July 18, 2022

Ellen Mering
Flathead National Forest All Units
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Dear Ms. Mering,

Thank you for the opportunity to comment on the Round Star project Environmental Assessment (EA). Please accept these comments from me on behalf of the Alliance for the Wild Rockies, Montana Ecosystem Defense Council and Native Ecosystems Council. The Alliance for the Wild Rockies, Montana Ecosystem Defense Council, and Native Ecosystems Council (collectively "Alliance") submit the following comments to guide the development of the environmental analysis for the proposal.

The Forest Service is proposing clearcuts bigger than 40 acres but the Forest Service has not notified the public of this by announcing a separate 60 day comment period on openings greater than 40 acres is size. Please do this. The Forest Plan allows openings bigger than 40 acres is rare circumstances but the Flathead has been proposing openings (clearcuts) bigger than 40 acres in every timber sale under the new Forest Plan. This make a mockery of the Forest Plan.

How can the Flathead justify building 21 more miles of roads and an undisclosed number of temporary roads in addition to commercial and mechanical logging in the inner and outer riparian zones, and 36 logging units that are over 40 acres in watersheds that are already impaired from logging and roads? An Environmental Impact Statement is necessary to analyze the impacts or better yet just drop this project. NEPA requires that you inform the public of exactly where and how many miles of roads will be built even if they are so called temporary roads.

Please analyze the cumulative impacts of this project on grizzly bears, lynx, lynx critical habitat, whitebark pine, wolverine, monarch butterflies, goshawks, and all native fish and wildlife in the Tally Lake Ranger District.

The EA states, "Connectivity would be impacted by large openings which lynx avoid." How will this project help recover lynx and lynx critical habitat since connectivity would be impacted?

Creating large, homogenous regeneration openings does not provide microsite diversity. There are reasons that Congress sought to limit the size of regeneration openings and this project works contrary to that intent.

The EA ignored most of our comments that we raised in our scoping comments. We still contend 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.

Please include a no commercial logging alternative.

NECESSARY ELEMENTS FOR PROJECT EIS or an EA since that is what you have chosen to do.

A. Disclose all Flathead 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 Montana Department of Fish, Wildlife, and Parks regarding the impact of the Project on wildlife habitat;

D. Solicit and disclose comments from the Montana 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; and disclose the number of road closure violations in the Ranger District during the last 5 years.

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

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

K. Disclose the Flathead National Forest's record of compliance with the additional monitoring requirements set forth in previous DN/FONSIs and RODs on the Flathead 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 proposed unit from previous logging 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 forest in the Project area;

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

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

Z. Disclose the amount of current habitat for old growth and mature forest dependent species in the Project area;

AA. Disclose the amount of habitat for old growth and mature forest dependent species that will remain after Project implementation;

BB. Disclose the method used to model old growth and mature forest dependent wildlife habitat acreages and its rate of error based upon field review of its predictions;

CC. Disclose the amount of big game (moose and elk) hiding cover, winter range, and security currently available in the area;

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

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

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

GG. 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 standard, and the failure to compile data to establish a reliable inventory of sensitive species on the Forest;

HH. 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; II.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;

JJ. Disclose when and how the Flathead National Forest made the decision to suppress natural wildfire in the Project area and replace natural fire with logging and prescribed burning;

KK. Disclose the cumulative impacts on the Forest-wide level of the Flathead National Forest's policy decision to replace natural fire with logging and prescribed burning;

LL. Disclose how Project complies with the Roadless Rule;

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

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

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

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;

SOIL PRODUCTIVITY The Flathead National Forest (FNF) adopted the Region 1 Soil Quality Standards, FSM 2500-99-1 (SQS), to assure compliance with the Forest Plan and NFMA. The SQS limit the areal extent of detrimental soil disturbance within logging units to no more than 15%. Soil Quality Standards "provide benchmark values that indicate when changes in soil properties and soil conditions would result in significant change or impairment of soil quality based on available research and Regional experience" (Forest Service Manual 2500, Region 1 Supplement 2500-99-1, Chapter 2550 – Soil Management, Section 2554.1).

The intent of the Regional Soil Quality Standards is that the FS must, in each case, consider the cumulative effects of both past and proposed soil disturbances to assure the desired soil conditions are met. This includes impacts from activities that include

logging, firewood gathering, livestock grazing, and motorized recreation impacts.

Please disclose percent detrimental disturbance estimates provided by watershed. What is the relevance of the areal extent of management-induced soil damage over such a geographic area? Alexander and Poff (1985) reviewed literature and found that the amount of soil damage varies even with the same logging system, depending on many factors. For example, as much as 10% to 40% of a logged area can be disturbed by skyline logging. They state: There are many more data on ground disturbance in logging, but these are enough to indicate the wide diversity of results obtained with different equipment operators, and logging techniques in timber stands of different composition in different types of terrain with different soils. Added to all these variables are different methods of investigating and reporting disturbance. The Sheep Creek Salvage FEIS (USDA Forest Service, 2005a) states at p. 173: Noxious weed presence may lead to physical and biological changes in soil. Organic matter distribution and

nutrient flux may change dramatically with noxious weed invasion. Spotted knapweed (Centaurea biebersteinii D.C.) impacts phosphorus levels at sites (LeJeune and Seastedt, 2001) and can hinder growth of other species with allelopathic mechanism. Specific to spotted knapweed, these traits can ultimately limit native species' ability to compete and can have direct impacts on species diversity (Tyser and Key 1988, Ridenour and Callaway 2001). Please disclose how the productivity of the land and soils been affected in the project area and forest wide due to noxious weed infestations, and how that situation is expected to change in the coming years and decades.

From Grier et al., (1989): The potential productivity of a site can be raised or lowered by management activities causing a permanent or long-term increase or decrease in the availability of nutrients essential for plant growth. (P. 27.) ...Any time organic matter is removed from a site, a net loss of nutrients from that site also occurs. In timber harvesting or thinning, nutrient losses

tend to be proportional to the volume removed. (P. 27.) ...Slash burning is a common site preparation method that can affect soil chemical properties tremendously. A great deal of controversy is often associated with using fire because of the wide variety of effects, some of which are definitely detrimental to site quality and some of which are beneficial. (P. 30.) The FNF has never attempted to put in place a scientifically sound definition of "soil productivity" that

FAILURE TO REVIEW AND PROTECT CULTURAL AND HISTORICAL RESOURCES

Consultation with the State Historic Preservation Office (SHPO) must be completed prior to a decision being signed.

Any required protection measures provided from SHPO will be incorporated into my final decision.

Crucial to the preservation of the historical and cultural foundations of the nation, Section 106 of the National Historic Preser-

vation Act (NHPA) and its implementing regulations, 36 C.F.R. Part 800 (PDF) (revised August 5, 2004) re- quire Federal agencies to consider the effects of projects they carry out, approve, or fund on historic properties. Additionally, Federal agencies must provide the Advisory Council on Historic Preservation (ACHP) opportunity to comment on such projects prior to the agency's final decision.

A Federal project that requires review under Section 106 is defined as an "undertaking." An undertaking means a project, activity or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license, or approval.

Section 110 of the NHPA

Added to the NHPA in 1992, Section 110 requires Federal agencies to emphasize the preservation and enhancement of cultural re- sources. Section 110 directs agencies to initiate measures necessary to direct their policies, plans, and programs in such a way that federally-owned sites, structures, and objects of historical architectural or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the public. The agencies are also encouraged to institute (in consultation with the ACHP) procedures to assure Federal plans and programs contribute to the preservation and enhancement of non-Federally owned sites, structures, and objects of historical, architectural, and archaeological significance. Has the MT SHPO received this survey? The cultural surveys need to be done before the NEPA and NHPA process can be completed, which has not occurred. The project must be approved by the SHPO and the public needs to given a chance to comment on this.

Did the Forest Service conduct NEPA analysis (i.e. an EA or EIS) for the Fire Plan the Forest is using for this project? If you don't the project will be in violation of NEPA, NFMA, and the APA.

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

Please explain why the area qualifies as Wildland Urban Interface (WUI).

Since the Forest Service did not conduct NEPA for the Fire Plan, please disclose the cumulative effects of Forest-wide implementation of the Fire Plan in the project EIS, or EA if you refuse to write an EIS, to avoid illegally tiering to a non- NEPA document. Specifically analyze the decision to prioritize mechanical, human-designed, somewhat arbitrary treatments as a replacement for naturally-occurring fire.

Did the Forest Service conduct ESA consultation for the Fire Plan?

Will the Forest Service be considering amending the Flathead Forest Plan to include binding legal standards for noxious weeds?

How effective have BMPs been at stopping (i.e. preventing) new weed infestations from starting during logging and related road operations?

Is it true that new roads are the number one cause of new noxious weed infestations?

Why isn't the Forest Service considering a Forest Plan amendment in this Project to amend the Forest Plan to include binding legal standards that address noxious weeds?

Is it true that noxious weeds are one of the top threats to bio- diversity on our National Forests?

How can the Forest Service be complying with NFMA's requirement to maintain biodiversity if it has no legal standards that address noxious weeds?

Will this Project address all Project area BMP needs, i.e. will the BMP road maintenance backlog and needs from this Project all be met by this Project?

The scoping notice was not clear if any MIS were found. What MIS did you find, how many and how did you look for these MIS?

How will the decreased elk security and thermal cover affect wolverines? Please formally consult with the US FWS on the impact of this project on wolverines. Wolverines need secure habitat in big game winter range.

Please formally consult with the US FWS on the impact of this project on Whitebark pine.

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 logging will make the for- est healthier for fish and wildlife? What about the role of mixed severity and high severity fire – what are the bene- fits 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 with- out human intervention?

What beneficial ecological roles do beetles play? You didn't an- swer 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 a 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?

Do unlogged old growth forests store more carbon than the wood products that would be removed from the same forest in a logging operation?

What is the cumulative effect of National Forest logging on U.S. carbon stores? How many acres of National Forest lands are logged every year? How much carbon is lost by that logging?

Is this Project consistent with "research recommendations (Krankina and Harmon 2006) for protecting carbon gains against the potential impacts of future climate change? That study rec-

ommends “[i]ncreasing or maintain- ing the forest area by avoiding deforestation,” and states that “protecting forest from logging or clearing offer immediate benefits via pre- vented emissions.”

Please list each visual quality standard that applies to each unit and disclose whether each unit meets its respective visual quality standard.

Please disclose whether you have conducted surveys in the Project area for this Project for whitebark pine, Monarch butterflies, wolverines, grizzly bears, pine martins, northern goshawk and lynx, as required by the Forest Plan.

Please disclose the last time the Project area was surveyed for whitebark pine, Monarch butterflies, grizzly bears, wolverines, pine martins, northern goshawk, and lynx.

Please disclose how often the Project area has been surveyed for whitebark pine, wolverines, Monarch butterflies, grizzly bears, pine martins, northern goshawks, and lynx.

Would the habitat be better for whitebark pine, Monarch butterflies, grizzly bears, wolverines, pine martins, northern goshawks, and lynx if roads were removed in the Project area?

Please provide us with the full BA for the whitebark pine, Monarch butterflies, grizzly bears, wolverines, pine martins, northern goshawks, and lynx.

Please formally consult with the U.S. Fish and Wildlife Service on the impact of the project on bull trout, bull trout critical habitat, whitebark pine, Monarch butterflies, grizzly bears, wolverines, pine martins, northern goshawks, lynx critical habitat, and lynx.

In Case 9:19-cv-0056-DWM the United States District Court for the District of Montana ruled on 6/24/21 that the Flathead Forest Plan was illegal because the Fish and Wildlife Service violated

the ESA by not considering the impacts of ineffective road closures in its 2017 BiOp. The court also ruled that the FWS violated the ESA by using a flawed incidental take statement for grizzly bears and the core density standards and secure core habitat surrogate violate the ESA.

The Revised Forest Plan and the Round Star project weakens grizzly bear habitat protections by allowing new roadbuilding throughout the Flathead National Forest, without meaningful and permanent reclamation of other roads elsewhere in the Forest to compensate for the new road construction. This new management direction is a significant departure from former Forest Plan Amendment 19, which required the Forest Service to reclaim roads according to stringent requirements such that a reclaimed road would "no longer function as a road or trail." Amendment 19 EA.

The New roadbuilding in the Round Star project without meaningful reclamation to ensure no net increase in the road system presents a significant threat to grizzly bears, because motor vehicle users and other recreationists can trespass on the supposedly "impassable" roads and thus encroach on grizzly bear habitat. Further, even unused roads cause detrimental impacts to grizzly bear survival and reproduction, because grizzly bears are displaced from roaded habitat, regardless of whether the roads receive public or administrative use. However, in concluding that the Revised Forest Plan will not jeopardize the species, FWS's Revised Biological Opinion failed to adequately examine adverse impacts to grizzly bears from unauthorized motorized use on roads closed according to the Revised Forest Plan's weaker closure standards; failed to consider the displacement impacts

caused by roads even when they do not receive motorized use; and failed to account for increased roadbuilding enabled by the Forest Service's abandonment of stringent road-reclamation requirements.

The Forest Service has failed to rationally determine, based on a consideration of all relevant factors, whether the Revised Forest Plan's new management direction will jeopardize the survival of grizzly bears in the Flathead and therefore the Round Star project.

The FWS's Revised Biological Opinion is therefore arbitrary, capricious, and not in accordance with law, and should be set aside pursuant to the ESA and APA and therefore can not be used as a basis for the Round Star project.

Please see the attached paper titled: "Management of forests and forest carnivores: Relating landscape mosaics to habitat quality of Canada lynx at their range periphery" by Holbrook et al. 2019. It states that all lynx habitat has to be monitored for lynx.

The vast majority of the project area is in lynx critical habitat.

Weeds

Native plants are the foundation upon which the ecosystems of the Forest are built, providing forage and shelter for all native wildlife, bird and insect species, supporting the natural processes of the landscape, and providing the context within which the public find recreational and spiritual opportunities. All these uses or values of land are hindered or lost by con- version of native vegetation to invasive and noxious plants. The ecological threats posed by noxious weed infestations are so great that a former chief of the Forest Service called the invasion of noxious weeds "devastating" and a "biological disaster." Despite implementation of Forest Service "best management practices" (BMPs), noxious weed infestation on the Forest is getting worse and noxious weeds will likely overtake native plant populations if introduced into areas that are not yet infested. The Forest Service has recognized that the effects of noxious weed invasions may be irreversible. Even if weeds are eliminated with herbicide

treatment, they may be replaced by other weeds, not by native plant species.

Invasive plant species, also called noxious weeds, are one of the greatest modern threats to biodiversity on earth. Noxious weeds cause harm because they displace native plants, resulting in a loss of diversity and a change in the structure of a plant community. By re- moving native vegetative cover, invasive plants like knapweed may increase sediment yield and surface runoff in an ecosystem. As well knapweed may alter organic matter dis- tribution and nutrient through a greater ability to uptake phosphorus over some native species in grasslands. Weed colonization can alter fire behavior by increasing flammability: for example, cheatgrass, a widespread noxious weed on the Forest, cures early and leads to more frequent burning. Weed colonization can also deplete soil nutrients and change the physical structure of soils.

The Forest Service's own management activities are largely responsible for noxious weed infestations; in particular, logging, pre- scribed burns, and road construction and use create a risk of weed infestations. The introduction of logging equipment into the Forest creates and exacerbates noxious weed infestations. The removal of trees through logging can also facilitate the establishment of noxious weed infestations be- cause of soil disturbance and the reduction of canopy closure In general, noxious weeds occur in old clearcuts and forest openings, but are rare in mature and old growth forests. Roads are of- ten the first place new invader weeds are introduced. Vehicle traffic and soil disturbances from road construction and maintenance create ideal establishment conditions for weeds. Roads also provide obvious dispersal corridors. Roadsides throughout the project area are infested with noxious weeds. Once established along roadsides, invasive plants will likely spread into adjacent grass- lands and forest openings.

Prescribed burning activities within the analysis area would likely cumulatively con- tribute to increases to noxious weed distribution and populations. As a disturbance process, fire has the potential to greatly exacerbate infestations of certain noxious weed species, depending on burn severity and habitat type (Fire Effects Information System 2004). Soil disturbance, such as that resulting from low and moderate burn severities from prescribed fire and fire suppression related disturbances (dozer lines, drop spots, etc.), provide optimum conditions for noxious weed invasion. Dry site vegetation types and road corridors are extremely vulnerable, especially where recent ground disturbance (timber management, road construction) has occurred. Units proposed for burning within project area may have closed forest service access roads (jammers) located within units. These units have the highest potential for noxious weed infestation and exacerbation through fire activities. Please provide an alternative that

eliminates units that have noxious weeds present on roads within units from fire management proposals.

Please address the ecological, social and ascetic impact of current noxious weed infestations within the project area. Include an analysis of the impact of the actions proposed by this project on the long and short term spread of current and new noxious weed infestations. What treatment methods will be used to address growing noxious weed problems? What noxious weeds are currently and historically found within the project area? Please include a map of current noxious weed infestations which includes knapweed, Saint Johnswort, cheat grass, bull thistle, Canada thistle, hawkweed, hound's- tongue, oxeye daisy and all other Category 1, Category 2 and Category 3 weeds classified as noxious in the MONTANA COUNTY NOXIOUS

WEED LIST. State-listed Category 2 noxious weed species yellow and orange hawkweeds are recently established (within the last 5 to 10 years) in Montana and are rapidly expand- ing in es-

tablished areas. They can invade undisturbed areas where native plant communities are intact. These species can persist in shaded conditions and of- ten grow under- neath shrubs making eradication very difficult. Their stoloniferous (growing at the surface or below ground) habit can create dense mats that can persist and spread to densities of 3500 plants per square mile (Thomas and Dale 1975). Are yellow and orange hawk- weeds present within the project area?

Please address the cumulative, direct and in- direct effects of the proposed project on weed introduction, spread and persistence that includes how weed infestations have been and will be influenced by the following management actions: road construction including new permanent and temporary roads and skid trails proposed within this project; opening and decommissioning of roads represented on forest service maps; ground disturbance and traffic on forest service template roads, min- ing access routes, and private roads; removal of trees through commercial

and pre-commercial logging and understory thinning; and prescribed burns. What open, gated, and de-commissioned Forest Service roads within the project area proposed as haul routes have existent noxious weed populations and what methods will be used to assure that noxious weeds are not spread into the proposed action units?

Noxious weeds are not eradicated with single herbicide treatments. A onetime application may kill an individual plant but dormant seeds in the ground can still sprout after herbicide treatment. Thus, herbicides must be used on consistent, repetitive schedules to be effective.

What commitment to a long-term, consistent strategy of ap- plication is being proposed for each weed infested area wi- thin the proposed action area? What long term monitoring of weed populations is proposed?

When areas treated with herbicides are re- seeded on national forest land, they are usually reseeded with exotic grasses, not native plant species. What native plant restoration activities will be implemented in areas disturbed by the actions proposed in this project? Will disturbed areas including road corridors, skid trails, and burn units be planted or reseeded with native plant species?

The scientific and managerial consensus is that prevention is the most effective way to manage noxious weeds. The Forest

Service concedes that preventing the introduction of weeds into un-infested areas is "the most critical component of a weed management program." The Forest Service's national management strategy for noxious weeds also recommends "develop[ing] and implement[ing] forest plan standards . . . ." and recognizes that the cheapest and most effective solution is prevention. Which units within the project area currently have no noxious weed populations within their boundaries? What minimum standards

are in the Flathead National Forest Plan to address noxious weed infestations? Please include an alternative in the DEIS that includes land management standards that will prevent new weed infestations by addressing the causes of weed infestation. The failure to include preventive standards violates NFMA because the Forest Service is not ensuring the protection of soils and native plant communities. Additionally, the omission of an EIS alternative that includes preventive measures would violate NEPA because the Forest Ser- vice would fail to consider a reasonable alter- native.

Rare Plants

The ESA requires that the Forest Service con- serve endangered and threatened species of plants as well as animals. In addition to plants protected under the ESA, the Forest Service identifies species for which population viability is a concern as "sensitive species" designated by the Regional Forester (FSM 2670.44). The response of each of the sensitive plant species to manage-

ment activity varies by species, and in some cases, is not fully known. Local native vegetation has evolved with and is adapted to the climate, soils, and natural processes such as fire, in- sect and disease infestations, and windthrow. Any management or lack of management that causes these natural processes to be altered may have impacts on native vegetation, including threatened and sensitive plants. Herbicide application – intended to eradicate invasive plants – also results in a loss of native plant diversity because herbicides kill native plants as well as invasive plants.

Not all ecosystems or all Rocky Mountain landscapes have experienced the impacts of fire exclusion. In some wilderness areas, where in recent decades natural fires have been allowed to burn, there have not been major shifts in vegetation composition and structure (Keane et al. 2002). In some alpine ecosystems,

fire was never an important eco- logical factor. In some upper subalpine ecosystems, fires were important, but their rate of occurrence was too low to have been significantly altered by the relatively short period of fire suppression (Keane et al. 2002).

For example, the last 70 to 80 years of fire suppression have not had much influence on subalpine landscapes with fire intervals of 200 to several hundred years (Romme and Despain).

Consequently, it is unlikely that fire exclusion has yet to significantly alter stand conditions or forest health within Rocky Mountain sub- alpine ecosystems.

Whitebark pine seedlings, saplings and mature trees, present in subalpine forests proposed for burning, would experience mortality from project activity. Whitebark pine is fire intolerant (thin bark). Fire favors whitebark pine regeneration (through canopy opening and reducing competing vegetation) only in the pres-

ence of adequate seed source and dispersal mechanisms (Clarks Nutcracker or humans planting white- bark pine seedlings).

White pine blister rust, an introduced disease, has caused rapid mortality of whitebark pine over the last 30 to 60 years. Keane and Arno (1993) reported that 42 percent of whitebark pine in western Montana had died in the previous 20 years with 89 percent of remaining trees being infected with blister rust. The ability of whitebark pine to reproduce naturally is strongly affected by blister rust infection; the rust kills branches in the upper cone bearing crown, effectively ending seed production.

What surveys have been conducted to determine presence and abundance of whitebark pine re-generation? If whitebark pine seedlings and saplings are present, what measures will be taken to protect them? Please include an alternative that excludes burning in the presence of whitebark pine regeneration (consider 'Daylighting' seedlings and saplings as an alternative restoration method). Will restoration efforts include planting whitebark

pine? Will planted seedling be of rust-resistant stock? Is rust resistant stock available? Would enough seedlings be planted to replace whitebark pine lost to fire activities? Have white pine blister rust surveys been accompli- shed? What is the severity of white pine blister rust in proposed action areas?

Montana is currently experiencing a mountain pine beetle epidemic. Mountain pine beetle prefer large, older whitebark pine, which are the major cone producers. In some areas the few remaining whitebark that show the potential for blister rust resistance are being at- tacked and killed by mountain pine beetles, thus accelerating the loss of key mature cone- bearing trees.

Whitebark pine seedlings and saplings are very likely present in the subalpine forests proposed for burning and logging. In the absence of fire, this naturally occurring white- bark pine regeneration would continue to function as an important part of the subalpine ecosystem. Since 2005, rust resistant seed sources have been identified in the Northern Rockies (Mahalovich et al

2006). Due to the severity of blister rust infection within the region, natural whitebark pine regeneration in the project area is prospective rust resistant stock.

Although prescribed burning can be useful to reduce areas of high-density subalpine fir and spruce and can create favorable ecological conditions for whitebark pine regeneration and growth, in the absence of sufficient seed source for natural regeneration maintaining the viability and function of whitebark pine would not be achieved through burning.

Does the Flathead N.F. have any forest plan biological assessment, biological opinion, incidental take statement, and management direction amendment for whitebark pine?

Planting of rust-resistant seedlings would likely not be sufficient to replace whitebark pine lost to fire activities.

What surveys have been conducted to determine presence and abundance of whitebark pine regeneration? If whitebark pine

seedlings and saplings are present, what measures will be taken to protect them? Please include an alternative that excludes burning in the presence of whitebark pine regeneration (consider 'Daylighting' seedlings and saplings as an alternative restoration method). Will restoration efforts include planting whitebark pine? Will planted seedling be of rust- resistant stock? Is rust resistant stock available? Would enough seedlings be planted to replace whitebark pine lost to fire activities? Have white pine blister rust surveys been accomplished? What is the severity of white pine blister rust in proposed action areas?

For whitebark pine, spring or fall burning may kill seedlings susceptible to fire. For mature whitebark pine trees, the bark is relatively thin compared to other species such as ponderosa pine and susceptible to scorching from fire. Fires that approach the tree trunks may scorch the bark, diminishing the bark's protective properties from other stressors. Depending on the fireline intensity and residence time of lethal temperatures, the heat from the fire may also penetrate the bark, killing the underlying cambium layer. Harm to the bark and cambium may reduce individual treevigor and also increase susceptibility to infections such as white pine blister rust or infestations by the mountain pine beetle.Whitebark pine seed banks and fine roots may also be

impacted should fire move through an area when fuels and soil moisture is conducive to longer residence time of lethal temperatures. Seeds are buried by Clark's nutcrackers generally within one inch of the soil surface and may be susceptible to longer residence time of lethal temperatures. Fine roots located near the soil surface serve as the primary water absorbing roots for trees and may be harmed or killed with longer residence times of lethal temperatures when soil moisture is low which would lead to an increase in the penetration depth of lethal temperatures. In general, the proposed prescription would attempt to achieve a low severity surface fire in which shrubs, needle cast and upper duff layers would be consumed. In some instances, including dense stands in which commercial or non-commercial thinning is not feasible, higher severity fire effects may be preferred to achieve the desired condition for those forested stands.In the long term, broadcast burning in the vicinity of living whitebark pine stands may improve the habitat suitability for seed caching by Clark's nutcracker; seed germination; and whitebark pine seedling establishment. Clark's nutcrackers prefer to cache seeds in recently burned areas as fire removes understory plants and creates soils surfaces that are easier to penetrate for seed caching. In addition, in the long term, broadcast burning may reduce the vigor of other species that would compete with whitebark pine seedlings for sunlight, soil water, and nutrients."

Whitebark pine are now a proposed species and the project is in violation of the ESA. This is new information that was not available at the time comments were accepted by the BNF on this project.

On December 2, 2020, the U.S. Fish and Wildlife Service issued a rule proposing to list whitebark pine (Pinus albicaulis) under the Endangered Species Act. The Sage Hen Project area includes whitebark pine. The whitebark pine present in the project area represents a major source within the larger geographic area. The Project proposes tree cutting and burning across thousands of acres where whitebark pine may be present. Regardless of whether individual activities are intended to impact whitebark pine, whitebark pine may be affected by damage from equipment and equipment trails, cutting, soil compaction and disturbance, mortality from prescribed burning, scorching from jackpot burning, trampling of seedlings and saplings, and removal of necessary microclimates and nursery trees needed for sapling survival. Additionally, hundreds of acres of whitebark pine habitat manipulation are proposed for the Project, including intentionally cutting and burning Whitebark pine trees. No discussion on the success rate of natural regeneration under these conditions is provided. No discussion of the success rate of planting seedlings in clearcuts is provided.

The Forest Service admits that whitebark pine is known to be present in the area and that the Project "may impact individuals. . . ." The Forest Service further admits: "some adverse impacts are possible." The Forest Service further admits that "implementation of the project may cause incidental loss of whitebark pine seedlings and saplings . . . ." Crucially, the Forest Service does not disclose or address the results of its only long-term study on the effects of tree cutting and burning on whitebark pine. This study, named "Restoring

Whitebark Pine Ecosystems," included prescribed fire, thinning, selection cuttings, and fuel enhancement cuttings on multiple different sites. The results were that "[a]s with all the other study results, there was very little whitebark pine regeneration observed on these plots." See U.S. Forest
Service, General Technical Report RMRS-GTR-232 (January 2010). More specifically: "the whitebark pine regeneration that was expected to result from this [seed] caching [in new openings] has not yet materialized. Nearly all sites contain very few or no whitebark pine seedlings." Thus, even ten years after cutting and burning, regeneration was "marginal." Moreover, as the Forest Service notes on its website: "All burn treatments resulted in high mortality in both whitebark pine and subalpine fir (over 40%)." Accordingly, the only proven method of restoration of whitebark pine is planting: "Manual planting of whitebark pine seedlings is required to adequately restore these sites."

Please find attached "Restoring Whitebark Pine Ecosystems in the Face of Climate Change
Robert E. Keane, Lisa M. Holsinger, Mary F. Mahalovich, and Diana F. Tomback" and "Restoring Whitebark Pine Forests of the Northern Rocky Mountains, USA Robert E. Keane and Russell a. Parsons."

Please formally consult with he FWS on the impact of this project on lynx, lynx critical habitat, bull trout, bull trout critical habitat, and grizzly bears.

Please disclose if the project is meeting:

(1) Forest Plan Standard 3 - Hiding Cover,

(2) Forest Plan Standard 3 - Thermal Cover,

(3) Forest Plan Standard 4a - Open Road

Density & Hiding Cover,

(4) Habitat Effectiveness,

(5) Hillis Elk Security at Elk Herd Unit level (i.e., including all lands), and

(6) Hillis-derived Elk Security at Elk Analysis Unit level (i.e., lands within National Forest boundary).

MT FWP has informed the Forest Service that total number of elk is not a correct measure of whether or not adequate secure big game habitat is available on Forest Service lands: "This is inappropriate because the correct measures of big game security are annual bull survival rates and the degree to which big game are retained on public land during the fall hunting season."

Please disclose or address the displacement of elk from public land to private land during hunting season due to inadequate security habitat on National Forests.

FWP recommends that land managers provide enough secure habitat during fall to meet annual bull survival objectives while maintaining general bull harvest opportunity. . . .

In contrast, the number of elk that spend the majority of the year on some nearby private lands has increased dramatically between 1986 and 2013.

Has MT FWP urged the Flathead National Forestto increase functional fall habitat security on the Tally Lake Ranger District?

Please demonstrated compliance with the Montana Elk-Logging Study Recommendation for Road Management. The Road Management requirement states: “Where maintenance of elk habitat quality and security is an important consideration, open road densities should be held to a low level, and every open road should be carefully evaluated to determine the possible consequences for elk.” To not do so is a violation of NEPA,NFMA, and the APA.

Are you planning on issuing any amendments to the Forest Plan for this project. If so what?

Montana FWP has indicated that there is a serious problem with elk being displaced from insecure National Forest lands onto private land during hunting season. Repeatedly exempting logging and roading projects from the only quantitative limits on logging and roading on this National Forest exacerbates this elk displacement problem and (a) results in a failure to comply with Forest Plan objectives and goals to maintain elk habitat andhunter opportunity, (b) results in a major change to standards and guidelines intended to maintain elk habitat and hunter opportunity, (c)significantly limits hunter opportunity on this For-

est, and (d) affects a large portion of this National Forest that is reasonably available to the public for hunting.

For these reasons, the Forest Service's practice of routinely exempting projects from Standards 3 and 4a amounts to a significant change to the Forest Plan, which requires analysis under 36 C.F.R. §219.10 (f) and 36 C.F.R. §219.12.

Will the Round Star project log aspen stands? If so, will the project also provide protection for aspen stands from livestock browsing.

The agency is violating the NEPA by promoting fuel reduction projects as protection of the public from fire, when this is actually a very unlikely event; the probability of a given fuel break to actually have a fire in it before the fuels reduction benefits are lost with conifer regeneration are extremely remote; forest drying and increased wind speeds in thinned forests may increase, not reduce, the risk of fire.

The agency is violating the NEPA by providing false reasons for logging to the public by claiming that insects and disease in forest stands are detrimental to the forest by reducing stand vigor (health) and increasing fire risk. There is no cur- rent science that demonstrates that insects and disease are bad for wildlife, including dwarf mistletoe, or that these increase the risk of fire once red needles have fallen.

The agency is violating the NEPA by claiming that logging is needed to create a diversity of stand structures and age classes; this is just agency rhetoric to conceal the real purpose of logging to the public.

The agency is violating the NEPA by using vague, unmeasureable terms to rationalize the proposed logging to the public. How can the public measure "resiliency?" What are the specific criteria used to define resiliency, and what are the ratings for each proposed logging unit before and after treatment? How is the risk of fire as affected by the project being measured so that the public can understand whether or not this will be effective? How is forest health to be measured so that the public can see that this is a valid management strategy? What specifically constitutes a diversity of age classes, how is this to be measured, and how are proposed changes measured as per diversity? How are diversity measures related to wildlife (why is diversity needed for what species)? If the reasons for logging cannot be clearly

identified and measured for the public, the agency is not meeting the NEPA requirements for transparency.

The agency will violate the Forest Plan by logging riparian areas; almost all wildlife species will be harmed by this treatment.

The agency will violate the NFMA by failing to ensure that old growth forests are well-distributed across the landscape with a Forest Plan amendment; although not provided in the scoping document for public comment, the agency is amending the Forest Plan to allow logging of old growth rather than preserving it.

Please include an easily understandable accounting of all costs for the various types of treatments, including burning. For commercial logging, fuels reduction, and prescribed burning, we would like to know what the estimated cost is "per acre" for that particular treatment. We would also like to know the costs for construction of new temporary roads, reconstruction of existing

roads, and road obliteration and/or decommissioning per mile of road.

THE AGENCIES MUST REINITIATE

CONSULTATION ON THE NORTHERN ROCKIES LYNX MANAGEMENT DIRECTION.

The Northern Rockies Lynx Management Direction is inadequate to ensure conservation and recovery of lynx. The amendments fail to use the best available science on necessary lynx habitat elements, including but not limited to, failing to include standards that protect key winter habitat.

The Endangered Species Act requires the FS to insure that the GRLA project is not likely to result in the destruction or adverse modification of critical habitat. 16 U.S.C. §1536(a) (2). Activities that may destroy or adversely modify critical habitat are those that alter the physical and biological features to an extent that appreciably reduces the conservation value of critical habi-

tat for lynx. 74 Fed. Reg. 8644. The Northern Rockies Lynx Management Direction (NRLMD) as applied in the project violates the ESA by failing to use the best available science to insure no adverse

modification of critical habitat. The NRLMD carves out exemptions from Veg Standards

S1, S2, S5, and S6. In particular, fuel treatment projects may occur in the WUI even though they will not meet standards Veg S1, S2, S5, or S6, provided they do not occur on more than 6% of lynx habitat on each Nation- al Forest. Allowing the agency to destroy or adversely modify any lynx critical habitat has the potential to appreciably reduce the conservation value of such habitat. The agency cannot simply set a cap at 6% forest-wide without looking at the individual characteristics of each LAU to determine whether the project has the potential to appreciably reduce the conservation value. The ESA requires the use of the best available science at the site-specific level. It does not allow

the agencies to make a gross determination that al- lowing lynx critical habitat to be destroyed forest-wide while not appreciably reduce the conservation value.

The FS violated NEPA by applying the above-mentioned exception without analyzing the impacts to lynx in the individual LAUs. The Project violates the NFMA by failing to insure the viability of lynx. Ac- cording to the 1982 NFMA regulations, fish and wildlife must be managed to maintain vi- able populations of Canada lynx in the planning area. 36 C.F.R. 219.19. The FS has not shown that lynx will be well distributed in the planning area. The FS has not addressed how the project's adverse modification of denning and foraging habitat will impact distribution. This is important because the agency readily admits that the LAUs already contain a "relatively large percentage of unsuitable habitat."

The national forests subject to this new direction will provide habitat to maintain a viable

population of lynx in the northern Rockies by maintaining the current distribution of occupied lynx habitat, and maintaining or enhancing the quality of that habitat.

The FS cannot insure species viability here without addressing the impacts to the already low amount of suitable habitat. By cutting in denning and foraging habitat, the agency will not be "maintaining or enhancing the quality of the habitat."

This project is in Canada lynx habitat. In order to meet the requirements of the FS/USFWS Conservation Agreement, the FS agreed to insure that all project activities are consistent with the Lynx Conservation Assessment and Strategy (LCAS) and the requirements of protecting lynx critical habitat. The FS did not do so with its project analysis. This project will adversely affect lynx critical habitat in violation of the Endangered Species Act. The BA/BE needs to be rewritten to reflect this information to determine if this project will adversely modify proposed critical habitat for lynx and if so conference with USFWS.

The Flathead National Forest (FNF) is home to the Canada lynx, listed as a Threatened species under the Endangered Species Act (ESA). In December 1999, the Forest Service and Bureau of Land Management completed their "Biological Assessment Of The Effects Of National Forest Land And Resource Management Plans And Bureau Of Land Management Land Use Plans On Canada Lynx" (Programmatic Lynx BA). The Programmatic Lynx BA concluded that the cur- rent programmatic land management plans "may affect, and are likely to adversely affect, the subject population of Canada lynx."

The Lynx BA team recommended amending or revising Forest Plans to incorporate conservation measures that would reduce or eliminate the identified adverse effects on lynx. The Programmatic Lynx BA's determination means that Forest Plan implementation is a "taking" of lynx, and makes Section 7 formal consultation on the Flathead Forest Plan mandatory, before actions such as the proposed project are approved.

Continued implementation of the Forest Plan constitutes a "taking" of the lynx. Such taking can only be authorized with an incidental take statement, issued as part of a Biological Opinion (B.O.) during of Section 7 consultation. The Flathead National Forest must incorporate terms and conditions from a programmatic B.O. into a Forest Plan amendment or revision before projects affecting lynx habitat, such as this one, can be authorized.

The Programmatic Lynx BA's "likely to adversely affect" conclusion was based upon the following rationale. Plans within the Northern Rockies:

• Generally direct an aggressive fire suppression strategy within developmental land allocations. ...this strategy may be contributing to a risk of adversely affecting the lynx by limiting the availability of foraging habitat within these areas.

• Allow levels of human access via forest roads that may pre- sent a risk of incidental trapping or shooting of lynx or access by other competing carnivores. The risk of road-related adverse ef- fects is primarily a winter season issue.

• Are weak in providing guidance for new or existing recreation developments. There- fore, these activities may contribute to a risk of ad- verse effects to lynx.

• Allow both mechanized and non-mechanized recreation that may contribute to a risk of adverse effects to lynx. The potential effects occur by allowing compacted snow trails and plowed roads which may facilitate the movements of lynx competitors and predators.

• Provide weak direction for maintaining habitat connectivity within naturally or artificially fragmented landscapes. Plans within all geographic areas lack direction for coordinating con- struction of highways and other movement barriers with other

responsible agencies. These factors may be contributing to a risk of adverse effects to lynx.

• Are weak in providing direction for coordinating management activities with adjacent landowners and other agencies to assure consistent management of lynx habitat across the landscape. This may contribute to a risk of adverse effects to lynx.

• Fail to provide direction for monitoring of lynx, snowshoe hares, and their habitats. While failure to monitor does not directly result in adverse effects, it makes the detection and assessment of adverse effects from other management activities difficult or impossible to attain.

• Forest management has resulted in a reduction of the area in which natural ecological processes were historically allowed to operate, thereby increasing the area potentially affected by known risk factors to lynx. The Plans have continued this trend.

The Plans have also continued the process of fragmenting habi-tat and

reducing its quality and quantity. Consequently, plans may risk adversely affect- ing lynx by potentially contributing to a reduc-tion in the geographic range of the species.

• The BA team recommends amending or revising the Plans to incorporate conservation measures that would reduce or elimi-nate the identified adverse effects to lynx. The programmatic conservation measures listed in the Canada Lynx Con- servation Assessment and Strategy (LCAS) should be considered in this regard, once finalized. (Programmatic Lynx BA, at 4.)

The Programmatic Lynx BA notes that the LCAS identifies the following risk fac-tors to lynx in this geographic area:

- Timber harvest and pre-commercial thinning that reduce denning or foraging habitat or converts habitat to less de-

sirable tree species

- Fire exclusion that changes the vegetation mosaic maintained by natural disturbance processes

- Grazing by domestic livestock that reduces forage for lynx prey

How many road closure violations have been found in the Tally Lake Ranger District in the last 5 years?

In Case 9:19-cv-0056-DWM the United States District Court for the District of Montana ruled on 6/24/21 that the Flathead Forest Plan was illegal because the Fish and Wildlife Service violated the ESA by not considering the impacts of ineffective road closures in its 2017 BiOp. The court also ruled that the FWS violated the ESA by using a flawed incidental take statement for grizzly bears and the core density standards and secure core habitat surrogate violate the ESA.

It is fair to assume that there are many more violations that regularly occur and are not witnessed and reported. It is also fair to assume that you have made no effort to request this available information from your own law enforcement officers, much less incorporate it into your analysis. Considering your own admissions that road density is the primary factor that degrades elk and grizzly habitat, this is a material and significant omission from your analysis– all of your ORD and HE calculations are wrong without this information.

The veracity of the FS's inventory of system and nonsystem ("undetermined" or "unauthorized") roads is at issue here also. This is partly because the FS basically turns a blind eye to the situation with insufficient commitment to monitoring, and also because violations are not always remedied in a timely manner.

The Round Star project would violate the Forest Plan/Access standards, a violation of NFMA because of road closure violations.

Please disclose how many years the existing core ares have provided the habitat benefits assumed under the Forest Plan. As pointed out, some has been lost (due to "private infrastructure development") and we're not told of other likely and forseeable reductions.

Please take a hard look as road closure violations.

Additionally, your emphasis on elk populations across entire hunting districts is disingenuous and has little relevance to whether you are meeting your Forest Plan obligations to maintain sufficient elk habitat onNational

Forest lands. As you note, the Forest Plan estimated that 70% of elk were taken on National Forest lands in 1986. What percentage of elk are currently taken on National Forest lands?

Have you asked Montana FWP for this information? Any honest biologist would admit that high elk population numbers do not indicate that you are appropriately managing National Forest elk habitat; to the contrary, high elk numbers indicate that you are so poorly managing elk habitat on National Forest lands that elk are being displaced to private lands where hunting is limited or prohibited. Your own Forest Service guidance document, Christensen et al 1993 states: "Reducing habitat effectiveness should never be considered as a means of controlling elk populations."

What is the existing condition of linear motorized route density on National Forest System lands in the action area and what would it increase to during implementation.

Do your open road density calculations include the "non-system" i.e. illegal roads in the Project area?

Do your open road density calculations include all of the recurring illegal road use documented in your own law enforcement incident reports?

Has the FNF closed or obliterated all roads that were promised to be closed or obliterated in the your Travel Plans in the Tally Lake Ranger District? Or, are you still waiting for funds to close or obliterate those roads? This distinction matters because you cannot honestly claim that you are meeting road density standards promised by the Travel Plan if you have not yet completed the road closures/obliterations promised by the Travel Plan. Furthermore, as noted above, you have a major problem with recurring, chronic violations of the road closures created by the Travel Plan, which means that your assumptions in the Travel Plan that all closures would be effective has proven false. For this reason, you cannot tier to the analysis in the Travel Plan because it is invalid. You must either complete new NEPA analysis for the Travel Plan on this issue or provide that new analysis in the NEPA analysis for this Project. Either way, you must update your open road density calculations to include all roads receiving illegal use.

Christensen et al (1993) states: “Any motorized vehicle use on roads will reduce habitat effectiveness. Recognize and deal with all forms of motorized vehicles and all uses, including administrative use.” Please disclose this to the public and stop representing that roads closed to thepublic should not be included in habitat effectiveness calculations. The facts that (a) you are constructing or reconstructing over 40 miles of road for this project, (b) you have problems with recurring illegal use, and (c) youalready admit that you found another 25 miles of illegal roads in the project area that you have not committed to obliterating, means that your conclusion that this Project will have no effect on open road density or habitat effectiveness is implausible to the point of being disingenuous. You cannot exclude these roads simply because you say they are closed to the public. Every road receiving motorized use must be included in the HE calculation. You must consider all of this road use in order to take a hard look that is fully and fairly informed regarding habitat effectiveness. In thevery least you must add in all “non-system” roads, i.e. illegal roads, as well as recurring illegal road use (violations) in your ORD calculations. Also, as a side note, your calculations in

Christensen et al 1993 finds: “Areas where habitat effectiveness is retained at lower than 50 percent must be recognized as making only minor contributions to elk management goals. If habitat effectiveness is notimportant, don't fake it. Just admit up front that elk are not a consideration.”

Will the project comply with Forest Plan Management Area C Goal states: “Maintain or enhance existing elk habitat by maximizing habitat effectiveness as a primary management objective. Emphasis will also be directed toward management of indigenous wildlife species. Commodity resource management will be practiced where it is compatible with these wildlife management objectives.” Also – MA C Standard: “Habitat effectiveness will be positively managed through road management and other necessary controls on resource activities.” Also – “Elk habitat effectiveness will be maintained.” Please demonstrate that the project will comply with all of these provisions for all of the above-stated reasons.

Do the action alternatives comply with PACFISH-INFISH?

Are you meeting the INFISH Riparian Management Objectives for temperature, pool frequency, and sediment?

The best available science shows that roads are detrimental to aquatic habitat and logging in riparian areas is not restoration.

Fish evolved with fire, they did not evolve with roads and logging.

The EA did not fully and completely analyze the impacts to bull trout and their habitat and westslope cutthroat trout habitat. What is the standard for sediment in the Forest Plan? Sediment is one of the key factors impacting water quality and fish habitat. [See USFWS 2010]

The Revised Forest Plan and the Round Star project weakens bull trout habitat protections by allowing new roadbuilding throughout the Flathead National Forest without meaningful reclamation of existing roads to compensate for the new road construction. This new management direction is a significant departure from former Forest Plan Amendment 19, which required the Forest Service to reclaim roads according to stringent requirements such that a reclaimed road would "no longer function as a road." Amendment 19 EA, app. D at 2. Importantly for bull trout, the Revised Forest Plan does not require the Forest Service to remove culverts from "impassable" roads. Moreover, while FWS's Revised Biological Opinion purports to fill the protective void created by the Revised Forest Plan's abandonment of culvert-removal requirements for closed roads, FWS's culvert- removal mandate fails to guarantee any protections for bull trout because it is geographically limited and applies only to "decommissioned" rather than "impassable" roads.

In lieu of Amendment 19's mandatory roadbuilding restrictions and reclamation requirements, the Revised Forest Plan set a hortatory guideline to limit roadbuilding and culvert installation in bull trout habitat. This hortatory guideline threatens to allow significant new roadbuilding in bull trout habitat.

New roadbuilding proposed in the Round Star project without meaningful reclamation to ensure no net increase in the road system threatens stream sedimentation that will degrade bull trout habitat. Surface runoff on roads, including roads unused by motorized vehicles, threatens to cause sediment discharge to nearby waterbodies, including bull trout streams. Culverts inevitably clog and fail, causing the affected stream to run over the roadbed with associated erosion and sedimentation. Such sedimentation threatens to degrade stream conditions and harm bull trout, which require very cold and clean water to survive and reproduce.

FWS's Biological Opinion and the Round Star EA do not acknowledge or analyze these potential impacts to bull trout in concluding that the Revised Forest Plan will not likely jeopardize bull trout or adversely modify bull trout critical habitat.

The Forest Service thus failed to rationally determine, based on a consideration of all relevant factors, whether the Revised Forest Plan's new management direction will jeopardize the survival of bull trout or adversely modify bull trout critical habitat in the Flathead. See Ctr. for Biological Diversity v. BLM, 698 F.3d at 1121.

The challenged Biological Opinion that the Round Star project relies on is therefore arbitrary, capricious, and not in accordance with law and should be set aside pursuant to the ESA and APA.

The area proposed for logging in the Sheppard and Logan watersheds has been heavily logged, burned, and then salvage logged in the recent past, it is time to give this place a rest. The results of this heavy past logging have placed Sheppard and Logan creeks on the Montana 303(d) list of impaired waters. The aquatic assessments done in 2020 concluded that these watersheds have not recovered and have not met the parameters of the Flathead-Stillwater Planning Area Nutrient, Sediment and Temperature TMDLs and Water Quality Improvement Plan 2014.

Sheppard Creek's impairments from headwaters to mouth of Griffin Creek are Alteration in stream-side or littoral vegetative covers with sources identified as Forest Roads (road construction and use) and Grazing in Riparian or Shoreline Zones. It is also impaired by Sedimentation/Siltation with sources identified as Silviculture Harvesting and Crop Production (crop land or dry land). It is not fully supporting aquatic life.

Logan Creek's impairments from headwaters to Tally Lake are Flow Regime Modification from Forest Roads (Road Construction and Use), Physical substrate habitat alterations from silviculture activities and sedimentation siltation from streambank modifications/destabilization. It is also not fully supporting aquatic life.

Rather than trim back the project and not construct new roads the EA concludes that implementation of the proposed action (or no-action alternative) individually or cumulatively would not alter the current findings for watershed condition framework and would not impair water quality beneficial uses.

The watershed condition framework rating for aquatic biota condition in Evers, Lower Logan, Middle Logan, Sheppard and Tobie Creek is poor indicating that these streams are functioning at unacceptable risk. This rating will not change post project so the project will maintain degraded habitat conditions that is impairing aquatic life. Second, water quality beneficial uses are already impaired and this project does nothing to improve them. The Forest Service is violating the Clean Water Act by maintaining degraded water quality that is impairing beneficial uses for aquatic life. It is likely that Evers and Tobie Creeks should also be on the 303(d) list since they are also functioning at unacceptable risk for aquatic biota.

Then the EA states, "emphasizing the most important factor in sediment load reduction for both Logan and Sheppard Creek may simply be time." This could possibly be true (although road decommissioning would hasten improvement) but this project builds over 20 miles of new roads with 13 new stream crossings, clearcut logs 85 acres in the RMZs (593 total logged acres in the outer and 52.1 in the inner RMZs) adding impacts and not allowing the streams to heal and improve.

The proposed action will spread weeds due to existing weed infestations, potential soil disturbance, roads, private lands, activi-

ty timing, logging, and moving equipment through infested areas. Weeds are already prolific in the project area, washing equipment doesn't work when the equipment then moves through infestations and spreads across the 8,364 acres of soil disturbed by roads and logging. The design features are inadequate and the EA discloses that even given those measures the risk of establishment is high. Only the no action alternative doesn't spread weeds.

With all the existing weed infestations and the high risk of weed proliferation there is no analysis or even discussion of how this impacts wildlife forage. Weeds are displacing native vegetation that wildlife need for food.

Connectivity for wildlife is fragmented in the project area and this project will exacerbate that situation with oversized clearcuts and more roads. This is already impacting small mammals that are prey for larger animals and birds yet there is no analysis of how this impacts wildlife foraging.

The project logs and builds roads through old growth forest habitat yet analysis of the impacts to wildlife is nil, a mere two paragraphs for goshawk.

It is time to give this area a rest. If landowners are concerned about fire then the best thing they can do is thin and manage their own property.

A new study by Dominick A. DellaSala et al. found that re-

viewed 1500 wildfires between 1984 and 2014 found that

actively managed forests had the highest level of fire severity. Please find DellaSala et al. attached. While those forests in protected areas burned, on average, had the lowest level of fire severity. In other words, the best way to reduce severe fires is to protect homes from the Home out in the Home Ignition Zone, not log forests outside the home ignition zone, therefore the purpose and need of the Round Star is not valid.

The best available science shows that Commercial Logging does not reduce the threat of Forest Fires. What best available science supports the action alternatives?

Please find Schoennagel et al (2004) attached. Schoennagel states: “we are concerned that the model of historical fire effects and 20th-century fire suppression in dry ponderosa pine forests is being applied incorrectly 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 ea- sily 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 fires 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 substantial shifts in stand structure over recent decades as a result 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 ef-

fect 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 fo- rests, fire behavior in Yellow- stone during 1988, although se- vere, was nei- ther unusual nor surprising."

Schoennagel et al (2004)(emphasis added) 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 hemlock, 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 these 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 re-generating forest . . . . natural ecological dynamics are large-ly 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 fires, 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 microcli- mate in more

open stands (fig. 9) compared to denser stands. Dense stands (canopy cover) tend to provide more shading of fuels, keeping 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 com- pared to dense canopy stands."

The Revised Forest Plan weakened grizzly bear habitat protections by allowing new roadbuilding throughout the Flathead National Forest, without meaningful and permanent reclamation of other roads elsewhere in the Forest to compensate for the new road construction. This new management direction is a significant departure from former Forest Plan Amendment 19, which required the Forest Service to reclaim roads according to strin-

gent requirements such that a reclaimed road would "no longer function as a road or trail." Amendment 19 EA, app. D at 2.

New roadbuilding in the Forest without meaningful reclamation to ensure no net increase in the road system presents a significant threat to grizzly bears, because motor vehicle users and other recreationists can trespass on the supposedly "impassable" roads and thus encroach on grizzly bear habitat. Further, even unused roads cause detrimental impacts to grizzly bear survival and reproduction, because grizzly bears are displaced from roaded habitat, regardless of whether the roads receive public or administrative use. However, in concluding that the Revised Forest Plan will not jeopardize the species, FWS's Revised Biological Opinion failed to adequately examine adverse impacts to grizzly bears from unauthorized motorized use on roads closed according to the Revised Forest Plan's weaker closure standards; failed to consider the displacement impacts caused by roads even when they do not receive motorized use; and failed to account for increased roadbuilding enabled by the Forest Service's abandonment of stringent road-reclamation requirements.

FWS thus failed to rationally determine, based on a consideration of all relevant factors, whether the Revised Forest Plan's new management direction will jeopardize the survival of grizzly bears in the Flathead. See Ctr. for Biological Diversity v. BLM, 698 F.3d at 1121.

FWS's Revised Biological Opinion is therefore arbitrary, capricious, and not in accordance with law, and should be set aside pursuant to the ESA and APA.

This Project would attempt to implement provisions of the revised Forest Plan, its FEIS and its BiOp that Judge Molloy found legally deficient. It would implement logging and thinning that is highly controversial and the results of which are highly uncertain. It would increase the size of the Forest's road system when the Forest Plan alleges that it would be held at the 2011 Baseline. It would create regeneration openings in excess of the size intended by Congress if not the limits for such openings set forth in the Forest Plan. It would conduct aggressive road building and logging in watersheds already "impaired" by these same activities. For these reasons and more, the Project and a broad range of alternatives to it must be fully analyzed in an EIS.

Sincerely yours,
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