elevation bands were likely 4,000-6,000 feet.
o Pinyon Jays were observed to occur most commonly in low density pinyon-juniper woodlands, especially along ecotones with shrub and grassy clearings. This is also true for many of the breeding colonies located. Current radio telemetry research in Utah backs this up, and published work in Nevada has found similar trends.
o Once a pinyon-juniper woodland becomes too dense and infilled we tend not to find Pinyon Jays using those areas. During the breeding season and summer months, Pinyon Jays in Utah seem to prefer mid-elevation pinyon-juniper woodlands in a landscape with lots of heterogeneity (i.e. pinyon-juniper woodlands of varying age and structure, grassy clearings, shrub clearings and edges, etc.). In the winter, Pinyon Jays are frequently found in more open habitats and away from typical breeding and summer home habitats.
This new research reveals that the MLNF is not priority breeding habitat for pinyon jays and is not a focus for their surveys. Pinyon jays most likely move up in elevation on the periphery of the forest to forage but is not important breeding or foraging habitat.

The above statement is not supported by any published, peer-reviewed scientific papers. The attached paper by Van Lanen, N. J., A. P. Monroe, and C. L. Aldridge (2024) title, "Despite regional variation, Gymnorhinus cyanocephalus (Pinyon Jay) densities generally increase with local pinyon–juniper cover and heterogeneous ground cover." found the opposite of what the Wildlife report states about pinyon jays and pinyon/juniper habitat.

Please include the UDWR 2019-2022 surveys in NEPA documents so the public can verify them. Please also don't burn or cut any trees in areas the surveys found pinyon jays.

The project will decrease pinyon/juniper cover which will harm habitat for pinyon jays. The project in in violation of NEPA, NFMA, the Forest Plan, and the APA.

Considerations for the Timing of Woodland Treatment Projects

It is preferable to conduct treatments outside of the Pinyon Jay breeding season, especially if an active nest colony is within the area where a treatment must occur. Pinyon Jays tend to breed earlier than most passerine land birds. Data from Nevada (J. Boone and E. Ammon, unpublished data), Utah, and Colorado (R. Norvell and L. Rossi, unpublished data) indicate that nesting activity in these regions begins in late February or early March and ends in late May. Studies in New Mexico suggest that nesting phenology may occur later than in more northerly regions, except in the case of a mast crop the previous fall (Johnson et al. 2014, 2015, 2017c); however, Pinyon Jays in New Mexico still breed earlier than most piñon-juniper bird species. The specific timing of the breeding season may vary from year-to-year depending on the severity of the preceding winter and on the availability and abundance of nuts cached during the previous fall (Balda 2002).

Documenting the Effects of Woodland Treatments on Pinyon Jays

If a woodland treatment is conducted in an area that is occupied by Pinyon Jays, conducting systematic, standardized pre- and post-treatment monitoring of Pinyon Jay habitat use and vegetation parameters will help to determine the effects of the treatment on Pinyon Jays. If treatments are conducted within a known nesting colony, post-treatment monitoring should be completed to determine if the colony moves and if the new habitat has similar characteristics to the original colony location. Pre- and post-treatment monitoring of vegetation measures (e.g., tree size, tree density, canopy cover, tree vigor, and piñon nut productivity) is necessary for

understanding the impacts of thinning treatments on Pinyon Jays (Johnson et al. 2018a, 2018b, 2019).

Post-treatment monitoring could be conducted by the agency performing the treatment, but may be facilitated by collaboration between managers and Pinyon Jay researchers. We strongly encourage this collaboration to take advantage of the information gathering opportunities presented by ongoing woodland treatments and among researchers to compare and contrast regionally-specific findings to strengthen our overall knowledge of Pinyon Jay conservation needs.

Considerations for Implementation of Woodland Treatments

If a woodland treatment is conducted in an area that is, or could be, occupied by Pinyon Jays, particularly during the breeding season, the following considerations and implementation parameters may help to reduce negative impacts to Pinyon Jays. The information presentedbelow is organized according to regions and by woodland treatment types and objectives. The bulk of this material is derived from research conducted in the Southwest (mostly New Mexico); less information is available about the Great Basin and other regions occupied by Pinyon Jays.

Some of the information shown below may be applicable across the broader Pinyon Jay range, but this remains to be determined.

Southwest Region - Woodland Thinning and Herbicide Treatments

The information in this section is informed primarily by research conducted in New Mexico and to a lesser extent, Arizona. In this region, most woodland treatments involve thinning, with a limited occurrence of herbicide treatments and large scale woodland removal. The goals of these projects are often fuels reduction, but may also include reduction of juniper to increase grass and forbs for ungulates (i.e., big game) and cattle, management for other wildlife species, and watershed restoration. Treatment plans that include plans for collaboration with Pinyon Jay researchers allow managers to identify whether particular treatment parameters (e.g., different percentages of retained canopy cover and/or tree density) can meet primary management objectives while remaining within the range of suitable nesting, caching, and foraging habitat.

a. Pinyon Jays often use the same general area each year for nesting, with colony site shifts of up to 550 yards (~500 meters) between years (Marzluff and Balda 1992, Johnson et al. 2017c, J. Boone and E. Ammon, pers. comm.). Thus, if a buffer area of 550 yard (~500 meters) around a known breeding colony remains undisturbed, it allows for colony shifts across years (Johnson et al. 2017c).

b. If thinning in persistent piñon-juniper woodlands or wooded shrublands, creating a patchy-clumpy mosaic of suitable nesting habitat within the treated area, as opposed to evenly spaced thinning, allows for shifting colony locations. This treatment pattern also better mimics how fire would have

impacted the landscape in persistent piñon-juniper woodlands and wooded shrublands (Romme et al. 2009). Provided that sufficient suitable habitat is retained throughout the treatment area, retaining as many larger trees as possible within areas of higher tree density and/or higher canopy cover will likely

conserve more Pinyon Jay nesting habitat than thinning all size/age classes to a uniform density. For example, a guideline is to retain trees within the 25–75% quartiles of these measures at the target site or similar sites (Johnson and Sadoti 2019).

c. If using herbicide treatments in juniper or piñon-juniper woodlands, a mosaic of treated and untreated areas better mimics the natural landscape setting than large monomorphic treatment areas. If juniper is the target species, avoiding treating areas that contain piñontrees avoids compromising piñon nut production.

d. As piñon nut production is critical to Pinyon Jays, mast-producing trees are particularly valuable. Therefore, thinning may be particularly detrimental in known productive piñon woodlands containing old or very old trees, likely of prime piñon nut producing age, and trees of moderate age to support future nut production (Parmenter et al. 2018, Crist et al. 2019). Parmenter et al. (2018) identified age and size of P. edulis as an indicator of probable nut productivity: little to no productivity (<3.5 inches or <9 centimeter diameter at breast height [dbh]); medium productivity (3.5–5.9 inches or 9–15 centimeter dbh); and high productivity (>6.3 inches or >16

centimeter dbh) (Zlotin and Parmenter 2008). Old and very old trees likely produce more mast due to their large size and larger number of fruiting branches (Parmenter et al. 2018).

e. South- and west-facing slopes, as opposed to north- and east-facing slopes, may be more suitable for treatments avoiding impacts to Pinyon Jays because north- and east-facing slopes are projected to better survive future climate change scenarios (Rondeau et al. 2017). Sites with lower heat load (north-facing) are also favored for Pinyon Jay colony sites (Johnson et al. 2017b).

f. Large and densely crowned trees are particularly valuable for Pinyon Jay nesting, particularly when they occur within areas of higher tree density (Wiggins 2005, Johnson et al. 2014, 2015, Johnson and Sadoti 2019).

g. Retaining and promoting native grasses, forbs, and shrubs in the understory may increase available invertebrate prey for Pinyon Jays (Bombaci and Pejchar 2016).

h. If cheatgrass and other invasive annual plants are in the vicinity of a planned treatment area, aggressive invasive species control in post-treatment management plans decreases fire risk and fire intensity (Chambers et al. 2017), thus lowering the risk to stands important to Pinyon Jays. A minimum of 20% perennial native herbaceous cover in a treatment area is recommended for preventing a large increase in cheatgrass and other annual invasive plants post-treatment (Chambers et al. 2017).

Great Basin Region - Sagebrush Restoration and Thinning Treatments In the Great Basin, the dominant woodland treatment involves complete tree removal of generally lower-elevation patches of woodland to reclaim or improve shrubland habitat to benefit Greater Sage-Grouse and other sagebrush obligate species. Compared to the Southwest, there is less information about Pinyon Jay habitat use in the Great Basin upon which to base suggested treatment parameters.

a. Pinyon Jays often use the same general area each year for nesting, with colony site shifts of up to 550 yards (~500 meters) between years (Marzluff and Balda 1992, Johnson et al. 2017c, J. Boone and E. Ammon, pers. comm.). Thus, if a buffer area of 550 yard (~500 meters) around a known breeding colony remains undisturbed, it allows for colony shifts across years (Johnson et al. 2017c).

b. Pinyon Jays appear to use Phase I woodlands most frequently, Phase II woodlands at an intermediate level, and Phase III woodlands rarely (J. Boone and E. Ammon, unpublished data). Therefore, preferentially treating denser woodlands as opposed to less-dense woodlands is recommended. We recognize that Phase III woodlands are rarely the target of typical woodland treatments in this region at the current time for several reasons, including their low potential to revert to high-quality shrubland habitat after complete removal.

c. Treatments that create “feathered” transition zones of approximately 270–550 yards (250–500 meters) between the treated area and untreated piñon-juniper woodlands more accurately mimic the transitional zones that Pinyon Jays use most often in the Great Basin. More specifically, a woodland / shrubland ecotone that is irregular, diverse, and gradual is likely to be more favorable for Pinyon Jays than a linear ecotone with sharp transition from open shrubland to dense woodland (Crist et al. 2019, J. Boone and E. Ammon, unpublished data).

d. If using herbicide treatments in juniper or piñon-juniper woodlands, a mosaic of treated and untreated areas more accurately mimics the natural variation in woodland cover. If juniper is the target species, treating areas with piñon trees will compromise piñon nut production.

e. If cheatgrass and other invasive annual plants are in the vicinity of a planned treatment area, aggressive invasive species control in post-treatment management plans decreases fire risk and fire intensity (Chambers et al. 2017), thus lowering the risk to stands important to Pinyon Jays. A minimum of 20% perennial native herbaceous cover in a treatment area is recommended for preventing a large increase in cheatgrass and other annual invasive plants post-treatment (Chambers et al. 2017).

The agency does not address the likely adverse impacts of the project on pinyon jays or on climate change on the persistence of juniper woodlands or values of forests as carbon sinks.

There is no mention in the EA about how climate change could affect the long-term persistence of juniper woodlands. If the persistence of these woodlands will be adversely impacted by climate change, juniper thinning operations will promote the long-term demise of this important conifer. This impact was noted by Coop and Mcgee (Undated). Indeed, the following article newspaper article by Maffly (2019) in the Sale Lake Tribune reported on the mystery of why junipers are dying in Utah; widespread loss of junipers would have far- reaching consequences for southern Utah's fragile desert environments.

Turns out, southern Utah's juniper trees aren't so indestructible after all. But what is killing them?

By Brian Maffly
| June 25, 2019

Late last fall, about 20 federal scientists toured southeastern Utah, prodding sickly and dead juniper trees, peeling back bark, snapping off branches and digging the dirt around root collars in search of clues to what could be killing the West's most hardy tree species.

Trip leader Liz Hebertson, a plant pathologist with the U.S. Forest Service's Forest Health Protection program, buried her face in a dying juniper's foliage, which had turned a telltale shade of deep yellow, dabbing at the trunk with a small hatchet to get a look at the nutrient-moving phloem beneath the bark.

"Look very carefully and sometimes you'll see fine little threads," said Hebertson, who describes her work as "CSI: Nature."

"Those threads could be produced by defoliating insects. They could be produced by mites. We're looking for webbing, fine threads. We're looking in all of the crevices for frass that's either been kicked out of the inner bark tissues or out of the bark," said Hebertson, her hair dotted with the yellow juniper needles falling from the branches. "Frass is just fundamentally a mixture of insects' poop and boring dust."

Hebertson and her colleagues could see the galleries and dust trails left by beetles, but was the damage enough to kill these trees on Alkali Ridge?

Most likely not, according to a preliminary report. Several months after the scientists' two-day field trip, the mystery persists although most signs indicate last year's severe drought, the worst on record for the Four Corners region, may be pushing many junipers over the edge.

However, the report continued, "pinyon pine, a species less tolerant to drought, had not exhibited symptoms of drought-induced stress last spring. This observation suggested that perhaps other abiotic factors, damaging insects, or diseases might be contributing to, or were primarily responsible for, the juniper decline."

Trees under attack

The die-off was documented last year by Kay Shumway, a retired science educator and botanist from Blanding who first noticed the junipers turning yellow on the southern end of Cedar Mesa. Thanks to his tireless efforts to document the deaths of the region's signature tree, the Forest Service and other federal agencies began investigating last fall and academic scientists are setting up studies to figure out why an organism so well equipped for survival is now dying in droves in Utah's San Juan County.

Although juniper is sometimes treated as a trash tree to be ripped out of the ground in the name of habitat restoration, it is a vital part of southern Utah's ecosystem, stitching together fragile desert landscapes. Widespread juniper mortality would deliver an ecological blow similar to what Utah has experienced where bark beetles have run amok in national forests.

But explanations for the juniper deaths are not nearly as clear cut as they are for the Uinta Mountains' lodgepole pines and Wasatch Plateau's Engelmann spruce.

Those trees look like they were eaten alive, their bark dripping with pitch produced by the trees in a failed effort to repel the attackers. The afflicted junipers, by contrast, show only modest levels of infestation.

"In all the large-diameter trees we examined, the total number of flat-headed wood-boring beetle galleries in the inner bark tissues of trunks and large branches was not sufficient to have completely interrupted vascular transport [girdle] within the tree," the report said.

The scientists searched for signs of fungal infections but found little.

"Declining and dead trees had evidence of secondary insect attack. Although some juniper had died, many symptomatic trees had healthy, green sprigs of foliage growing from their lowermost branches," the report said. "We did not find evidence of insects or diseases in the root systems of trees we examined."

The report recommends continued monitoring and asked the Forest Service to complete an aerial survey this summer to "assess the extent and severity of the juniper decline and crown dieback" across the Four Corners region.

Twice the Forest Service scheduled such surveys, and both times they were canceled due to inclement weather, according to John Guyon of the Forest Health Protection program based in Ogden.

Mapping the juniper mortality is crucial for understanding the extent of the problem and detecting patterns that could bring the causes into sharper focus. It would also provide a baseline against which to measure the spread of mortality.

Rains returned

The region's drought reversed shortly after the scientists' visit when precipitation returned to San Juan County in record amounts. Southeastern

Utah enjoyed a snowpack containing more than double the amount of moisture it receives in a typical winter.

Will that put the brakes on the juniper die-off? It's hard to say without the baseline data that aerial surveys could provide, said William Anderegg, a University of Utah biology professor who studies the impact of climate change on forests.

"It's crucial to have that part," Anderegg said. "We would like to know regionally how many trees are dying and you can only know from a plane or satellite."

Anderegg's lab has been approved for a Forest Service grant to study the juniper mortality, and it has already set up a monitoring instrument known as an eddy covariance tower in a spot with dying junipers.

"It measures total carbon take-up and water lost in a patch of forest, a good metric of the overall health of the trees. A healthy forest will be taking up a lot of carbon," Anderegg said. "It puts a sensor above the trees sensing the eddies of air and recording the carbon dioxide concentrations going up and going down. By measuring wind and carbon levels, you can determine how much carbon is being taken up."

His research will couple these measurements with data collected from the trees' tissues.

"We are trying to figure out if drought is killing these trees," he said, "and what are the effects on an ecosystem scale."

Currently, the juniper mortality is far from uniform. Some parts of San Juan County appear unaffected, such as the middle of Cedar Mesa, while junipers are dead and dying on the mesa's southern and eastern margins, said Shumway, who acted as a guide on the scientists' field trip.

"The concern is what is going to happen next year if the beetle flies off and lays eggs in some more trees," said Shumway, while surveying the dying trees around Alkali Ridge.

This area east of Blanding appears to be a hot spot where about half the junipers are afflicted, with the smaller trees showing the greatest severity.

In recent dry years, junipers across the border in Colorado turned bronze but then recovered when rains returned. Utah's yellowed junipers, on the other hand, are goners.

Forest Service scientists gathered beetles from trees they inspected last fall and cut down a few dead junipers to remove cross sections of the trunk for further study in a lab, where they coaxed out more clues.

"We'll seal off the ends with wax. We'll put it in an enclosed box that's totally black on the inside, and we seal off all seams in the box," Hebertson said. "There's one little window of light that attracts the insects when they emerge. They head toward the light. They get into a trap and they fall down into a cup."

The goal was to identify the beetles residing in the tree, although Hebertson said she was not aware of any wood-boring species that would be considered a primary killer of juniper.

The types of insects later identified were those that typically infest trees weakened by harsh weather, poor site conditions and other stressors, according to the report.

"Abiotic factors such as air pollution, smoke, or temperature extremes might explain the scale of symptoms we observed," the report said, "but drought-induced stress remains the most plausible explanation."

Whatever the cause, the juniper die-off adds to a litany of woes facing Western forests that will likely complicate land management for years and keep the scientific community busy looking for answers.

In addition to the concern about juniper mortality resulting from climate change, we also note that forest thinning in general exacerbates climate change. Milman (2018) recently reported on this issue, noting that scientists

say halting deforestation is just as urgent as reducing emissions to address climate change, given the function they provide as a carbon sink. Forest thinning reduces this carbon sink function.

The impact of juniper treatments on the spread of noxious weeds was generally ignored and downplayed in the EA, even though this is very likely a significant adverse impact of this proposal.

Page 25 of the final EA/DN states:

The pinyon-juniper forest cover types within the project area are abundant, covering about 23 percent of the area. Overstories are dominated by pinyon and juniper species, the tendency is for lower canopy layers to consist of juniper species and generally speaking there is limited amount of pinyon regeneration occurring. The majority of the area consists of trees that are likely relatively young trees (e.g. less than 150-year-old pre-European settlement), those less than 12" at the root crown. Trees that established over the last century are now maturing and densities increasing. As a result, there has been a homogenization of fuel continuity and the potential fire intensities have increased with departure from historic conditions. Dwarf mistletoe (disease) is widespread in juniper. Ips beetle is present in pinyon and is causing pockets of mortality.

The EA states that "The majority of the area consists of trees that are likely relatively young trees (e.g. less than 150-year-old pre-European settlement), those less than 12" at the root crown." But this is just an assumption that the EA fails to provide any evidence to back up this assumption.

The article by Rathner, 2024 titled, "The Invasion of the Pinyon Juniper," found that the BLM under estimated the age of juniper in the Grand Staircase National Monument which borders the projects area. The EA and Decision Notice are in violation of NEPA, NFMA and the APA for giving the public in correct information about the age of the pinyon-juniper trees. It appears that the project area contains old growth juniper that are much older than what the Decision Notice assumes. Ratner found that Pinyon-Juniper in

the area were “from 211 to 426 years old” which is much older than under 150 years the EA/Decision Notice claims.

There is a considerable awareness today regarding the problems of noxious weed infestations on public lands. One activity that is clearly promoting noxious weeds are fuels reduction and prescribed burning projects. We cite only a few examples at this time. One example is a Joint Fire Science Report by Coop and Magee (Undated), where they note that fuels and juniper reduction treatments resulted in rapid, large and persistent increases in the frequency, richness and cover of 20 non-native plant species including cheatgrass; exotic plant expansion appeared linked to the disturbance associated with treatment activities, reduction in tree canopy, and alterations to ground cover; exotic species were much more frequently encountered at treated than control sites, occurring at 86% of sample plots in treatments and 51% of untreated sample plots; richness of exotic species in treatments was more than double that of controls. What is also interesting in this study is that cheatgrass showed a negative effect of tree canopy, which means that cheatgrass was benefited by canopy removal. They noted that models for chestgrass alone and all non- native species together indicate strong negative associations with tree canopies, indicating that increased light availability, or perhaps below-ground resources such as moisture or nitrogen, enhance colonization and growth in treatments. Increases in exotic plant species in treatment areas was one of the reasons these researchers concluded that managers need to be cautious about implementing treatments in light of the

persistent, negative ecological impacts that accompany woodland thinning in pinyon pine- juniper ecosystems; this includes an increase in fire frequency.

Kerns and Day (2014) also reported that juniper treatments resulted in at least a short-term conversion of juniper woodlands to an exotic grassland. And Kerns (undated) reported similar findings in another Joint Fire Science Program report; she stated that it is a significant challenge for land managers to apply thinning and burning fuel treatments in a manner that does not exacerbate existing weed and associated resource problems due to the reduction of ecological resistance that fuel reduction activities created, combined with the aggressive nature of exotic species present. Kerns also noted that weed problems were also caused in slash pile burning, which is planned for the Rowley Canyon project.

Perchemlides et al. (2008) reported similar problems with juniper thinning projects in Oregon; exotic annual grass cover increased, whereas cover by native perennial grasses did not, in treatment areas; they noted that fuel reduction thinning may have some unintended negative impacts, including expansion of exotic grasses, reduction in native perennial species cover, persistent domination of annuals, and increased surface fuels.

The EA failed to provide any documentation that conversion of juniper woodlands to grasslands, including cheatgrass, improves habitat for all wildlife species.

The agency notes that the project will not only reduce juniper, but various shrubs as well. Although we noted above that juniper woodlands have a very high value to many wildlife species, it is not clear that replacing juniper with grasses, including cheatgrass, balances out the loss of wildlife species removed due to juniper removal by replacement with other wildlife species that use only grasses as habitat. For example, the scooping notice did not identify that mule deer on this winter range use grasses as winter forage. The value of cheatgrass to elk in the winter is also not demonstrated. Cheatgrass seeds are extremely sharp, and use by elk in the winter seems unlikely. Cheatgrass use by wildlife in the summer is also unlikely after early spring, since this grass cures out by summer. The seeds of cheatgrass are also responsible to mortality through blinding of grassland birds (McCrary and Bloom 1984).

General comments on the proposal are as follows:

Parts of this very large project area are big game winter range as per the Forest Plan. The EA failed to define what the specific habitat objectives are for this winter range, including hiding and thermal cover, as well as forage. Juniper and sagebrush are key forage plants for big game on winter ranges. What are the objectives for these forage species? The Forest Plan direction for this management area is binding. If the agency is going to claim that the Forest Plan is being implemented, you need to specifically define how this is being done, instead of simply claiming that juniper and shrub removal is improvement on big game winter range. Also, the science and monitoring

behind this claim need to be provided. Currently mule deer populations have been in decline across the western U.S.. We haven't seen any science that reported increases of mule deer populations following removal of juniper and shrubs on their winter ranges.

One issue that is generally ignored in the EA is what shrubs are present, and will be targeted for masticating and burning. Do these control efforts include sagebrush? There is extensive documentation that sagebrush is highly valuable to both elk and deer on winter ranges (Wambolt 1998, Petersen 1993). Removing sagebrush to increase grasses on winter range, as is suggested in the EA, does not promote mule deer and elk. Sagebrush has a high protein content of almost 13% in the winter, while dormant grasses have a protein content of less than 4% (Peterson 1993). There can be no valid reason to remove sagebrush and replace it with grasses for big game winter forage. The actual replacement species the agency claims are going to be managed for are never identified. But at a minimum, the rationale for removing shrubs and replacing them with grasses on winter range needs to be documented, as is required by the NEPA.

The claim that this project will increase diversity is pure unsupported rhetoric. There is no definition as to what constitutes diversity. What criteria are being used to measure diversity, and why isn't this information provided to the public? For example, what is the criteria for a diversity of age classes in juniper woodlands or sagebrush, and what is this based on? The NEPA requires that the agency provide reliable, valid information to the public on

projects. This claim that removing juniper and shrubs will improve diversity is a clear violation of the NEPA, as there is no actual basis for it. Worse, it is not clear why eliminating trees and shrubs increases diversity as per the standard definitions. What science claims that a grassland has higher habitat diversity than a woodland or forest, or shrubland? One likely factor driving the proposed project is not promotion of big game species and wildlife, but instead is being done for livestock. This may be why there is no actual discussion in the EA of current livestock grazing practices in this landscape.

The EA did not provide any monitoring data on the effect of the fire on as winter range, or how this fire affected the extent of exotic vegetation, such as cheatgrass and other weeds. Since the proposed actions will be somewhat similar in effect, it would seem to be important for the agency to provide this information to the public.

The EA never provides any monitoring data, or references any current science, as to what the specific problems are in this landscape for wildlife. How did the agency determine that the current conditions are causing problems for wildlife? In general, one would not expect trees to be a problem for wildlife, especially juniper which is a highly valuable resource for wildlife, not just for forage, including berries, but as hiding and thermal cover. How has the agency determined that hiding cover are too high in this winter range? What are the objectives for hiding and thermal cover which are the target for management intervention?

The EA does not demostrate that the project complies with the Forest Plan standards for montoring, old growth forests, big game, goshawks in vioaltion of the Forest Plan and therefore the Healthy Forest Restoration Act.

The proposed action is very extensive for conclusions that it will not significantly change and degrade conditions for wildlife. It is not clear how this was determined. The EA lacks some important information, such as what species of shrubs are going to be slashed and burned. Why aren't these shrubs being used by wildlife?

Overall, this EA is a huge violation of the NEPA because the public is provided essentially no information as to why this project will benefit wildlife. At a minimum, the agency needs to demonstrate to the public that this is in fact the case. The EA also did not provide any information as to how the resource specialists determined that the project will not lead to any significant effects on wildlife. These conclusions need to be documented for the public, including criteria that were used and evaluated to measure levels of significant impact. As just one question, if the Forest Plan standard to manage this area to promote big game species on their winter range is not being followed, this would most likely trigger significant impacts. It seems like that this is an intentional Forest Plan violation to promote livestock grazing over wildlife in this landscape. Since the project is in violation of the Forest Plan, the project is alos in violation of the Healthy Forest Restoration Act which requires that the project complies with Forest Plans.

Juniper removal has been a long- standing practice to promote livestock grazing, not wildlife. The EA did not discuss the current grazing use of this area by livestock. This information needs to be included as important information to the public.

Please provide a map showing the WUI and the locations of all homes in comparison to the project area.

Does the Wildlife Urban Interface (WUI) definitions that the project uses comply with the statutory definition of a WUI in the Healthy Forest Restoration Act?

The MLSNF Forestwide burning project does not follow the plain language of the Healthy Forest Restoration Act which limits the Wildland Urban Interface to be at most 1 1/2 miles from a community.

The project must Healthy Forest Restoration Act, NEPA NFMA, and the APA. Please write an EIS where the Forest Service demonstrates that the Wildland Urban Interface (WUI) follows the plain language of the WUI found in the Healthy Forest Treatment Act. Please change the project area to limit it to the WUI and do NEPA on the Fire plan.

Please see the attached paper by Dr. William Baker titled: “Are High-Severity Fires Burning at Much Higher Rates Recently than Historically in Dry-Forest Landscapes of the Western USA?”

Dr. Baker writes: “Programs to generally reduce fire severity in dry forests are not supported and have significant adverse ecological impacts, including reducing habitat for native species dependent on early-successional burned patches and decreasing landscape heterogeneity that confers resilience to climatic change.”

Dr. Baker concluded: “Dry forests were historically renewed, and will continue to be renewed, by sudden, dramatic, high-intensity fires after centuries of stability and lower-intensity fires.”

The purpose of this project is to improve big game and grouse habitat and to make the forest more resilient and plan for a more historic fire regime. Based on Dr. Baker’s paper, the proposed action will not meet the of the project.

Please find attached DellaSala et al 2022. Please also find attached, Baker 2023.

Countering Omitted Evidence of Variable Historical Forests and Fire Regime in Western USA Dry Forests:
The Low-Severity-Fire Model Rejected

William L. Baker [1,*]

, Chad T. Hanson [2], Mark A. Williams [3] and Dominick A. DellaSala [4]

1 2 3 4

* Correspondence: bakerwl@uwyo.edu

Abstract: The structure and fire regime of pre-industrial (historical) dry forests over ~26 million ha of the western USA is of growing importance because wildfires are increasing and spilling over into communities. Management is guided by current conditions relative to the historical range of variability (HRV). Two models of HRV, with different implications, have been debated since the 1990s in a complex series of papers, replies, and rebuttals. The “low-severity” model is that dry forests were relatively uniform, low in tree density, and dominated by low- to moderate-severity fires; the “mixed-severity” model is that dry forests were heterogeneous, with both low and high tree densities and a mixture of fire severities. Here, we simply rebut evidence in the low-severity model’s latest review, including its 37 critiques of the mixed-severity model. A central finding of high-severity fire recently exceeding its historical rates was not supported by evidence in the review itself. A large body of published evidence supporting the mixed-severity model was omitted. These included numerous direct observations by early scientists, early forest atlases, early newspaper accounts, early oblique and aerial photographs, seven paleo-charcoal

reconstructions, ≥18 tree-ring reconstructions, 15 land survey reconstructions, and analysis of forest inventory data. Our rebuttal shows that evidence omitted in the review left a falsification of the scientific record, with significant land management implications. The low-severity model is rejected and mixed-severity model is supported by the corrected body of scientific evidence.

Dr. Baker's and DellaSala's paper are the best available science. Please explain why this project is not following the best available science.

Please see the attached paper by Calkin at al 2023 that found we have a home ignition problem, not a wildfire problem.

Please explain include a discussion of the following:

1. Baker and Shinneman. 2004. Fire rotation for high- severity fire in juniper is estimated at 400-480 years.

2. Floyd and others. 2004. Stand replacing fires in juniper 400 years or longer.

3. Bauer and Weisberg. 2009. The fire cycle in pinyon- juniper was estimated at 427 years.

What evidence do you have that shows fire has been suppressed in the area?

Baker and Shinneman (2004), Bauer and Weisberg (2009), and Floyd et al. 2004) that demonstrate that the fire cycle in juniper woodlands is very long, up to 400 years or longer, and has not been impacted by any fire suppression actions since settlement. In addition, Coop and Magee (Undated) noted that low-severity fire is not generally considered to have played an important role in shaping patterns of pre- settlement pinyon-juniper woodland structure, where fire regimes were mostly characterized by rare stand-replacing fire; as a result, they noted that direct management interventions such as thinning or fuel reductions may not represent ecological restoration.

Please find Schoennagel et al (2004) attached. Schoenagel states: "we are concerned that the model of historical fire effects and 20th-century fire suppression in dry ponderosa pine forests is being applied uncritically across all Rocky Mountain forests, including where it is inappropriate.

Schoennagel et al (2004) states: “High-elevation subalpine forests in the Rocky Mountains typify ecosystems that experience infrequent, high-severity crown fires []. . . The most extensive subalpine forest types are composed of Engelmann spruce (Picea engelmannii), subalpine fir (Abies lasiocarpa), and lodgepole pine (Pinus contorta), all thin- barked trees easily killed by fire. Extensive stand-replacing fires occurred historically at long intervals (i.e., one to many centuries) in subalpine forests, typically in association with infrequent high-pressure blocking systems that promote extremely dry regional climate patterns.”

Schoennagel et al (2004) states: “it is unlikely that the short period of fire exclusion has significantly altered the long fire intervals in subalpine forests. Furthermore, large, intense fi- res burning under dry conditions are very difficult, if not impossible, to suppress, and such fires account for the majority of area burned in subalpine forests.

Schoennagel et al (2004) states: “Moreover, there is no consistent relationship between time elapsed since the last fire and fuel abundance in subalpine forests, further undermining the idea that years of fire suppression have caused unnatural fuel buildup in this forest zone.”

Schoennagel et al (2004) states: “No evidence suggests that spruce–fir or lodgepole pine forests have experienced sub- stantial shifts in stand structure over recent decades as a re- sult of fire suppression. Overall, variation in climate rather than in fuels appears to exert the largest influence on the size, timing, and severity of fires in subalpine forests []. We conclude that large, infrequent stand replacing fires are ‘business as usual’ in this forest type, not an artifact of fire suppression.”.

Schoennagel et al (2004) states: “Contrary to popular opinion, previous fire suppression, which was consistently effective from about 1950 through 1972, had only a minimal effect on the large fire event in 1988 []. Reconstruction of historical fires indicates that similar large, high-severity fires also occurred in the early 1700s []. Given the historical range of variability of fire regimes in high-elevation subalpine forests, fire behavior in Yellow-stone during 1988, although severe, was neither unusual nor surprising.”

Schoennagel et al (2004) states: “Mechanical fuel reduction in sub- alpine forests would not represent a restoration treatment but rather a departure from the natural range of variability in stand structure.”

Schoennagel et al (2004) states: “Given the behavior of fire in Yellowstone in 1988, fuel reduction projects probably will not substantially reduce the frequency, size, or severity of wildfires under extreme weather conditions.”

Schoennagel et al (2004) states: “The Yellowstone fires in 1988 revealed that variation in fuel conditions, as measured by stand age and density, had only minimal influence on fire behavior. Therefore, we expect fuel- reduction treatments in high-elevation forests to be generally unsuccessful in reducing fire frequency, severity, and size, given the overriding importance of extreme climate in controlling fire regimes in this zone. Thinning also will not restore subalpine forests, because they were dense historically and have not changed significantly in re- sponse to fire suppression. Thus, fuel- reduction efforts in most Rocky Mountain sub- alpine forests probably would not effectively mitigate the fire hazard, and these efforts may create new ecological problems by moving the forest structure outside the historic range of variability.”

Likewise, Brown et al (2004) states: “At higher elevations, forests of subalpine fir, Engelmann spruce, mountain hem- lock, and lodgepole or whitebark pine predominate. These forests also have long fire return intervals and contain a high proportion of fire sensitive trees. At periods averaging a few hundred years, extreme drought conditions would prime the- se forests for large, severe fires that would tend to set the forest back to an early successional stage, with a large carry- over of dead trees as a legacy of snags and logs in the regenerating forest . . . . natural ecological dynamics are largely preserved be- cause fire suppression has been effective for less than one natural fire cycle. Thinning for restoration does not appear to be appropriate in these forests. Efforts to manipulate stand structures to reduce fire hazard will not only be of limited effectiveness but may also move systems away from pre-1850 conditions to the detriment of wildlife and water- sheds.” “Fuel levels may suggest a high fire ‘hazard’ under conventional assessments, but wildfire risk is typically low in these settings.”

Likewise, Graham et al (2004) states: “Most important, the fire behavior characteristics are strikingly different for cold (for example, lodgepole pine, Engelmann spruce, subalpine fir), moist (for example, western hemlock,

western redcedar, western white pine), and dry forests. Cold and moist forests tend to have long fire- return intervals, but fires that do occur tend to be high- intensity, stand-replacing fires. Dry forests historically had short intervals between fi- res, but most important, the fires had low to moderate severity."

According to Graham et al (2004), thinning may also increase the likelihood of wildfire ignition in the type of forests in this Project area: "The probability of ignition is strongly rela- ted to fine fuel moisture content, air temperature, the amount of shading of surface fuels, and the occurrence of an ignition source (human or lightning caused) . . . . There is generally a warmer, dryer microclimate in more open stands (fig. 9) compared to denser stands. Dense stands (canopy cover) tend to provide more shading of fuels, keep- ing relative humidity higher and air and fuel temperature lower than in more open stands. Thus, dense stands tend to maintain higher surface fuel moisture contents com- pared to more open stands. More open stands also tend to allow higher wind speeds that tend to dry fuels compared to dense stands. These factors may in- crease probability of ignition in some open canopy stands compared to dense canopy stands."

Please see the attached report titled: "Have western USA fire suppression and megafire active management approaches become a contemporary Sisyphus?" By Dominick A. DellaSala[a,*], Bryant C. Baker[b,c], Chad T. Hanson[d], Luke Ruediger[e,f], William Baker [g]

Which wildlife species and ecosystem processes, if any, does the fire-proofing in the proposed project benefit? Which species and processes do fire-proofing harm?

What is your definition of healthier?

What evidence do you have that this project will make the forest healthier for fish and wildlife? What about the role of mixed severity and high severity fire – what are the benefits of those natural processes?

How have those processes (mixed and high severity fire) created the ecosystems we have today?

Over how many millennia have mixed and high severity fire have been occurring without human intervention?

What beneficial ecological roles do beetles play? You didn't answer this in violation of NEPA, NFMA and the APA.

Can the forest survive without beetles?

Will all WQLS streams in the project area have completed TMDLs before decision is signed?

Will this project leave enough snags to follow the Forest Plan requirements and the requirements of sensitive old growth species such as flammulated owls and goshawks?

Will this Project exacerbate existing noxious weed infestations and start new infestations?

Please find attached a declaration from Dr. Paul Rogers that contradicts the Forest Service's findings that the project fulfills the purpose and need of the project and that it does not protect old growth nor comply with the Forest Plan, NFMA, and the APA.

The agency does not address the likely adverse impacts of climate change on the persistence of juniper woodlands or values of forests as carbon sinks.

Please explain how climate change could affect the long-term persistence of juniper woodlands. If the persistence of these woodlands will be adversely impacted by climate change, juniper thinning operations will promote the long-term demise of this important conifer. This impact was noted by Coop and Mcgee (Undated). Indeed, a recent newspaper article by Maffly (2018) reported on the mystery of why junipers are dying in Utah; widespread loss of junipers would have far- reaching consequences for southern Utah's fragile desert environments.

In addition to the concern about juniper mortality resulting from climate change, we also note that forest thinning in general exacerbates climate change. Milman (2018) recently reported on this issue, noting that scientists say halting deforestation is just as urgent as reducing emissions to address climate change, given the function they provide as a carbon sink. Forest thinning reduces this carbon sink function.

Please explain the impact of juniper treatments on the spread of noxious weeds.

There is a considerable awareness today regarding the problems of noxious weed infestations on public lands. One activity that is clearly promoting noxious weeds are fuels reduction and prescribed burning projects. We cite only a few examples at this time. One example is a Joint Fire Science Report by Coop and Magee (Undated), where they note that fuels and juniper reduction treatments resulted in rapid, large and persistent increases in the frequency, richness and cover of 20 non-native plant species including cheatgrass; exotic plant expansion appeared linked to the disturbance associated with treatment activities, reduction in tree canopy, and alterations to ground cover; exotic species were much more frequently encountered at treated than control sites, occurring at 86% of sample plots in treatments and 51% of untreated sample plots; richness of exotic species in treatments was more than double that of controls. What is also interesting in this study is that cheatgrass showed a negative effect of tree canopy, which means that cheatgrass was benefited by canopy removal. They noted that models for chestgrass alone and all non- native species together indicate strong negative associations with tree canopies, indicating that increased light availability, or perhaps below-ground resources such as moisture or nitrogen, enhance colonization and growth in treatments. Increases in exotic plant species in treatment areas was one of the reasons these researchers concluded that managers need to be cautious about implementing treatments in light of the persistent, negative ecological impacts that accompany woodland thinning in pinyon pine- juniper ecosystems; this includes an increase in fire frequency.

Kerns and Day (2014) also reported that juniper treatments resulted in at least a short-term conversion of juniper woodlands to an exotic grassland. And Kerns (undated) reported similar findings in another Joint Fire Science Program report; she stated that it is a significant challenge for land managers to apply thinning and burning fuel treatments in a manner that does not exacerbate existing weed and associated resource problems due to the reduction of ecological resistance that fuel reduction activities created, combined with the aggressive nature of exotic species present.

Perchemlides et al. (2008) reported similar problems with juniper thinning projects in Oregon; exotic annual grass cover increased, whereas cover by native perennial grasses did not, in treatment areas; they noted that fuel reduction thinning may have some unintended negative impacts, including expansion of exotic grasses, reduction in native perennial species cover, persistent domination of annuals, and increased surface fuels.

Please show scientific documentation that conversion of juniper woodlands to grasslands, including cheatgrass, improves habitat for all wildlife species.

The agency notes that the project will not only reduce juniper, but various shrubs as well. Although we noted above that juniper woodlands have a very high value to many wildlife species, it is not clear that replacing juniper with grasses, including cheatgrass, balances out the loss of wildlife species removed due to juniper removal by replacement with other wildlife species that use only grasses as habitat. For example, the scooping notice did not identify that mule deer on this winter range use grasses as winter forage. The value of cheatgrass to elk in the winter is also not demonstrated. Cheatgrass seeds are extremely sharp, and use by elk in the winter seems unlikely. Cheatgrass use by wildlife in the summer is also unlikely after early spring, since this grass cures out by summer. The seeds of cheatgrass are also responsible to mortality through blinding of grassland birds (McCrary and Bloom 1984).

We also wrote starting with:

To evaluate the Project's impact on climate change, including on carbon storage and sequestration, the Forest Service relied on a "Carbon Report"

that fails to adequately consider years of climate science and does not

adequately analyze the Project's broader climate impacts.

This is not taking a hard look at the effects of the project on climate change in violation of NEPA.

The Forest Service responded on page 4 of the carbon report:

Due to the currently departed conditions of timber stands across the area, the treatments proposed in this project would increase longterm forest health and ecosystem resilience, promote long-term carbon storage and stability, and reduce the risk of uncharacteristic wildfire which would have a detrimental impact on carbon storage and ecosystem health.

There is no scientific basis for the above statement which is arbitrary and capricious and thus in violation of NEPA.

Dellasala et al 2022 and Baker et al. 2023 show that the project will not reduce fires and only result in the release of carbon into the atmosphere and decrease the amount of carbon that the project area can capture by cutting down trees that are hundreds of years old and disturbing soils which will also release carbon into the atmosphere.

The claim that thinning and removing juniper will increase resiliency of this area is highly questionable. First, these forests are not highly flammable as per the current science. Second, thinning will likely increase flammability by increasing wind speeds and vegetation drying due to a reduction of shade. Third, flammability will surely be increased over current conditions due to an increase of grasses, including exotic species as cheatgrass. The EA did not provide any actual science to indicate that large scale prescribed burning will reduce fires, and thereby increase "resiliency" of this winter range.

The agency does not address the likely adverse impacts of climate change on the persistence of juniper woodlands or values of forests as carbon sinks.

It is now time to speak honestly about unrealistic expectations relat- ing to desired future condition. Forest managers have failed to dis- close that at least five common tree species, including aspens and four conifers, are at great risk unless atmospheric greenhouse gases and associated temperatures can be contained at today's levels of concentration in the atmosphere. This cumulative ("reasonably foreseeable") risk must not continue to be ignored at the project-level, or at the programmatic (Forest Plan) level.

Global warming and its consequences may also be effectively irreversible which implicates certain legal consequences under NEPA and NFMA and ESA (e.g., 40 CFR § 1502.16; 16 USC §1604(g); 36 CFR §219.12; ESA Section 7; 50 CFR §§402.9, 402.14). All net car- bon emissions from logging represent "irretrievable and irreversible commitments of resources."

It is clear that the management of the planet's forests is a nexus for addressing this largest crisis ever facing humanity. Yet the EA and Draft Decision Notice fails to even provide a minimal quantitative analysis of project- or agency-caused CO_2 emissions or consider the best available science on the topic. This is immensely unethical and immoral. The lack of detailed scientific discussions in the EA and Draft Decision Notice concerning climate change is far more troubling than the document's failures on other topics, because the consequences of unchecked climate change will

be disastrous for food production, sea level rise, and water supplies, resulting in complete turmoil for all human societies. This is an issue as serious a nuclear annihilation (although at least with the latter we're not already pressing the button).

The EA provided a pittance of information on climate change effects on project area vegetation. The EA provides no analysis as to the veracity of the project's Purpose and Need, the project's objectives, goals, or desired conditions. The FS has the responsibility to inform the public that climate change is and will be bringing forest change. For the project, this did not happen, in violation of NEPA.

The EA fails to consider that the effects of climate change on the project area, including that the "desired" vegetation conditions will

likely not be achievable or sustainable. The EA fails to provide any credible analysis as to how realistic and achievable its desired condi- tions are in the context of a rapidly changing climate, along an un- predictable but changing trajectory.

The Forest Plan does not provide meaningful direction on climate change. Nor does the EA acknowledge pertinent and highly relevant best available science on climate change. This project is in violation of NEPA.

The EA does not analyze or disclose the body of science that impli- cates logging activities as a contributor to reduced carbon stocks in forests and increases in greenhouse gas emissions. The EA fails to provide estimates of

the total amount of carbon dioxide (CO_2) or other greenhouse gas emissions caused by FS management actions and policies—forest-wide, regionally, or nationally. Agency policy-makers seem comfortable maintaining a position that they need not take any leadership on this issue, and obfuscate via this EA to justify their failures.

The best scientific information strongly suggests that management that involves removal of trees and other biomass increases atmospheric CO_2. Unsurprisingly the FSEIS doesn't state that simple fact.

The EA fails to present any modeling of forest stands under different management scenarios. The FS should model the carbon flux over time for its proposed stand management scenarios and for the vari- ous types of vegetation cover found on the CGNF.

The EA also ignores CO_2 and other greenhouse gas emissions from other common human activities related to forest management and recreational uses. These include emissions associated with machines used for logging and associated activities, vehicle use for administrative actions, and recreational motor vehicles. The FS is simply ignoring the climate impacts of these management and other authorized activities.

The Committee of Scientists, 1999 recognize the importance of forests for their contribution to global climate regulation. Also, the 2012 Planning Rule recognizes, in its definition of Ecosystem services, the "Benefits people

obtain from ecosystems, including: (2) Regulating services, such as long term storage of carbon; climate regulation...”

We have no more time to prevaricate, and it’s not a battle we can afford to lose. We each have a choice: submit to status quo for the profits of the greediest 1%, or empower ourselves to limit greenhouse gas emissions so not just a couple more generations might survive.

The District Court of Montana ruled in Case 4:17-cv-00030- BMM that the Federal government did have to evaluate the climate change impacts of the federal government coal pro- gram.

In March 2019, U.S. District Judge Rudolph Contreras in Washington, D.C., ruled that when the U.S. Bureau of Land Management (BLM) auctions public lands for oil and gas leas- ing, officials must consider emissions from past, present and foreseeable future oil and gas leases nationwide. The case was brought by WildEarth Guardians and Physicians for Social Responsibility.

In March of 2018 the Federal District Court of Montana found the Miles City (Montana) and Buffalo (Wyoming) Field Office’s Resource Management Plans unlawfully overlooked climate impacts of coal mining and oil and gas drilling. The case was brought by Western Organization of Resource Councils, Montana Environmental Information Center, Powder River Basin Resource Council, Northern Plains Resource Council, the Sierra Club, and the Natural Resources Defense Council.

The project is in violation of NEPA, NFMA, the APA, the ESA for not examining the impacts of the project on climate change. The project will eliminate the forest in the project area. Forests absorb carbon. The project will destroy soils in the project area. Soils are carbon sinks.

Forests are already experiencing emissions-driven deforestation on both the post-fire and post-logging acreage. Areas where the cumulative effects of wildfire, followed by salvage logging on the same piece of ground are error upon error, with decades of a routine that can rightfully be described as willful ignorance and coverup.

Where is the reference to restocking? Monitoring data and analysis? If monitoring has been done there is no disclosure documenting the scope and probability of post-fire regeneration failures in the project area. NFMA requires documentation and analysis that accurately estimates climate risks driving regeneration failure and deforestation – all characteristic of a less "resilient" forest.

"In the US Rocky Mountains, we documented a significant trend of post-fire tree regeneration, even over the relatively short period of 23 years covered in this analysis. Our findings are consistent with the expectation of reduced resilience of forest ecosystems to the combined impacts of climate warming and wildfire activity. Our results suggest that predicted shifts from forest to non-forested vegetation." Evidence for declining forest resilience to

wildfires under climate change, Ecology Letters, (2018) 21: 243–252, Stevens-Rumens et al. (2018).

The Forest Plan is based on assumptions largely drawn from our past that no longer hold true. These assumptions, made decades ago, must be challenged, and amended, where overwhelming evidence demon- strates a change of course is critical. It is time to take a step back, as- sess the present and future and make the necessary adjustments, all in full public disclosure to the Congress and the American people. Many acres of (conifers) In many areas, conifers haven't shown "resilience" enough to spring back from disturbance. Regeneration is already a big problem.

Both RPA and NFMA mandate long-range planning which impose numerous limitations on commodity production, including grazing, timber harvesting practices and the amount of timber sold annually.

These long-range plans are based on assumptions, which are based on data, expert opinion, public participation and other factors that all, well almost all, view from a historical perspective. Assumptions that drove forest planning guidance decades ago, when climate risk was not known as it is today, are obsolete today.

Present and future climate risk realities demand new assumptions and new guidance.

A proper reexamination of the assumptions relating to resilience and sustainability contained in the Forest Plan is necessary. Scientific research supporting our comments focus on important data and analysis. A full discussion and disclosure of the following is required: 1) trends in wildfires, insect activity and tree mortality, 2) past regeneration success/failure in the project area, and 3) climate-risk science – some of which is cited below. Our comments, and supporting scientific re- search clearly "demonstrates connection between prior specific written comments on the particu- lar proposed project or activity and the content of the objection..."

The project is in violation of NEPA, NFMA, the Forest Plan and the APA.

Sec. 6. of the National Forest Management Act states:

(g) As soon as practicable, ... the Secretary shall ... promulgate regulations, under the principles of the Multiple-Use, Sustained-Yield Act of 1960...

The regulations shall include, but not be limited to-

(3) specifying guidelines for land management plans developed to achieve the goals of the Program which-

(E) insure that timber will be harvested from National Forest System lands only where-

(i) soil, slope, or other watershed conditions will not be irreversibly damaged;

NFMA regulations at 36 C.F.R. § 219.27 (Management requirements) state:

(a) Resource protection. All management prescriptions shall—

(1) Conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land;

(b) Vegetative manipulation. Management prescriptions that involve vegetative manipulation of tree cover for any purpose shall--

(5) Avoid permanent impairment of site productivity and ensure conservation of soil and water resources;

The project-level, and programmatic-level (Forest Plan) fail to pub- licly disclose the current and future impacts of climate risk to our national forests. NEPA requires cumulative effects analysis at the programmatic level, and at the project-level. The failure to assess and disclose all risks associated with vegetative-manipulation (slash and burn) units in the project area in the proper climate-risk context/scenario violates the NFMA, NEPA and the APA.

In the face of increasing climate risk, growing impacts of wildfire and insect activity, plus scientific research findings, NEPA analysis and disclosure must address the well-documented trend in post-fire regeneration failure. The project has already experienced difficulty restocking on areas that burned in the 1988 wildfire. NFMA (1982) regulation 36 CFR 219.27(c)(3)

implements the NFMA statute, which requires adequate restocking in five years.

The NEPA requires a “hard look” at climate issues, including cumulative effects of the “treatments” in the proposed project when added to the heat, drought, wind and other impacts associated with in- creased climate risk. Regeneration/Restocking failure following wildfire, prescribed fire and/or mechanical tree-killing has not been analyzed or disclosed. There is a considerable body of science that suggests that regeneration following fire is increasingly problematic.

Stands are at risk of going from forest to non-forest, even without the added risk of “management” as proposed in the project area. The project is currently is violation of NEPA, NFMA, and the APA.

REMEDY

Withdraw the Draft Decision Notice and FONSI and wrote and EIS that fully complies with the law or chooses the No Action Alternative.

We wrote in our comments:

Please disclose whether you have conducted surveys in the Project area for this Project for Utah Prairie Dogs, pine martins, northern goshawk, yellow-billed cuckoo, Ute ladies’- tresses, Southwestern Willow Southwestern Willow Flycatcher, Bonytail, Colorado Pike minnow, Humpback Chub, Razorback Sucker, Bald Eagles, Greater Sage Grouse, Northern Goshawk,

Spotted Bat, Peregrine Falcon, Spotted Bat, Three-toed woodpecker, Townsend's big-eared bat, Bonneville cutthroat trout, Utah Colorado River Cutthroat Trout, Columbia River Spotted Frog, Southern Leatherside chub, Western Boreal Toad,

Black Rosy-Finch, Brewer's Sparrow, Burrowing Owl, Calliope Hummingbird, Cassin's Finch, Ferruginous Hawk, Fox Sparrow, Gray Vireo, Juniper Titmouse, Lewis's Woodpecker, Loggerhead Shrike, Long-billed Curlew, Olive-sided Flycatcher, Pinyon Jay, Prairie Falcon, Sage Thrasher, Short-eared Owl, Virginia's Warbler,

Western Grebe, Williamson's Sapsucker, Willow Flycatcher, Golden Eagle, Macroinvertebrates, Aquatic Insects, Mule Deer, Northern Goshawk, Rocky Mountain Elk, and Monarch Butterfly.

Please disclose the last time the Project area was surveyed for Utah Prairie Dogs, pine martins, northern goshawk, yellow-billed cuckoo, Ute ladies'-tresses, Southwestern Willow Southwestern Willow Flycatcher, Bonytail, Colorado Pike minnow, Humpback Chub, Razorback Sucker, Bald Eagles, Greater Sage Grouse, Northern Goshawk, Spotted Bat, Peregrine Falcon, Spotted Bat, Three-toed woodpecker, Townsend's big-eared bat,

Bonneville cutthroat trout, Utah Colorado River Cutthroat Trout, Columbia River Spotted Frog, Southern Leatherside chub, Western Boreal Toad, Black Rosy-Finch, Brewer's Sparrow, Burrowing Owl, Calliope Hummingbird, Cassin's Finch, Ferruginous Hawk, Fox Sparrow, Gray Vireo, Juniper Titmouse, Lewis's Woodpecker, Loggerhead Shrike, Long-billed Curlew, Olive-sided Flycatcher, Pinyon Jay, Prairie Falcon, Sage Thrasher, Short-eared Owl, Virginia's Warbler, Western Grebe, Williamson's Sapsucker, Willow Flycatcher, Golden Eagle, Macroinvertebrates, Aquatic Insects, Mule Deer, Northern Goshawk, Rocky Mountain Elk, and Monarch Butterfly.

Please disclose how often the Project area has been surveyed for the Would the habitat be better for Utah Prairie Dogs, pine martins, northern goshawk, yellow-billed cuckoo, Ute ladies'- tresses, Southwestern Willow Southwestern Willow Flycatcher, Bonytail, Colorado Pike minnow, Humpback Chub, Razorback Sucker, Bald Eagles, Greater Sage Grouse, Northern Goshawk, Spotted Bat, Peregrine Falcon, Spotted Bat, Three-toed

woodpecker, Townsend's big-eared bat, Bonneville cutthroat trout, Utah Colorado River Cutthroat Trout, Columbia River Spotted Frog, Southern Leatherside chub, Western Boreal Toad, Black Rosy-Finch, Brewer's Sparrow, Burrowing Owl, Calliope Hummingbird, Cassin's Finch, Ferruginous Hawk, Fox Sparrow, Gray Vireo, Juniper Titmouse, Lewis's Woodpecker, Loggerhead Shrike, Long-billed Curlew, Olive-sided Flycatcher, Pinyon Jay, Prairie Falcon, Sage Thrasher, Short-eared Owl, Virginia's Warbler,
Western Grebe, Williamson's Sapsucker, Willow Flycatcher, Golden Eagle, Macroinvertebrates, Aquatic Insects, Mule Deer, Northern Goshawk, Rocky Mountain Elk, and Monarch Butterfly if the no action alternative was chosen?

Please provide us with the full BA for Utah Prairie Dogs, pine martins, northern goshawk, yellow-billed cuckoo, Ute ladies'- tresses, Southwestern Willow Southwestern Willow Flycatcher, Bonytail, Colorado Pike minnow, Humpback Chub, Razorback Sucker, Bald Eagles, Greater Sage Grouse, Northern Goshawk, Spotted Bat, Peregrine Falcon, Spotted Bat, Three-toed woodpecker, Townsend's big-eared bat, Bonneville cutthroat trout, Utah

Colorado River Cutthroat Trout, Columbia River Spotted Frog, Southern Leatherside chub, Western Boreal Toad, Black Rosy-Finch, Brewer's Sparrow, Burrowing Owl, Calliope Hummingbird, Cassin's Finch, Ferruginous Hawk, Fox Sparrow, Gray Vireo, Juniper Titmouse, Lewis's Woodpecker, Loggerhead Shrike, Long-billed Curlew, Olive-sided Flycatcher, Pinyon Jay, Prairie Falcon, Sage Thrasher, Short-eared Owl, Virginia's Warbler, Western Grebe, Williamson's Sapsucker, Willow Flycatcher, Golden Eagle, Macroinvertebrates, Aquatic Insects, Mule Deer, Northern Goshawk, Rocky Mountain Elk, and Monarch Butterfly.

Inventoried Roadless areas

The Forest Service recognizes the value of forestland unencumbered by roads, timber harvest, and other development. Sometimes these areas are known as "inventoried roadless areas" if they have been inventoried through the agency's various Roadless Area Review Evaluation processes, or "unroaded areas" if they have not been inventoried but are still of significant size and ecological significance such that they are eligible for congressional designation as a Wilderness Area.

Roadless areas provide clean drinking water and function as biological strongholds for populations of threatened and endangered species. Special

Areas; Roadless Area Conservation; Final Rule, 66 Fed. Reg. 3,244, 3,245 (Jan. 12, 2001) (codified at 36 C.F.R. Part 294). They provide large, relatively undisturbed landscapes that are important to biological diversity and the long- term survival of many at-risk species.

Roadless areas provide opportunities for dispersed outdoor recreation, opportunities that diminish as open space and natural settings are developed elsewhere. Id. They also serve as bulwarks against the spread of non-native invasive plant species and provide reference areas for study and research. Id.

Other values associated with roadless areas include: high quality or undisturbed soil, water, and air; sources of public drinking water; diversity of plant and animal communities; habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land; primitive, semi-primitive non-motorized, and semi-primitive motorized classes of dispersed recreation; reference landscapes; natural appearing cultural properties and sacred sites; and other locally identified unique characteristics.

The Roadless Rule mandates:

Prohibition on timber cutting, sale, or removal in inventoried roadless areas.

(a) Timber may not be cut, sold, or removed in inventoried roadless areas of the National Forest System, except as provided in paragraph (b) of this section.

(b) Notwithstanding the prohibition in paragraph (a) of this section, timber may be cut, sold, or removed in inventoried roadless areas if the Responsible

Official determines that one of the following circumstances exists. The cutting, sale, or removal of timber in these areas is expected to be infrequent.

(1) The cutting, sale, or removal of generally small diameter timber is needed for one of the following purposes and will maintain or improve one or more of the roadless area characteristics as defined in § 294.11.

(i) To improve threatened, endangered, proposed, or sensitive species habitat; or

(ii) To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period;

(2) The cutting, sale, or removal of timber is incidental to the implementation of a management activity not otherwise prohibited by this subpart;

... .
36 C.F.R. §294.13 (2005)(emphases added).

The Roadless Rule further explains the meaning of the phrase "incidental to" in subsection (b)(2) above as follows:

Paragraph (b)(2) allows timber cutting, sale, or removal in inventoried roadless areas when incidental to implementation of a management activity not otherwise prohibited by this rule. Examples of these activities include, but are not limited to trail construction or maintenance; removal of hazard trees adjacent to classified road for public health and safety reasons; fire line construction for wildland fire suppression or control of prescribed fire; survey and maintenance of property boundaries; other authorized activities such as ski runs and utility corridors; or for road construction and reconstruction where allowed by this rule.

66 Fed. Reg. 3258.

Are the roadless areas in the project area currently within the natural historic range of variability? Is the project area within natural range for wildfire conditions? Will this prescribed Fire Project substantially alter the Roadless characteristics in the inventoried roadless areas within the project area?

Use of an EA for this project is also invalid because the proposed vegetation treatments would occur within Inventoried Roadless Areas (IRA). Thisqualifies as an extraordinary circumstance that invalidates use of a EA. It is the existence of a cause- effect relationship between a proposed action and the potential effects on these resource conditions and if such a relationship exists, the degree of the potential effects of a proposed action on these resource conditions that determine whether extraordinary circumstances exist (36 CFR 220.g(b).

In relevant part, regarding the prohibition on tree cutting, the Roadless Rule mandates: Prohibition on timber cutting, sale, or removal in inventoried roadless areas. 1. Timber may not be cut, sold, or removed in inventoried roadless areas of the National Forest System, except as provided in paragraph (b) of this section. 2. Notwithstanding the prohibition in paragraph (a) of this section, timber may be cut, sold, or removed in inventoried roadless areas if the Responsible Official determines that one of the following circumstances exists. The cutting, sale, or removal of timber in these areas is expected to be infrequent. 1. The cutting, sale, or removal of generally small diameter timber is needed for one of the following purposes and will maintain or improve one or more of the roadless area characteristics as defined in § 294.11. 1. To improve threatened, endangered, proposed, or sensitive species habitat; or 2. To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period;

2. The cutting, sale, or removal of timber is incidental to the implementation of a management activity not otherwise prohibited by this subpart; 36 C.F.R. §294.13 (2005).

The Roadless Rule further explains the meaning of the phrase "incidental to" in subsection (b)(2) above as follows:

Paragraph (b)(2) allows timber cutting, sale, or removal in inventoried roadless areas when incidental to implementation of a management activity not otherwise prohibited by this rule. Examples of these activities include but are not limited to trail construction or maintenance; removal of hazard trees adjacent to classified road for public health and safety reasons; fire line construction for wildland fire suppression or control of prescribed fire; survey and maintenance of property boundaries; other authorized activities

such as ski runs and utility corridors; or for road construction and reconstruction where allowed by this rule.

Page 30 of the EA states: "There are 32 Inventoried Roadless Areas (IRAs) within the project area, that total approximately 472,100, acres proposed for potential prescribed burn treatments. IRAs occur on all five Manti-La Sal National Forest Ranger Districts.." It appears that the Project authorizes tree cutting on in roadless areas, the Project EA is not clear how the Forest Service will access those units. It is unclear whether the Forest Service will be reconstructing old roads, using illegal user-created roads, or using roads already closed by the Travel Plan in the Inventoried Roadless Area in order to conduct these activities. Please clarify what roads will be used. Every one of these examples shows that the management activity itself is not any form of vegetation management, i.e. tree-cutting - instead the management activities are things like trail management, road management, firefighting, land surveys, ski runs, utility corridors, or lawful road construction. In contrast, here the management activity itself is vegetation\ management, i.e. tree cutting. The Forest Service's interpretation of exemption (b)(2) is contrary to the explanation of "incidental to" in the Roadless Rule, and if adopted, would swallow the rule. The Forest Service could simply avoid the tree-cutting ban by labeling every tree-cutting activity in a Roadless Area as something other than tree-cutting - such as “restoration" - and thereby circumvent the ban with euphemisms. This is clearly not the intent of the Roadless Rule. 66 Fed. Reg. 3258. Accordingly, the (b)(2) exemption does not apply here.

Page 3 of the “Region 4 Roadless Project Summary and Briefing Sheet 2001 Roadless Rule” states that 24,348 acres will be logged with much of it being commercial logging. This is not incidental to purpose and need of the project. It is the main purpose of the project.

The project is involution of the Roadless Conservation Rule, NEPA, NFMA, and the APA.

The Project violates the Roadless Rule because, among other things: Neither the EA nor any of the MLSNF’s supporting documents defines what constitutes a “small diameter” tree for any of the stands within the project area’s Inventoried Roadless Areas except to write in the roadless report:

But the Forest Service’s justification is not part of the roadless rule.

The decision also has no limit on the size of a tree that they can cut in violation of the Roadless Rule, NEPA, NFMA and the APA.

Neither the EA nor any of the MLSNF's supporting documents limits the cutting, sale, or removal of trees in Inventoried Roadless Areas to generally small diameter trees in violation of the Roadless Rule, NEPA, NFMA, and the APA.

Health effects

In total, on a national scale, emissions from prescribed burns are just as damaging to human health as those from wildfires. A , recent study, titled, "Smoke from US wildfires, prescribed burns caused premature deaths, billions in health damages" (attached) concluded that annually, nationwide, wildfire smoke and prescribed burns combined to cause the deaths of 20,000 Americans a year, and slightly more than half of those deaths were caused by prescribed burns. If that is the case, it challenges the assumption that human health is being protected by prescribed burns.

How many people will be killed by this smoke from the burning?

A review article, by Reid et al. 2025 (attached), of research on characteristics of biomass burning emissions establishes several important factors on the issue of whether or not the more intense wildfires that prescribed burns are supposed to prevent, are in fact more harmful to human health. It is not just the amount of particulate pollution being emitted, many factors influence toxicity of biomass burning emissions: the size and shape of the particles, their chemical composition, the age of the particles in the atmosphere, and the type and species of biomass being burned. In turn many factors influence those characteristics, such as the intensity or temperature of the burn, the amount of oxygen in the flame, combustion efficiency, and the progression phase of the burn, i.e. flame or smoldering.

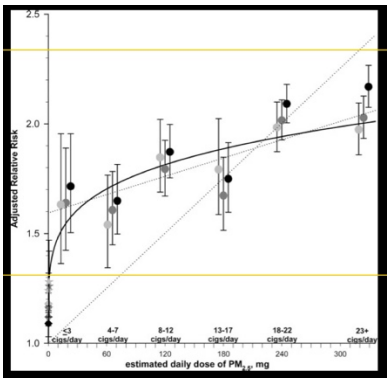
The review found that very intense fires, as opposed to lower-intensity burns like prescribed burns, had higher concentrations of incomplete combustion, and created larger particles. Particle size is extremely important in assessing toxicity of the particles. Smaller particles are more easily inhaled, more difficult to exhale, more easily picked up by the blood stream in the lungs, and then more easily penetrate organs, tissues, and individual cell membranes once those particles are distributed systemically in the blood stream. Moreover, the smaller the particle the greater the surface area for an

equal amount of particle mass. The greater surface area allows more toxic chemicals and heavy particles to be adsorbed on to the particle and greater chemical surface reactivity with body molecules. The smallest particles trigger the most oxidative stress, inflammation, tissue injury, and DNA damage.

Although inhaled particulate matter of any size can cause health problems, in general, the smaller the particles the more damage they can do compared to an equal amount of particle mass consisting of larger particles. On that basis alone, the larger particles of more intense wildfires are less toxic than smaller particles typical of prescribed burns. Other studies have shown that per ton of biomass burned, low intensity burns produce more smoke emissions than higher intensity burns.

It is well known by every relevant medical organization and governmental regulatory agency in the world, there is no safe level of air pollution, it is harmful at even very low concentrations. Please find editorial, titled, "Misuse of Pollution Reference Standards: No Safe Level of Air Pollution", attached.

Furthermore, it is also well known that the dose response curve between air pollution concentration and adverse health outcomes is not linear, but hyperbolic, i.e. steepest at the lowest concentrations. Every critical organ system can be harmed by air pollution, including every cell in the body.



Hyperbolic, air pollution dose response curve. This graph demonstrates there is no safe level of particulate pollution, and that the relationship between dose exposure and disease is the strongest at the lowest doses.

This means that even small increases in exposure to communities in rural areas is harmful to their health, and that includes from prescribed burns and slash pile burning from forest thinning.

Please find attached a paper titled, “Smoke from US wildfires, prescribed burns caused premature deaths, billions in health damage.”

Please find attached a paper by Reid et al. 2005 titled, “A review of biomass burning emissions part II: intensive physical properties of biomass burning particles”

A recent study by is cited inappropriately as justification for prescribed burns in the Western Unites States. Kelp et al. (2025) (attached) found no significant reduction in wildfire severity from thinning, but did find a significant reduction in fire severity from prescribed fire conducted less than two years prior to wildfire. The study also reported substantial reductions in particulate emissions from prescribed fire. However, on page 10 of that study, the authors base their results regarding particulate emissions reduction on the assumption that "on average 75% of the land treated by Rx [prescribed] fire burns in a wildfire within the next 8 years", which the authors say "agrees well with encounter rates for Northern California (Beidler et al., 2024).” However, only a small portion of one western U.S. state (California) had an encounter rate (prescribed fire area later burned in wildfire) anywhere near this high, and that tiny portion of the western U.S. was a profound outlier. Beidler et al. (2024) (attached) reported, in Table S8 (Supplemental Information Table S8), that even over the course of 10 years the encounter rate in western US states ranged from 7% to 17%, not 75%. Therefore, the particulate emissions reduction results reported by Kelp are not applicable to the vast majority of areas in the western U.S., either because wildfires mostly do not encounter previous prescribed burn units within a given decade, or because prescribed fire would have to be conducted far more often--unrealistically often--to achieve a higher encounter rate.

Thank you for your time and consideration of our concerns.

Sincerely yours,

Mike Garrity, Director,
Alliance for the Wild Rockies
PO Box 505, Helena, MT 59624
And for

Sara Johnson, Director,
Native Ecosystems Council
PO Box 125
Willow Creek MT 59760

And for

Katie Fite, Director

Wildlands Defense

PO Box 125

Boise, ID 83701