

Paul R. Sieracki



Feb. 1, 2020

Re: Scoping Notice Comments, Chloride Gold, IPNF from the Inland Empire Task Force, Alliance for the Wild Rockies, Wild Earth Guardians and Wild Idaho Rising Tide.

Dear District Ranger Berner, Sandpoint Ranger District, Idaho Panhandle National Forests.

Introduction

This Scoping Notice makes outrageous claims that 12.5 square miles of "chainsaw medicine" - seedtree and shelterwood clearcuts, are good for our forests and the the landscape. This is not so. The touted "benefits" are not described in detail because they are detriments, not benefits. Violations of this project to NEPA and the ESA are rampant. Clearly when the three contiguous temporally overlapping EA's are considered over 1.06 million acres and a 45 mile area in addition to the overlapping Kaniksu Winter Recreation EA, NEPA is violated because the IPNF is stacking EA's, an EIS must be prepared.

We, the Public do not know what is out there.

The information presented in the Scoping Notice and proposed action is insufficient to prepare substantive comments. The scoping notice does not portray the existing condition of the various topics required to be addressed in the NEPA document, especially wildlife and old growth. The USFS has this information in specialist reports and choose not to disclose *any* information from the 2 years of field work involved during the Scoping process. There was little data presented on the occurrence of sensitive, threatened and endangered species based on fresh wildlife surveys. Even more disingenuously, the IPNF discloses this information to a small select pro-logging collaborative through their "forestry" committee omitting the general public.

Scoping needs to occur before the project is designed. Currently, an almost complete alternative is presented for comment, as in a dEA but without

supporting information, making substantive commenting difficult at best and necessitates detailed commenting. This is done on purpose to try to push the project to completion.

How can the IPNF come up with a detailed proposed alternative before public input that will be carried through to the decision EA?

NEPA and ESA violations are rampant

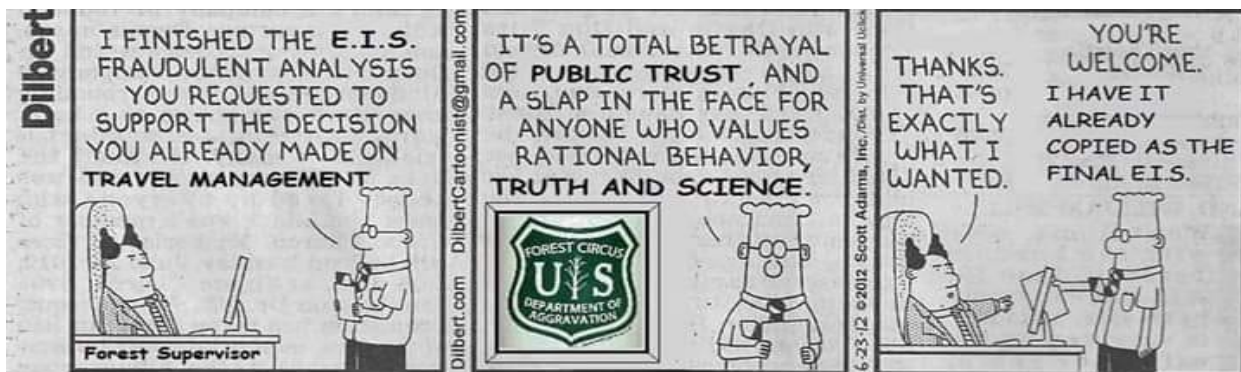
One of the many NEPA violations for this project is the fact that the Kaniksu Winter Rec EA overlaps this project and is not disclosed in the Scoping Notice. The effects of allowing over snow snowmobile and snowbike use to whitebark pine (just listed as threatened), grizzly denning habitat, ungulate winter ranges, wetlands, riparian areas, old growth and disturbance to the soundscape can be extreme during daylight winter periods. These must be analyzed in the Chloride Gold EA. The IPNF cannot ignore direct, indirect and cumulative effects from the Winter Rec EA in relation to the Chloride-Gold project area.

The Scoping Notice also failed to disclose that there is a special use permit process happening to allow guided dirt bike and atv use in the project area.

No public meetings

There have been no public meetings involving non-collaborative citizens and groups in Sandpoint for the purpose of discussing this logging project. In addition, NEPA requires a range of alternatives, the SN presents a single alternative developed by chainsaw medicine logging collaboratives. As in Buckskin-Saddle, the EA will only have one alternative maybe slightly modified from comments by the general public. This is a disservice to the community of publics interested in this project and to the environments.. Dilbert is right again.

Dilbert illustrating how the USFS pushes one alternative through the NEPA process.



Participation in public process

The commentor has attended "collaboration" meetings with the Panhandle Forest Collaborative as an observer and provided input for field trip to the project area with Wild Idaho Rising Tide. Despite claims to the contrary, the public was NOT involved in the alternative development process. The collaborative only represents logging interests and those groups that support it. There are other viewpoints of the public that must be considered however the USFS has already decided on the outcome as the proposed actions are almost never significantly modified after the Scoping Notice is put out.

For example the IPNF in an attempt to gaslight the public, erroneously claims that this project will,

"Improve habitat quality for flammulated owls, harlequin duck, elk, and other ungulates"

"Many federal lands within the Chloride-Gold project area consist of closed canopy stands, where forage for wildlife is limited. This structure shades the forest floor, limiting the growth of palatable shrubs and herbaceous species; this includes stands in all forest types, including the higher elevation subalpine stands where mule deer forage."

Logging in subalpine stands during times of abrupt climate change is unacceptable. Is forage limiting for mule deer in the Chloride-Gold project area? Please provide a detailed analysis.

Using "fisheries improvements" as a political justification for logging and roadbuilding is incredibly offensive especially since logging and roadbuilding will change the hydrologic response and add sediments to streams in bull trout critical habitat. These projects, small dam and culvert replacements can be funded by other means so that the watersheds involved do not have to be logged off. Logging off the headwaters of Declaration Creek is one example where an entire upper third of a drainage will be clearcut logged using shelterwood and seed trees as a smokescreen for clearcutting impacting the North Fork of the Coeur d'Alene River.

Lack of environmental ethics of the USFS and "big green conservation groups" through collaboration are supporting the construction of 23.8 miles of new roads

which will negatively affect grizzly bears, elk and all wildlife responsive to road densities. Additionally the SN provides no wildlife, sensitive plants, old growth and roadless expanse reports and GIS data. The USFS does this to monkey wrench attempts for substantive comments, requiring a FOIA. One can only ask the USFS to disclose the hidden information by use of FOIA and by requesting disclosure while commenting on the Scoping Notice the USFS can stall for the entire 45 day response period to delay essential information for substantive comment. How can the USFS present a SN without baseline data? Additionally, the IPNF did not disclose that there is an overlapping Winter Recreation EA with this project area. These antics are done on purpose to attempt to push projects through without sufficient environmental disclosure and review.

Stacking EA's, an example of poor environmental ethics.

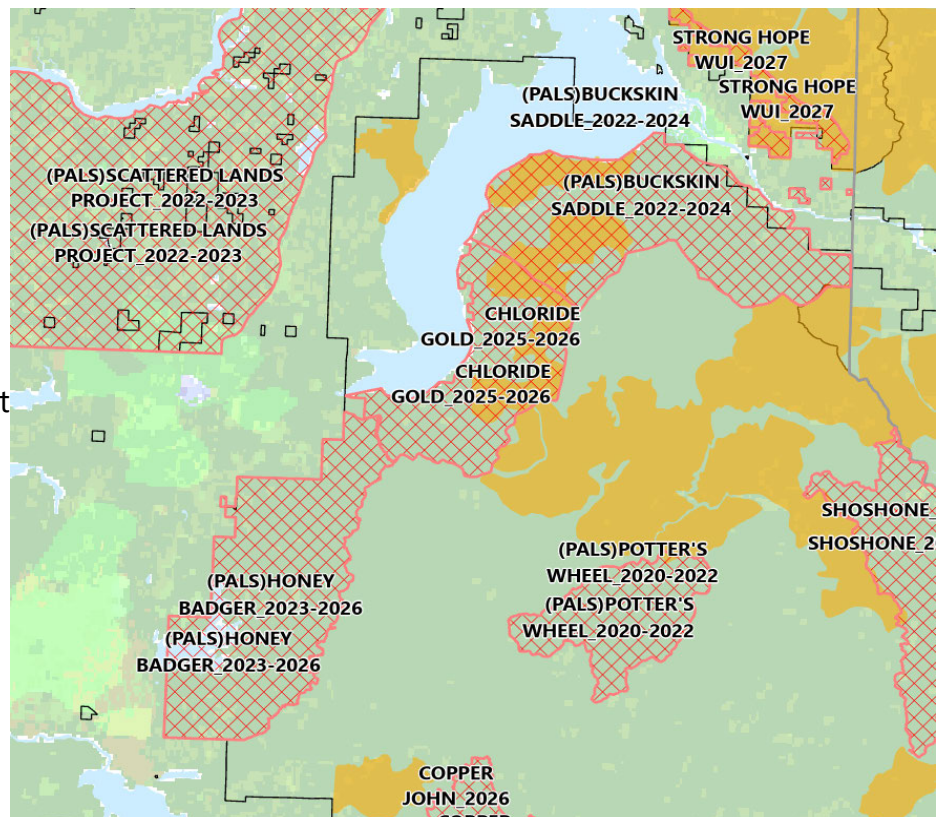
Map 1 shows the location of contiguous temporally overlapping EA's. The USFS unethically avoided having to do an EIS by completing the Buckskin-Saddle and Honey-Badger EA's first then working on Chloride-Gold. All these EA's will have active sales at curing overlapping 10-15 year time periods from the Decision Notice signing. This is a violation of NEPA. Chloride-Gold must be an EIS.

Requested Actions.

- Eliminate using logging collaboratives to support timber industry volume goals.
- Involve all interested publics from the start of the project.
- Conduct a public meeting on the SN proposed action.

Landscape

An entire 1.06 million acre, 45 mile north / south in length region will be chronically disturbed by



Map 1 shows the location of contiguous temporally overlapping EA's

roadbuilding and logging for at least 15 years possibly more due to the temporal overlap of the 4 EA's. (Including Bottom Canyon which is adjacent to Honey-Badger).

Forest habitat will be Fragmented Severely.

The roaded drainages in the project area are currently heavily fragmented by roads and logging units. Please use the best available science of fragmentation statistics for all TES species present including plants and fungi. Disclose fragmentation statistics for forest habitat in general, including fragmentation caused by roadbuilding. It takes years for a "restored" road to grow to forest and to stop functioning as a fragmentation barrier to wildlife and plants.

Requested Actions

- Please use *species specific* fragmentation statistics to analyze forest habitat fragmentation for all TES species that may occur in the project area.
- Disclose the time lag between putting a road to bed and the end of its fragmentation effects.

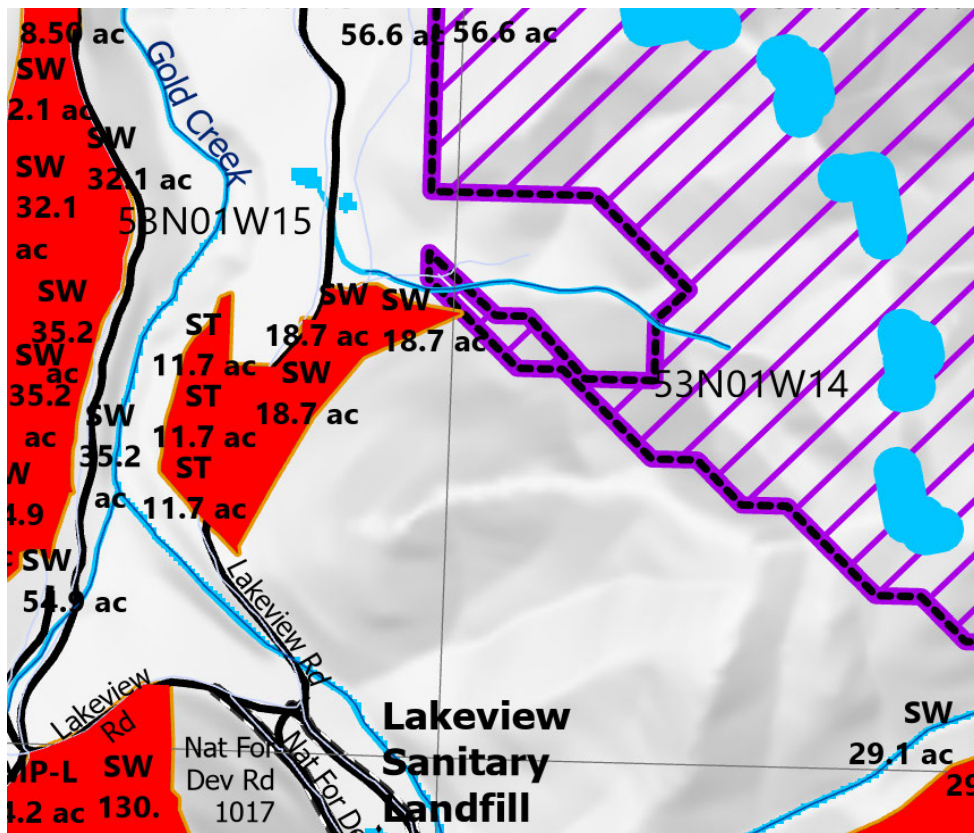
IRA's and the Roadless Expanse.

Please identify the roadless expanses adjacent to existing IRA's. These areas should be included into the poorly mapped IRA boundaries. Existing mapping is historic and needs to be updated. The jagged lines of the IRA boundaries illustrates the dated mapping. and Arbitrary and capricious IRA boundaries are sloppily done (see map below) . The value of IRA's to wildlife and humans is unquestioned by most. The revulsion that the IPNF has with marinating wilderness character and the roadless expanse is characterized by Bilodeau and McFarlane (2020),

"In conclusion, both RACR and the Idaho Roadless Rule have facilitated a gradual erosion of the roadless system. Neither rule effectively protects roadless areas from logging, but rather provides exceptions for logging and roadbuilding to various degrees, which the Forest Service is exploiting. The Forest Service's environmental analyses have shifted to justify utilizing the exceptions in an unchecked manner, and because the Forest Service does not update roadless boundaries, wildlands overlooked from the initial inventories remain unprotected while there is a growing

number of "inventoried roadless areas" that no longer have roadless and wilderness characteristics. Given these rules are not as protective as assumed, we need a substantive review of both rules and an accounting of the remaining roadless areas in the United States."
Bilodeau and McFarlane (2020).

The map below (Map 2) illustrates the incompetence of roadless area mapping which was completed historically and needs competent updating. Shown are a small peninsula of roadless area in the Packsaddle IRA and the jagged, nonsensical



Map 1 shows the location of contiguous temporally overlapping EA's not including the Kaniksu Winter Rec EA
 boundaries of the IRA (purple outline).

Please follow the guidelines in the document titled "Idaho Roadless Rule and 2001 Roadless Rule. Northern and Intermountain Region Guidance," March 2019. Brian Riggers, Roadless Coordinator. Although the guidelines for roadless expanse delineation are arbitrary, at least they are at start.

"Based on court projects on unroaded lands contiguous to Inventoried Roadless Areas (IRAs) it is recommended units analyze the environmental consequences, including irreversible

and irretrievable commitment of resources on Roadless Area Characteristics, and the effects for potential designation as wilderness under the Wilderness Act of 1964. This analysis considers the effects to the entire roadless expanse IRAs should not be considered in isolation from contiguous unroaded lands. Actions occurring in one or the other (unroaded or inventoried roadless lands) may affect the surrounding areas ability to support roadless area characteristics." Riggers, 2019.

We request that the IPNF.

- Map the roadless expanses adjacent to existing IRA's
- Adjust the boundaries of the IRA's to include the roadless expanse.
- Do no logging in the roadless expanse and IRA's.
- Disclose detailed analysis of areas that should be included in the roadless expanse and IRA's following Riggers guidelines.
 - "5. For each unroaded area adjacent to an IRA, document why the area will either be considered as part of the roadless expanse or not based on the above factors."
- Complete an IPNF Forest Plan Amendment to incorporate areas in the roadless expanse to adjacent IRA's.
- Unlogged areas not displayed. The commentor also requested that areas outside of the roadless areas that have not been logged or roaded be mapped and not entered. Unlogged and unroaded areas of any size serve as important biological reserves.

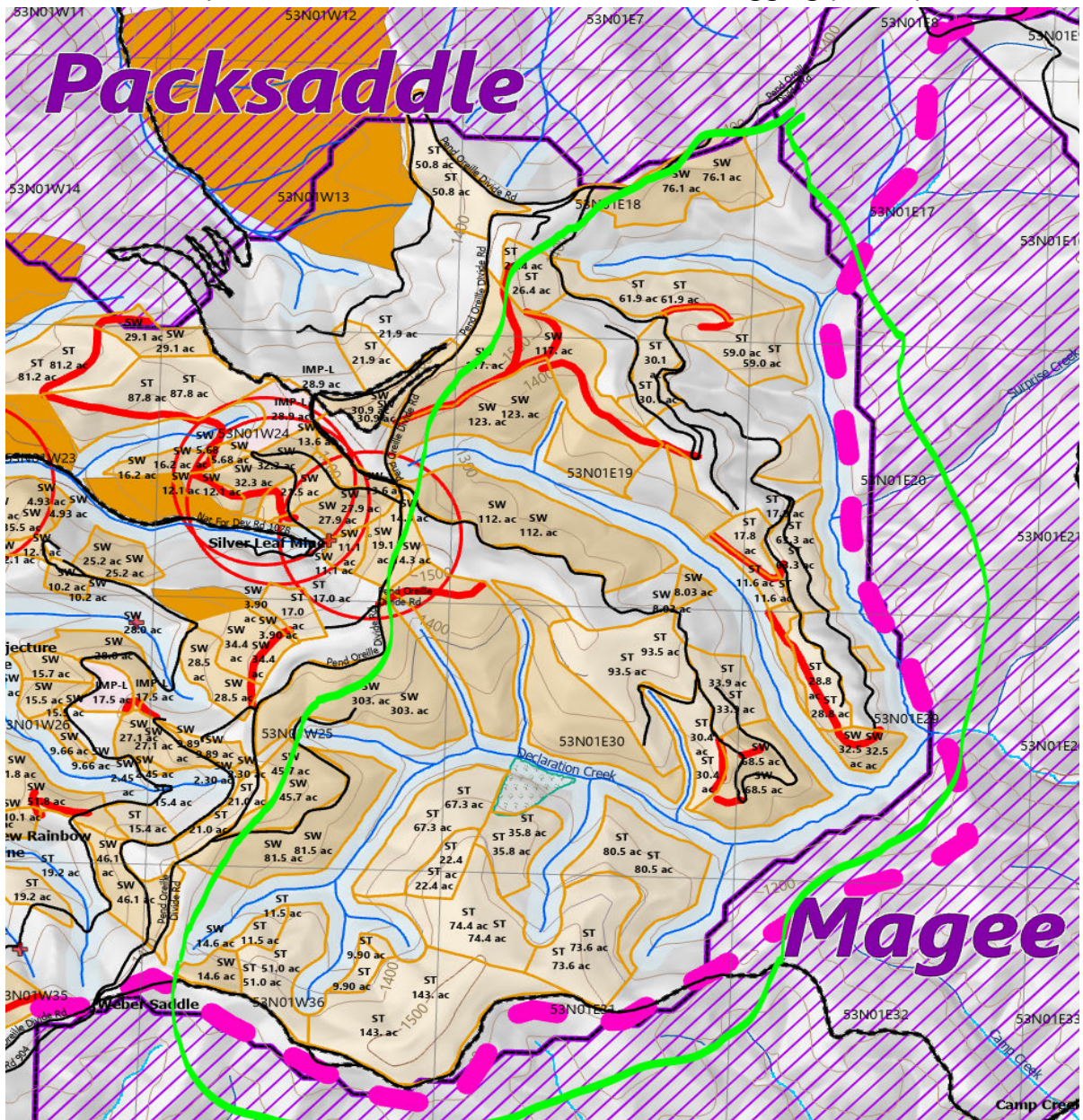
Connect and increase the size of existing roadless areas through rewilding.

As stated above please map potential roadless additions and remove roads to provide roadless connectivity between identified roadless areas. One such area is the the roaded corridor splitting the two roadless areas named

Packsaddle. Road 2238 (Map 2) should be removed along with a host of smaller roads to the NW. The area is outlined in red in the above image. This should be a first step towards a large scale rewilding project following the science in NREPA.

**Site-specific areas.
Declaration Creek.**

Especially concerning is the attempted roadbuilding and regen clearcut logging of the contiguous unroaded habitat adjacent and north of the Magee IRA in Declaration Creek which feeds into the North Fork Coeur d'Alene River, bull trout critical habitat (Map 3). We call shelterwoods and seed tree logging prescriptions



Map 3. Area to be evaluated by the IPNF for inclusion in the Magee and Packsaddle IRA. Declaration Creek flows into the N. Fk. Coeur d'Alene River, bull trout critical habitat and a prime cutthroat fishery.

clearcuts because most of the trees will be removed on the first entry and then most of the remaining trees will be removed as the plantation begins to grow leaving only a few snags and snag replacements. This deception is not disclosed in IPNF NEPA documents. The logging and skid trail scars called seed tree and shelterwoods function ecologically as a clear cut.

The inclusion of the Declaration Creek basin into the Magee IRA is based on the fact that there is substantial unroaded land adjacent to the Magee IRA (see image



Photos 1 and 2. Proposed addition to the MAGEE IRA above and ATV road entering the IRA (below).



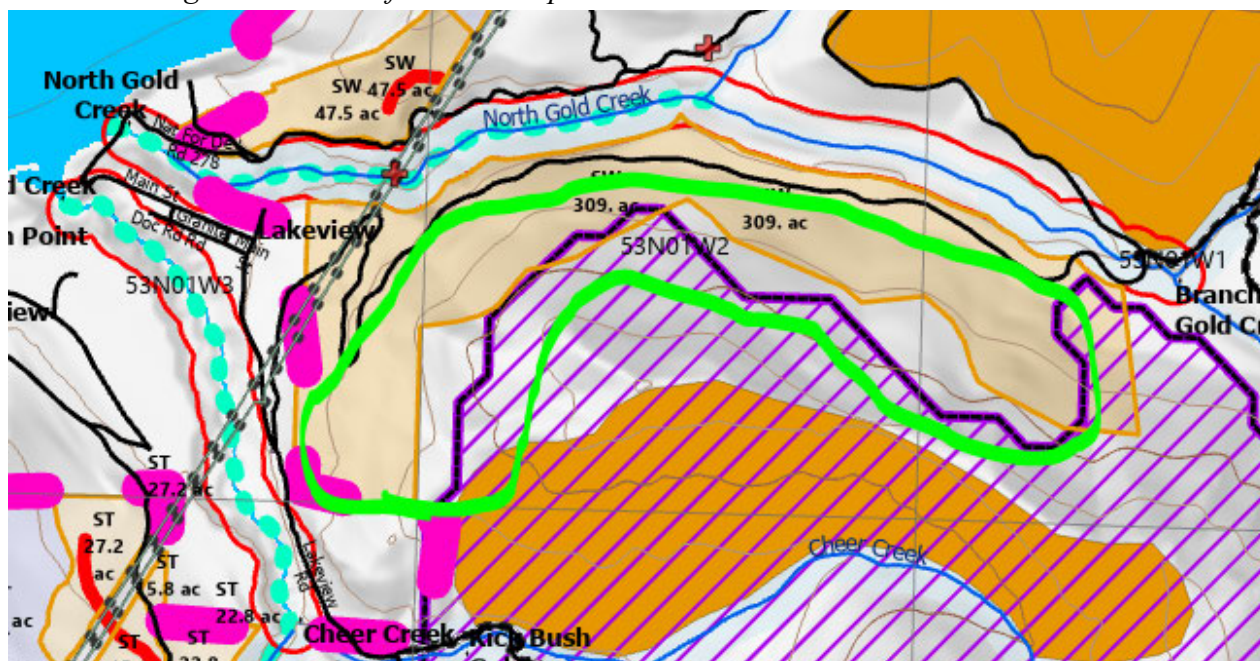
below). Deception Creek is part of the North Fork Coeur d'Alene drainage (critical bull trout habitat), and that past clearcuts on the north side of the creek are recovered. There is a motorized trail on a portion of the south edge but that does not preclude inclusion into the roadless expanse because motorized trails are acceptable in IRA's. This roadless expanse continues north east of the Pend Oreille Divide until it reaches the Packsaddle IRA (Map 3).

The commentors request that this area be included in the Magee IRA (Map 2) and that no new roads be constructed, even "temp" roads fragment habitat.

Photos 1 and 2 show a part of the Declaration Creek proposed addition to the Magee IRA looking SE from the Bunco Road and the entrance to the ATV trail that occurs in the IRA.

Other areas include the shelterwood clearcut just south of North Gold Creek and some of Gold Creek, bull trout critical habitat (Map 4). This 309!! acre logging unit is unroaded, adjacent to the Packsaddle IRA and contributes forested habitat towards the continued health of North Gold Creek. The sedimentation and change in water yield will impact this creek. This unroaded area should be added to the Packsaddle IRA and hopefully NREPA. North aspects, where most of this unit is placed, serve as fire refugia and this stand needs to be recruited to old growth.

Map 4. 309 acre shelterwood clearcut adjacent to an IRA and bull trout critical habitat. Please note that the green outlines of roadless expanse are not exact boundaries.

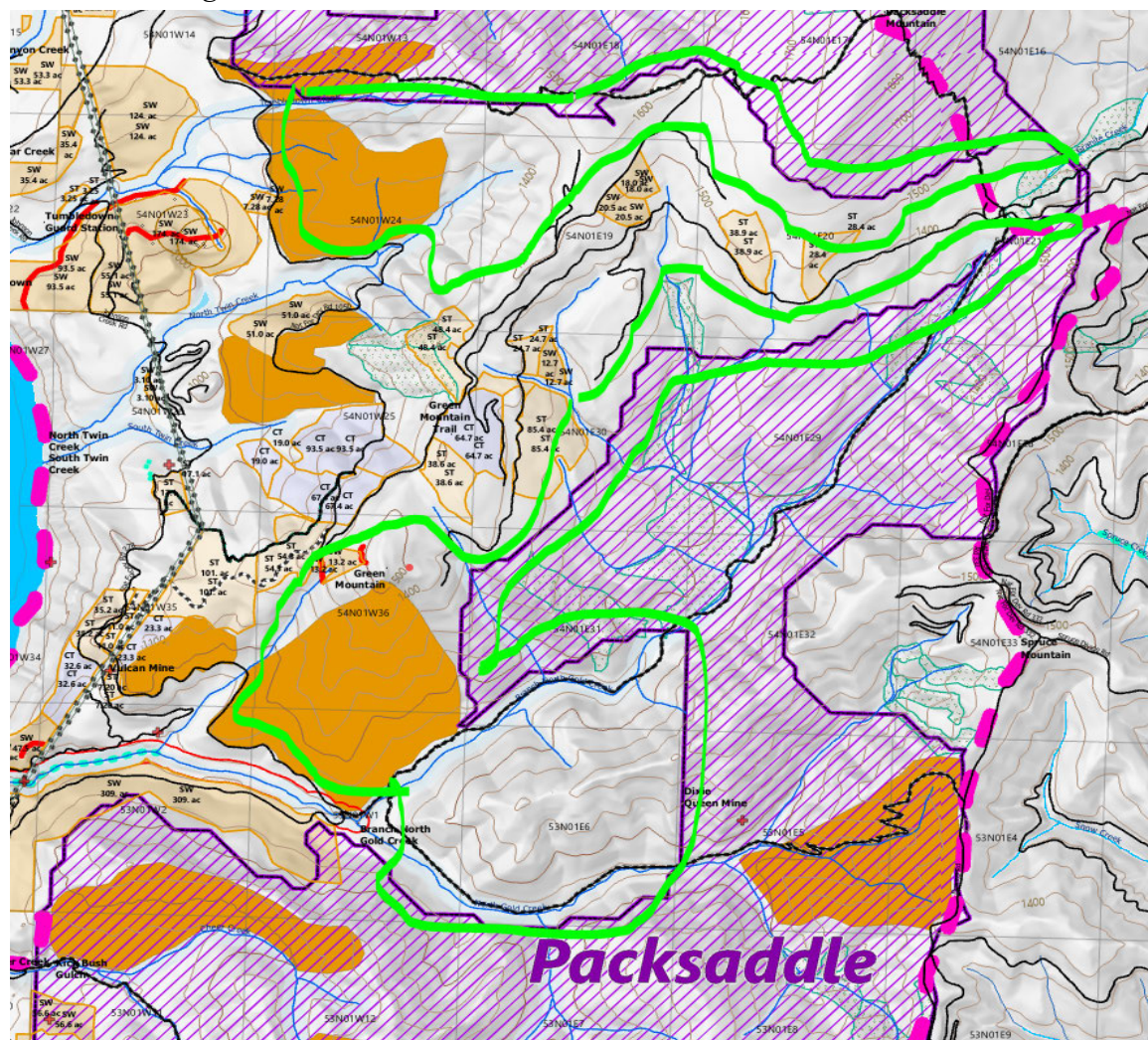


Roadless expanse also exists near Green Mountain (the site of a proposed silica mine) and North and East of Twin Creek. These areas all provide valuable attributes to the existing Packsaddle IRA. Please close and restore NF 2238, which fragments the Packsaddle IRA to decrease the accessibility of the area. This would benefit road density sensitive species such as grizzly bear, black bear, elk and other wildlife Map 5) by providing a N/S corridor. Gray and Christ 2023 in the Ecological Citizen, "From darkness back into the light: Humanity's rewilding imperative" state emphatically that:

"Rewilding is giving back to the natural world without tallying what we humans might "get" in return. " Gray, J. and Crist, E. 2023.

IETF is requesting that these areas be added to the Packsaddle IRA and is working on adding them to NREPA (Northern Rockies Ecosystem Protection Act).

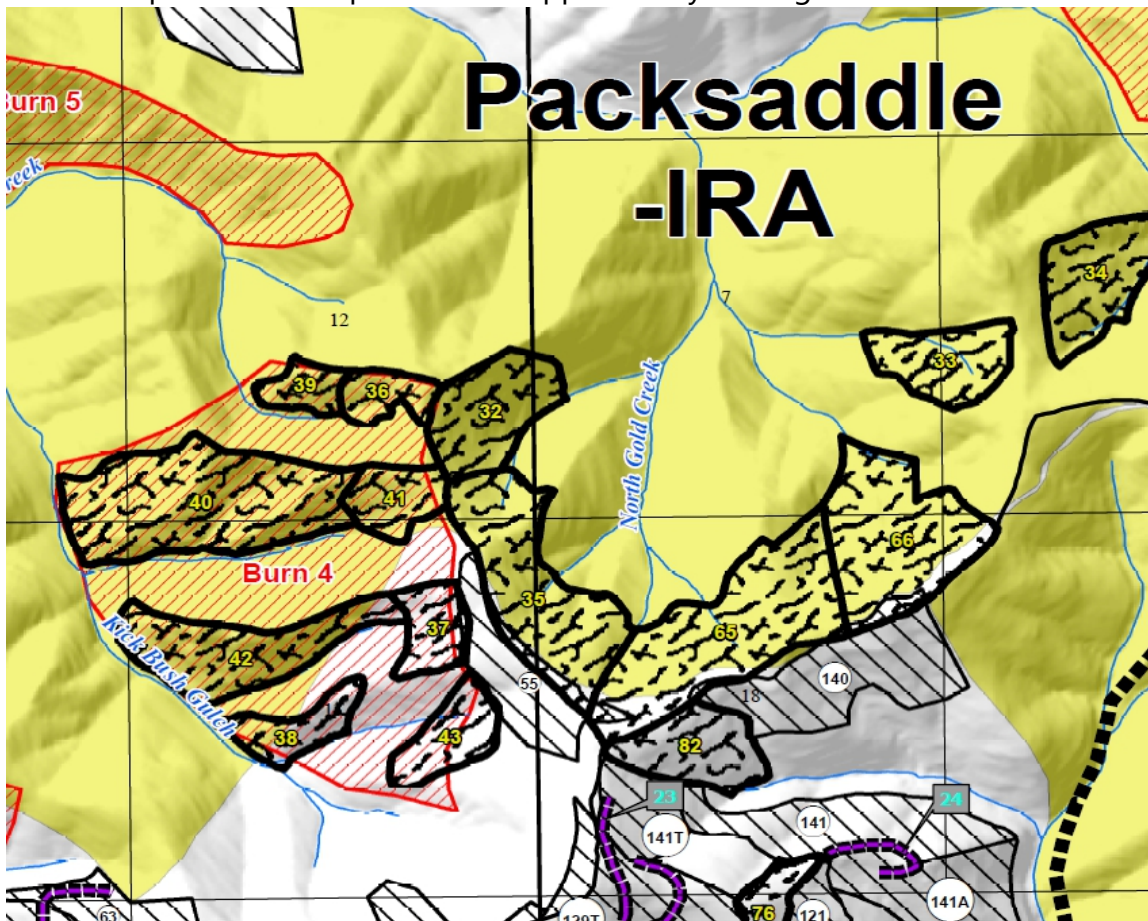
Map 5. Roadless expanses proposed to be added to the Packsaddle IRA and the area between them to be rewilded along road NF 2238.



The extensive mechanized precommercial thinning in the Packsaddle IRA will damage the roadless characteristics of the area and violate the Idaho Roadless Rule (Map 6). Closed canopy stands are a natural occurrence even on southerly aspects on the IPNF, especially in the wetter regions. Therefore logging will not have temporary impacts but will change the successional trajectory of the stand and will impair the roadless characteristics of the IRA. Impacting these stands by interfering with natural succession.

Furthermore, logging in IRA's requires approval of the Regional Forester

"Although the Idaho Rule requires regional forester approval to apply one of the enumerated exceptions, this does not appear to offer more protection. Where the National Roadless Rule allows the responsible official to apply exceptions, the Idaho Roadless Rule requires the exception to be "approved by the regional forester."



Map 6. This map shows precommercial thinning in the IRA as mottled black polygons.

"In the Idaho Panhandle National Forest, the Forest Service omitted from the 2008 Idaho Rule roadless inventory areas with previous timber harvest. The evidence of timber harvest (e.g., stumps) drives the decision to exclude considering these areas as potential wilderness. The Forest Service does not look into whether it had approved the tree cutting to improve roadless characteristics " (Katie Bilodeau and Gary Mcfarlane. September 2020. The Roadless Report: Analyzing the Impacts of Two Roadless Rules on Forested Wildlands, Friends of the Clearwater. Incorporated by reference)

Requested Actions.

- *that these additional areas in the roadless expanse be included in the Packsaddle or Magee IRAs*
- *We also oppose precommercial thinning in IRA's as there is no evidence that the existing young tree stands are "uncharacteristic" for this project area.*
- *Disclose the permission letter that the IPNF has submitted to the Regional Forester for logging (precommercial thinning) by the Regional Forester.*
- *Because the extensive burning and precommercial thinning affects an IRA negatively, this is an extraordinary circumstance and an EIS must be prepared.*

Wildlife - General

Failure to address issues in regards to trapping.

Requested Actions.

- Initiate an area closure on trapping activities based on natural resource damage with emphasis on snaring grizzly bear feet, grey wolf, beavers, if not applicable, change USFS law on allowing harm by trapping to wildlife on Federal Lands.

Failure to address poisoning of carnivores and scavengers by allowing lead ammunition.

Requested Actions:

- Initiate an area closure on the use of lead or other toxic metal ammunition. This is not only a hunting issue, it is a widespread contamination with a toxic substance issue that impacts TES species.

Lack of wildlife surveys

Pygmy Nuthatch/White-headed Woodpecker/Lewis Woodpecker, black-backed woodpeckers all need surveys to document presence. The need for biologists to complete surveys applies to all TES species.

For Example, no information was given as to the surveyed distribution of the Pygmy Nuthatch in the project area. Please disclose if a survey was completed, where, when and numbers found and their locations if any.

- Unlike past claims by the IPNF wildlife biologists, the pygmy nuthatch does not follow the distribution of ponderosa pines in this area. This is not accurate and is dated information. They (the nuthatch) are primarily found in low elevation habitats and not at higher elevation dry site habitats. Why has a pygmy nuthatch survey not been completed?

Requested Actions

- Conduct a detailed, professionally designed surveys for all sensitive species and raptors in the project area.
- Disclose a complete list of all species that occur in the project area.
- Sponsor a bioblitz using iNaturalist for the app and data storage source. Contact George Gherig (geogehrig@gmail.com) for information on the international City Nature Challenge, summer and fall Northern Rocky Mountain Biodiversity Challenge Bioblitzes which can have a local focus.

Flammulated owls, a sensitive species are often loosely colonial.

Again the IPNF is careless and is not using science for evaluation and managing flammulated owl (FLOW) habitat. Develop a detailed plan for maintaining or increasing the FLOW colonies in the Chloride-Gold project area. There are several scientists that have expressed caution about randomly burning in owl habitat.

An example is a double blind experiment about logging in flammulated owl habitat by conserving micro habitats around nest sites on the Boise National Forest.

"Boise NF Experimental Forest: Vegetation Treatments and Flammulated Owls – Mike Feiger, Boise National Forest. A significant chunk of Idaho City Ranger District is an Experimental forest for the Rocky Mountain Research Station (RMRS).

"Working to retain micro-habitat around known nest sites in attempt to keep birds in the areas. Plan to test the effectiveness of these through testing of different protected patch size (no patch, ¾ acre, 2 acre). Minimum of 30 replicates of each treatment."

We recommend that existing flammulated owl colonies not be disturbed by:

- *spring underburns*
- *spring underburning in occupied areas until after flams have demonstrated breeding in areas the IPNF is supposed to be preparing for their occupancy.*

Please disclose the following.

- Have nests been located?
- How many nests are there?
- How will random partial logging and underburning affect the owls and their habitat? Please use science and just do not state that burning is "beneficial" it might not be in stands currently used.
- How many active nest trees will be lost by underburning?
- How much habitat disturbance can flams take before abandoning nesting territories?
- How and when will the population be monitored?
- Is the population going to increase or decrease from the random underburning?
- By how many territories?
- What insects are they preying on in the Chloride-Gold project area?
- Is this population a source or sink (being maintained by recruitment from other areas)?
- Disclose why there are no additional dry site old growth recruitment stands being delineated.

Fisher habitat: the proposed alternative is a "may adversely affect" for this R1 sensitive species.

The USFS is eliminating fisher habitat through habitat fragmentation, for a good portion of 1.06 million acre 3 EA complex. The habitat fragmentation is due to roadbuilding, burning and logging with the 45 mile 3 EA complex. The IPNF is falling back on old science that was used in the Forest Plan which is much more permissive of clearcutting that current best available science.. Since then, better research has shown that even a small amount of openings (eg seedtree and shelterwood clearcuts) will result in an area not selected for a fisher home range. Failure to use the best available science is a violation of NEPA.

Both Weir and Corbould (2010) and Sauder and Rachlow (2014) state that:

“Weir and Corbould concluded that “landscapes with previous widespread and intensive forest harvesting may lose their ability to support fishers until these harvested areas regenerate sufficiently”. Their conclusions are backed up by another study on fisher occupancy from northwest Idaho, where Sauder and Rachlow found that fishers also select home ranges with $\leq 5\%$ open areas. In addition, that study found that fisher selected landscapes with $\geq 50\%$ of the area in mature connected forests”

and importantly, Weir and Corbould (2010) state for BC:

“They estimated that a 5% increase in the area of wetlands or recent logging decreased the relative probability of fisher occupancy by 50% (Figure 1). At a 25% increase in the amount of open area within a home range area, the relative probability of a fisher occupying the landscape falls to almost nil”

Citations:

Weir, R and F. Corbould. 2010. Factors affecting landscape occupancy by fishers in North-Central British Columbia. *Journal of Wildlife Management* 74(3): 405-410.

Sauder, J. and J. Rachlow. 2014. Both forest composition and configuration influence landscape-scale habitat selection by fishers (*Pekania pennanti*) in mixed coniferous forests of the Northern Rock Mountains. *Forest Ecology and Management* 314(2014):75-84.

see probability graph
Figure 1:

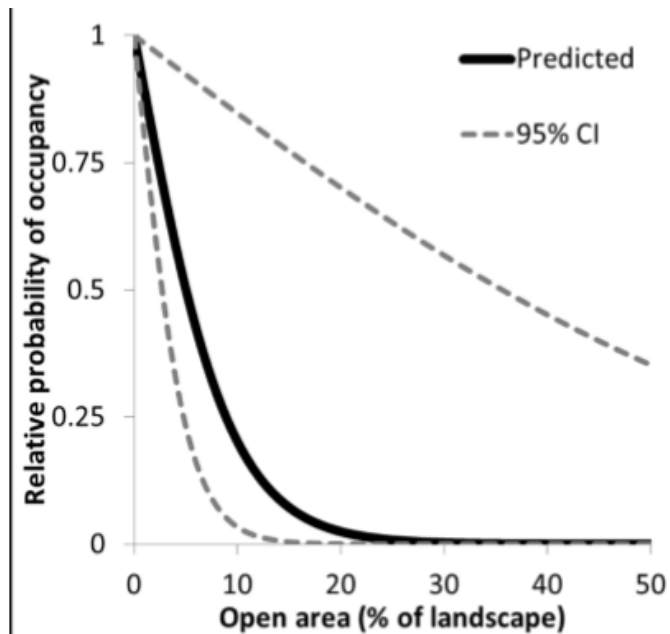
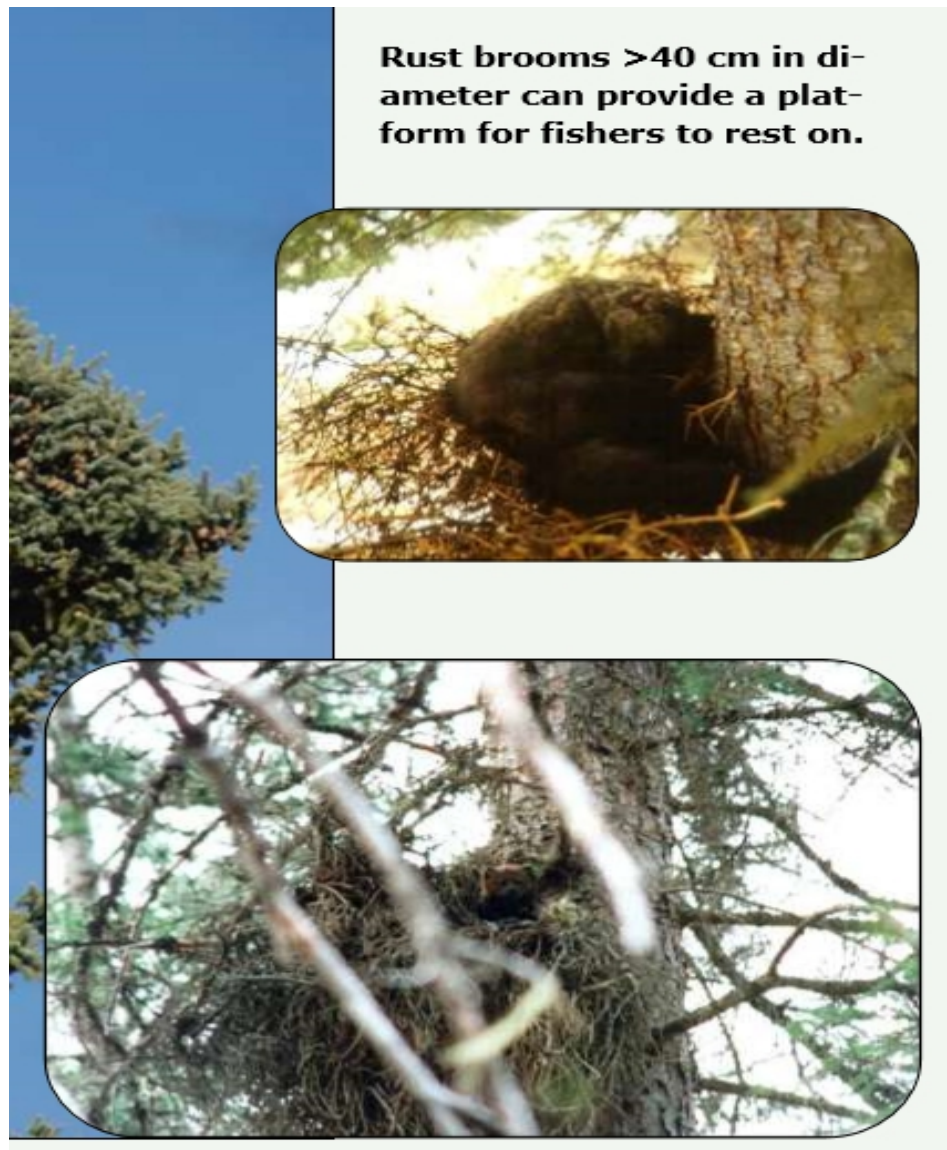


Figure 1. Open areas (logging 0-12 years old and wetlands) affect the relative probability of a home range being occupied by fishers in the Williston region of BC (Figure 1. from

Requested Actions.

- Provide and implement action items that will trend fisher towards abundance and increase its distribution to the point of removal from the sensitive species list.
- Provide for large tree structures that are normally found in old growth communities *in actual old growth stands which are part of fisher habitat. Use the analysis guidelines in Fisher Open Area Analysis V. 25 April 2019, found*



at: <https://www.bcfisherhabitat.ca/wp-content/uploads/Fisher-Open-Area-Analysis-25.04.2019.pdf>

- Provide for abundant resting areas including mistletoed western larch and other species. These are favored by fisher, which are partially *aboreal*. Photos below are from the fisher habitat photo guide on the BC fisher

habitat site. Use the same precommercial thinning standards as required for Canada lynx to provide abundant snowshoe hare prey for all predators. IPNF wildlife biologists need to remember that multi-story old growth stands also have high snowshoe hare densities. Please allow for 30% of the area in old growth and recruitment stands (See old growth discussion below).

- Provide unburnt piles of large diameter logging slash for resting sites also.

Requested Action:

- Analyze the cumulative effects of all timber sales on the IPNF with the “may affect individuals” determination for fisher.
- “Design” an alternative that allows fishers to reoccupy the over 1million acre 3 EA area.

Northern Goshawk

For Raptors:

FW-GDL-WL-20. Raptors. Management activities on NFS lands should avoid/minimize disturbance at known active raptor nests, including owls. Timing restrictions and distance buffers should be based on the best available information, as well as site-specific factors (e.g., topography, available habitat, etc.). Birds that establish nests near pre-existing human activities are assumed to be tolerant of that level of activity.

Requested Actions.

Do not log in the active territory at Tumbledown Creek.

Local climate changes and logging (as projected) will negatively affect migratory songbird species.

Boyle and Martin (2015) found that high elevation habitats are very important for migratory birds in British Columbia. Logging must be eliminated in high elevation habitats (subalpine) to provide natural habitats for songbirds and to reduce increased stress from un-natural design-a-stand approaches.

“Most species exhibited strong temporal variation in patterns of abundance that were related to migratory behavior. From an extensive literature-based survey, we found that ~35% of North America's breeding bird species use high elevations, and that all primary high

elevation habitats are important for full life-cycle conservation of this avifauna. Our findings highlight the importance of high elevation habitats to migrating birds from wide-ranging breeding distributions for at least three months of the year, a period equivalent to the length of the breeding season for most species. These results emphasize the need for effective conservation of fragile alpine and other high elevation habitats that are increasingly threatened by local, regional, and global anthropogenic disturbance.” (Boyle, W. A. and Martin, K., 2015. The conservation value of high elevation habitats to North American migrant birds. Biological Conservation 192 (2015) 461–476. <http://dx.doi.org/10.1016/j.biocon.2015.10.008>)

They found that 25 species using high elevation habitats were of concern:

“Over 26% of the species (n = 25) detected on our surveys were birds listed by North American and local conservation planning and management agencies including five Red-listed and eight Blue-listed species or subspecies”

The movements of non migratory birds are much more complex than previously thought

Cambell et al. (1997 in Boyle and Martin, 2015) found that chestnut-backed chickadees, which occur in the project area, exhibit altitudinal migration, breeding at low elevations, moving up slope in late summer, then winter at lower elevations. These complex patterns of elevational and distance migratory behaviors that many bird species have need to be addressed to maintain these species over the long-term especially with increasing climate change stressors.

Both above examples show the dangers of assigning logging units in random locations instead of completing a credible analysis using credible science and credible data.

Migratory Bird Treaty Species:

Please do not schedule logging during nesting season for neotropical and non-migratory songbirds. Bird populations are declining everywhere and any direct impact to these birds can and should be avoided. Having a take permit to kill species protected by the MBTA during logging and roading operations is unacceptable.

Ungulates

Bernard Peak Mountain Goats and high severity fire.

It seems that the Benard Peak Fire, occurring next to the traditional cliffs occupied by mountain goats would provide beneficial forage and a snag forest for the black-backed woodpecker. Instead, the IPNF uses scare tactics "high-severity effects" to try to make people believe that the extensive logging and roadbuilding is "good".

"Locally, the Bernard Peak Fire in 2020 was an example of wildfire spreading through hazardous fuels in rugged terrain, resulting in high-severity effects on resources while threatening private land, infrastructure, and values. (SN p 3)."

Requested Actions:

- Disclose the population counts of mountain goats and condition of the herd.
- Disclose the effects of additional logging near the Bernard Cliffs
- Disclose the effects of allowing over snow vehicles near the cliffs.
- Buffer the traditional range, eliminating over snow vehicle use to reduce potential interactions.

ELK

The Packsaddle area is of high importance to IDFG for elk hunting, according to Laura Wolf, IDFG biologist.

Please change the priority level for elk from medium to high. Please let the public know that the reason the IPNF chose medium importance was to bow to timber industry. The IPNF describes the Packsaddle Mountain area as a quality hunting area and a unique feature to the Pend Oreille Geographic Area. "Packsaddle Mountain Elk Quality Hunt Area" IPNF FP p88. A significant portion of the Packsaddle IRA is within the Chloride-Gold project area.

"FW-GDL-WL-13. Elk. Management activities in elk management units should maintain existing levels of elk

security (see glossary). Where possible, management activities in high and medium priority elk management units (determined in cooperation with Idaho Department of Fish and Game; see FW-DC-WL-17) should improve elk security. "

"FW-DC-WL-17. Habitat for native ungulates (elk, deer, moose, and mountain goat) is managed in coordination with state agencies. Cover is managed according to FW-DC-VEG-01, FW-DC-VEG-02, FW-DC-VEG-04, FW-DC-VEG-05 and FW-DC-VEG-11."

"FW-OBJ-WL-02. Elk. Over the life of the Plan, increase by 3 the number of high or medium priority elk management units (determined in cooperation with Idaho Department of Fish and Game; see FWDC-WL-17) that provide >30 percent elk security (see glossary). "

The IPNF should consider this popular hunting area a high priority area.

Elk Calving areas need to be identified in the project areas of this and adjacent logging projects.

Please follow IPNF Forest Plan Guidelines and identify critical elk areas for the project adhering to the guidelines in

"FW-GDL-WL-14. Big Game. Management activities should avoid or minimize disturbance to native ungulates during the birthing/parturition period. "

Requested Actions.

- Disclose calving and wintering concentration areas.
- Disclose effects from roadbuilding and logging to these areas.
- Disclose effects from winter OSV use to wintering habitat.

Mule Deer

This is another shallow and unsubstantiated attempt at justifying logging in subalpine habitats in relation to mule deer. The SN page 3 states:

"Improve habitat quality for flammulated owls, harlequin duck, elk, and other ungulates

Many federal lands within the Chloride project area consist of closed canopy stands, where forage for wildlife is limited. This structure shades the forest floor, limiting the growth of palatable shrubs and herbaceous species; this includes stands in all forest types, including the higher elevation subalpine stands where mule deer forage."

This facade of inferring that logging in subalpine habitats is going to benefit mule deer is not justified. In fact, subalpine habitats are at risk due to abrupt climate change and should be preserved not logged.

Requested Actions:

- Disclose a detailed analysis of effects to mule deer.
- Disclose the population of mule deer in the area?
- Disclose where they migrate from summer to winter range, even local migration pathways are important to know.
- Disclose the effects of allowing over snow vehicles, motorized winter rec, in mule deer winter ranges.
- What model will be used to estimate the availability of forage from the proposed action to mule deer.
- Disclose what "forage" species are involved and how will each logging unit contribute to mule deer forage by some useful metric?
- Disclose how road density influences mule deer distribution in the project area.



- The IPNF forced the Alliance for the Wild Rockies to do a gate and barrier effectiveness inventory for the adjacent Buckskin-Saddle EA. It was found that there were many breached gates and barriers (Sieracki, 2000) AWR does not want to do the work that the USFS is supposed to do.. ensure that closures are effective by regular checking of gates and barriers. Disclose the existing condition of gates and barriers in the project area. Photo 3. shows gate breaching in the project area by dirt bikes.

Grey Wolves (IPNF sensitive species)

Based on a 2015 map of wolf pack locations about 5 wolf packs have territories that overlap the project area: Kick Bush, Surprise, Dixie Queen Chilco and possibly Skitwish. The clipped map below is not from IDFG but from Idrange.org (Map 7). We are not sure who gets to officially name wolf packs.

The IPNF Forest Plan issues a strong guideline for protecting wolf denning and rendezvous sites.

FW-GDL-WL-22. Wolf. Management activities should avoid or minimize disturbance to wolves near den and rendezvous sites during the times those sites are in use based on the best available information

the caveat that allows the IPNF to skate by this guideline is that they claim that they have the best available information on wolf denning and rendezvous sites without authorizing wolf surveys. This way, "no information" becomes the "best available information"

On May 26, 2021, the Center for Biological Diversity and the Humane Society of the United States petitioned the USFWS to "Relist Gray Wolves" as a Distinct Population Segment under the ESA (Emergency Petition to Relist Gray Wolves

"(Canis lupus) in the Northern Rocky Mountains as an Endangered or Threatened "Distinct Population Segment" Under the Endangered Species Act (Center for Biological Diversity, The Humane Society of the United States. May 26, 2021). Senseless bounty-driven killing must stop. The use of snares which incidentally injure the threatened grizzly bear must stop immediately."

Idaho's law allows the state to hire private contractors to hunt and kill wolves. Hunters can kill an unlimited number of wolves as long as they buy



Map 7. 2015 potential wolf pack territories from Idrange.org

tags for each one, and trapping is permitted year-round on private land in Idaho. Do not disclose den and rendezvous sites because groups like The Foundation for Wildlife Management and the Rocky Mountain Elk Foundation will use this information to pay hunters and trappers to attempt to eliminate these packs.

Requested Actions:

- *Disclose methods used to locate and protect dens with extensive buffers along with rendezvous sites, by permanently closing and rehabilitating roads and atv trails.*
- *Using quantitative analysis, disclose open and closed road densities near dens/areas to be protected in order to prevent the R1 sensitive species from being listed by the USFWS as threatened.*
- *Work towards eliminating wolf hunting and trapping.*

- *The USFS can declare a resource emergency and close the area (and all of the IPNF) to wolf hunting and trapping to enable the species to eventually be removed from the sensitive species list due to abundance, and to prevent take of threatened grizzly bears with snares and traps, not extirpation as is the case for the white-headed woodpecker on the IPNF.*

Grizzly Bear, a threatened species.

Chloride-Gold and its extensive overlapping IRA's and roadless expanse provides good habitat and denning habitat for grizzly bears habitat connectivity between recovery areas especially in the IRA's. The C-G project area is listed by the USFWS as a "bears may be present" area. Map 8 shows medium (bright red) and high quality (black) denning habitat and the IRA's as purple hatch. Map 9 shows grizzly core habitat, no minimum size.

Water Quality and Fisheries

Streams and Pend Oreille Lake are negatively affected by anthropogenic activities imperiling bull and cutthroat trout. IDEQ has temperature TMDLs on Chloride Gulch Creek, West and South Gold Creeks, North Gold Creeks which flow into Pend Oreille Lake. The near shore waters of Pend Oreille Lake have a nutrient tmdl. and Declaration Creek, which has a temperature tmdl flows into N. Fk. Coeur d'Alene River. The last three creeks and Pend Oreille Lake are designated bull trout critical habitat.

<https://www.deq.idaho.gov/water-quality/surface-water/total-maximum-daily-loads/pend-oreille-lake-subbasin/>

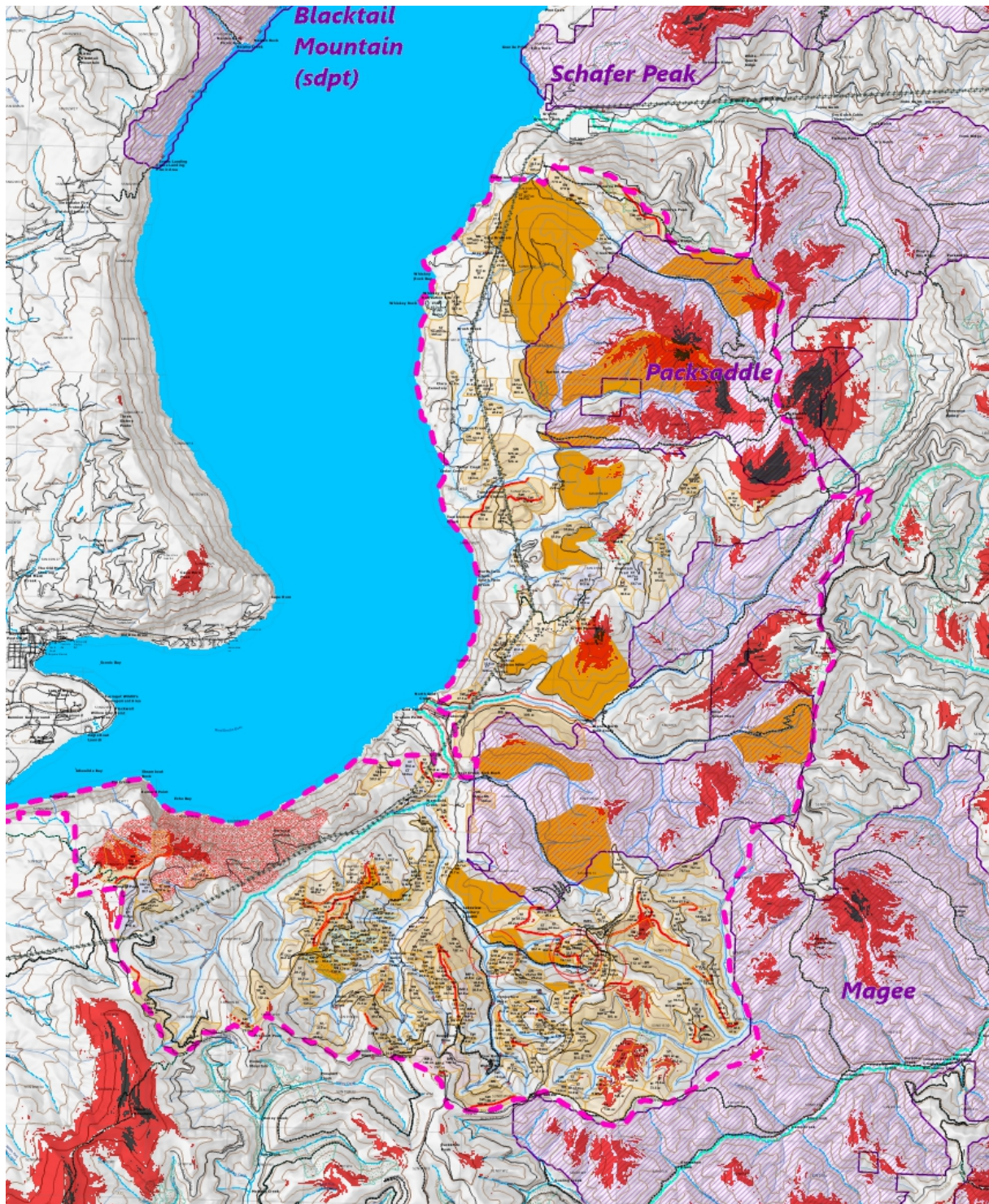
Similarly to the adjacent Buckskin-Saddle EA, Chloride-Gold is proposing excessive logging in impaired drainages and bull trout critical habitat.

For Buckskin-Saddle,

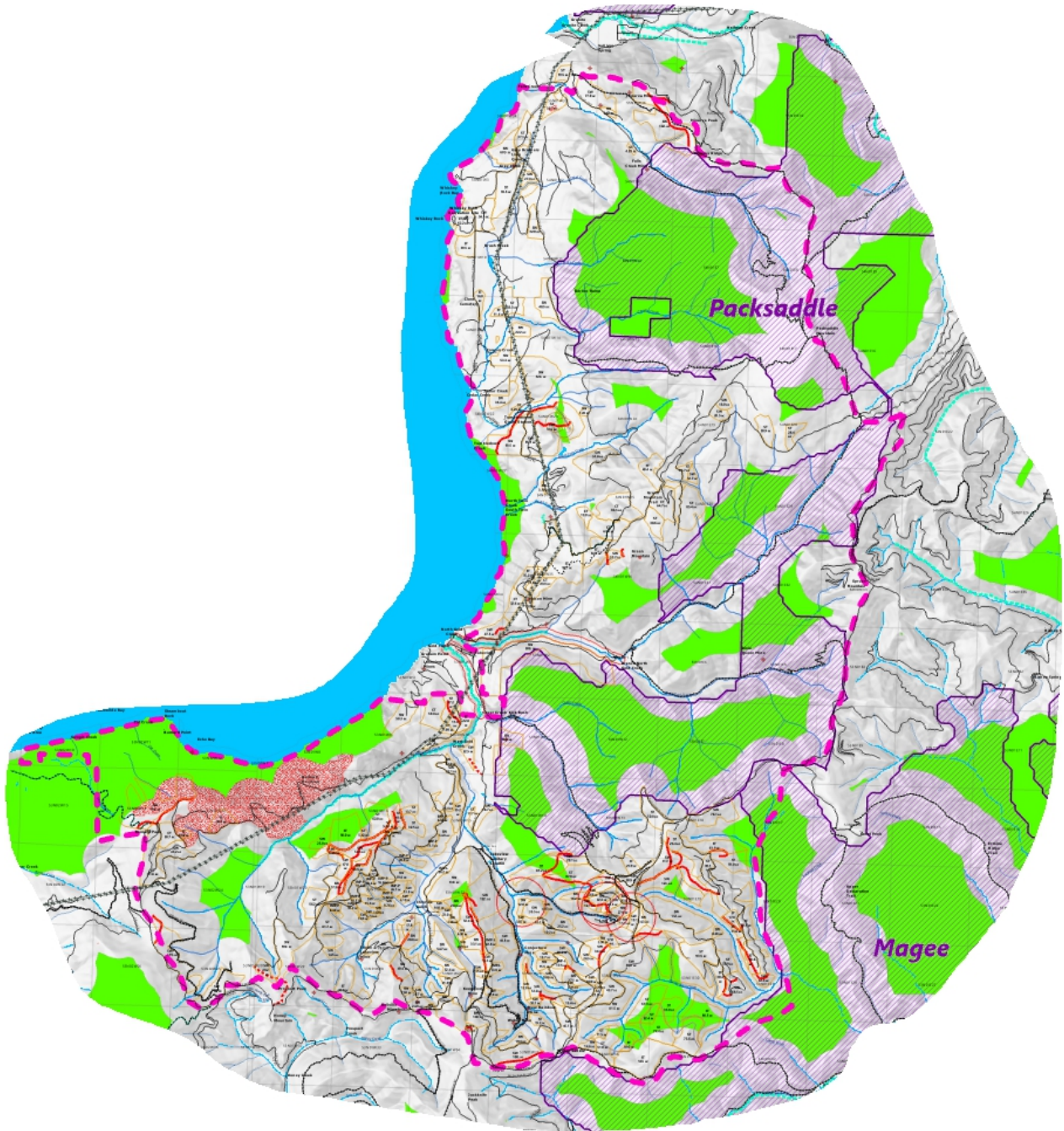
"DEQ is concerned about cumulative effects of such a project within Project area boundaries and the potential for excessive hydrologic yield, erosion, and sedimentation in receiving water-bodies." (IDEQ, February 7, 2020)

The commentors are concerned about cumulative effects to streams in the Chloride-Gold project area and the occurrence of Rain on Snow events in these

Map 8. Grizzly Bear Denning Habitat, black areas are highest probability, red is moderate probability (Bader and Sieracki, 2022)



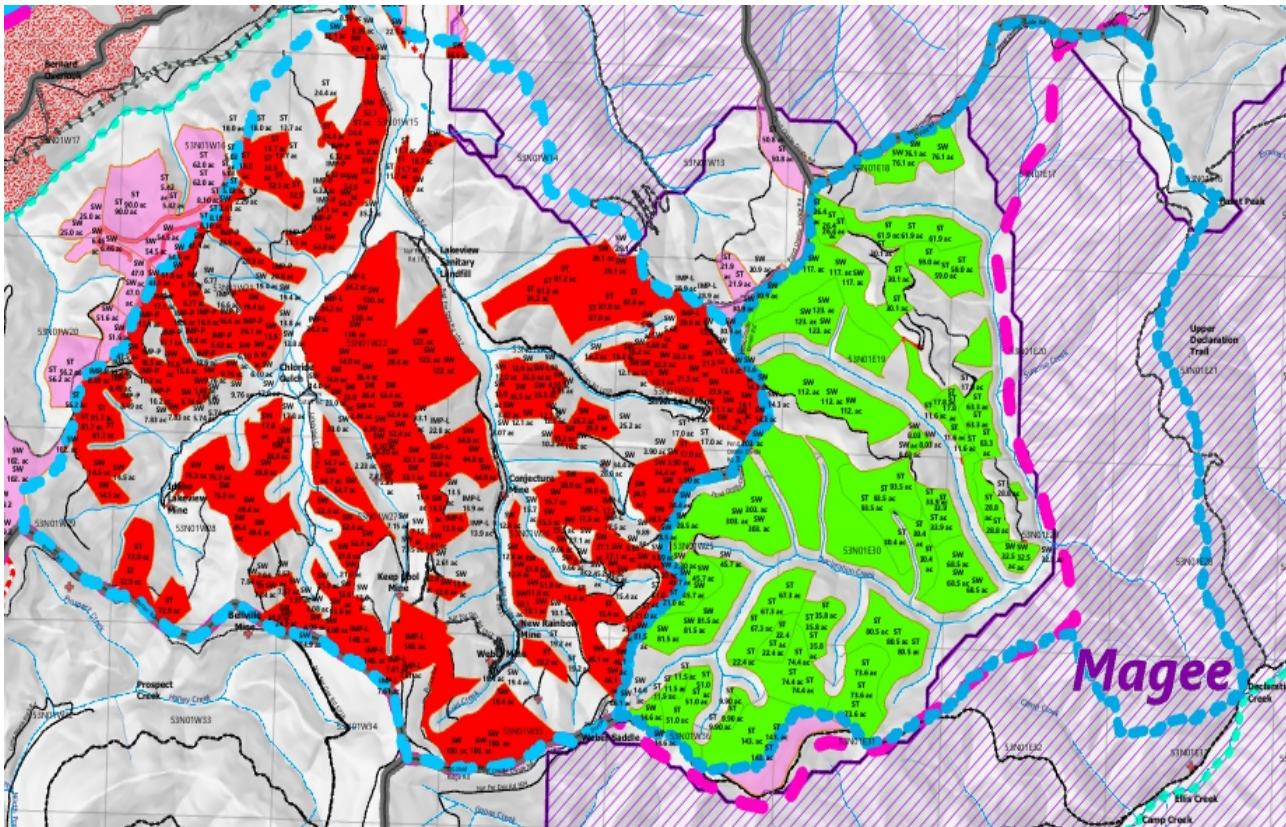
Map 9. Grizzly bear Core habitat based on open roads and motorized trails from USFS national gis datasets.



watersheds. These events will become more extreme with ongoing abrupt climate change.

"As stated in the [Buckskin-Saddle] Hydrology Report, there are many limitations to predicting water yield using the Equivalent Clearcut Area (ECA) calculator. Most concerning, they do not take into account wet and high snowmelt seasons and extreme precipitation events such as high intensity rain or rain-on-snow events. Additionally, the ECA calculator does not discriminate between soil moisture or runoff complexities." (IDEQ, February 7, 2020)

The commentors found that excessive seedtree and shelterwood clearcut logging is proposed in the Gold Creek Drainage, upstream from the confluence with West



Map 10. Seed Tree and Shelterwood Clearcuts in the Gold (red) and Deception Creek (green) drainages will lead to excessive sedimentation and water yields to Lower Gold Creek and the North Fork of the Coeur d'Alene River. Critical bull trout streams are shown as blue green dashes. Note the impacts to Declaration Creek to the west of the Magee Roadless IRA.

Gold Creek and for the entire Declaration Creek drainage with openings exceeding 37% in Gold Creek and 33% in Declaration Creek (table 1).

Watershed	Acres	Acres of Regen Logging	Percent Forest Liquidated in Watershed
Gold Creek Upstream WestGC	6634	2847	37.50%
Declaration Creek	5805	1934	33.30%

Table 1. "Openings" proposed in Gold and Declaration Creeks.

Bull Trout, ESA Endangered Species.

Declaration Creek.

The IPNF and its partner Idaho Department of Lands are proposing to Seedtree and Shelterwood clearcut log a significant portion of the headwaters of Declaration Creek. IDEQ found that Deception Creek in the CDA river drainage has a temperature TMDL.

The proposed logging and roadbuilding would violate section 9 of the ESA by increasing high flows during rain on snow events, and increasing sedimentation, and Illegal taking. (see IDEQ discussion in the water section above).

Illegal taking under ESA §9.

"Take - to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct. [ESA §3(19)] Harm is further defined by FWS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass is defined by FWS as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering." [50 CFR §17.3]

Deception Creek and tributaries	ID17010301PN037_02	Temperature
---------------------------------	--------------------	-------------

Cutthroat Trout, R1, USFS sensitive species.

Effects of the proposed action due to increased sedimentation, water yield and temperature would also impact cutthroat trout. Based on the temperature tmdls,

increased sedimentation the only determination in a Biological Assessment can be "adversely affect".

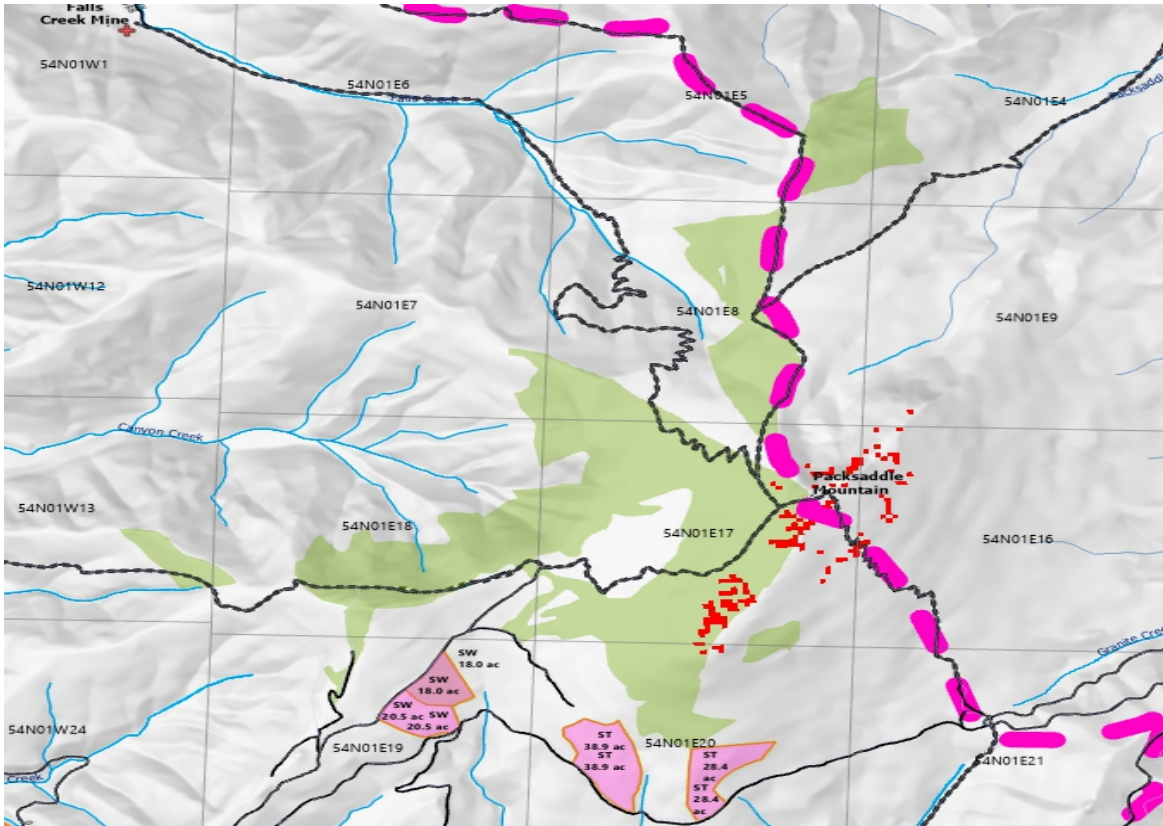
Threatened and Sensitive plants.

Whitebark Pine, Threatened.

The whitebark pine (WBP) has been recently listed as a threatened species. WBP occurs on Packsaddle Mountain (R1_Existing_WBP) based on modeling however R1's suitable habitat modeling seems very inaccurate for the Packsaddle Mountain area. This isolated existing population and proposed restoration are threatened not only by white pine blister rust but by snow compaction and direct impacts from dirt bikes and snowmobiles. There is a crisscross of dirt bike trails over Packsaddle Mountain (in the IRA) which would cause the direct effect of mechanical damage and the indirect effect of increasing the risk of wildfires to the small existing population. In winter, snowmobiling is allowed year-round which would cause snow compaction, and direct mechanical damage to the existing population and any restoration activities by running over tops that are not visible, but buried just under the snow surface and by direct impacts. To reiterate, the overlapping project area of the Kaniksu Winter Rec EA was not mentioned in the Chloride-Gold Scoping Notice. See map 11 for

Requested Actions.

- Disclose the locations of the existing population on a map based on field surveys.
- Remap suitable but not occupied WBP habitat based on field information, not from the modeling which is inaccurate and questionable at best.
- Disclose impacts from blister rust
- Disclose impacts from snowmobiling,
- Disclose take permit application.
- Disclose impacts to grizzly bear from the loss of WBP.
- Disclose impacts to Clark's Nutcracker
- Prohibit motorized use on trails in field mapped habitat and the Packsaddle IRA..
- Prohibit oversnow activity on Packsaddle mountain.
- Eliminate logging units at high elevations, located just south of the modeled suitable habitat (green).
- **Directed towards the USFWS: do not issue a take permit for the Packsaddle Mountain subpopulation of WBP.**



Map 11. WPB modeled presence (red) and suitable (green) habitat on Packsaddle Mountain. Note issues with the juxtaposition of wbp presence and suitable habitat. Locations of this species and suitable habitat must be field verified and disclosed in the dEA.

Clustered Ladyslipper (*Cryptopodium fasciculatum*. Cyfa) and IPFN sensitive species.

Experimenting on this population during abrupt climate change is unacceptable as Idaho populations are mostly small and widely dispersed. The IPNF is touting this as helping the orchid but the reality is that it is a public relations campaign to justify an illegal EA and timber sale.

"Idaho: Only fifteen out of the current 116 occurrences were known prior to 1988. The number of Idaho sites increased steadily through the 90s as a result of clearance surveys, incidental observations during other botanical surveys, and an ecosystem-scale botanical survey conducted in the Clearwater basin in 1994 (Lichthardt and Moseley 1994). Idaho populations are mostly small and widely dispersed"

C. musculature tends to occur in dry sites that tend to be dominated by climax species, multi storied, with shrub understories, there are occasional exceptions. For moist sites as in the South Twin Creek population IDFG's evaluation states:

*"In the moist-forest habitat types occupied by Cyfa, the primary seral species is grand fir. Cyfa often occurs in mid-seral stands dominated by grand fir or by a mixture of grand fir and western redcedar, **but is most commonly associated with late-seral stands of western redcedar.** Most Idaho Cyfa occurrences are in these moist-forest types."*

Importance of mycorrhizae and Armillaria or Phaeolus spp. "root rot fungi"

Like all orchids, Cyfa is mycorrhizal, meaning that its roots are colonized by hyphae of symbiotic soil fungi that are essential to its life cycle.

"C. fasciculatum is most frequently associated with mycorrhizae in the family Tulasnellaceae, and the distribution of this orchid may be limited by the distribution of fungi in this group (Shefferson et al. 2005). Because of this association, important environmental factors controlling the distribution of clustered lady's slippers may include characteristics of the upper organic layer of the soil profile and how they influence mycorrhizal fungi, rather than the nature of the parent or mineral soil. Some soil factors that may affect mycorrhizal fungi include development of the soil organic layer, soil depth, rate of decomposition of organic matter, moisture content, and pH. The bryophyte communities that cover shallow soils in which clustered lady's slippers rhizomes often grow may also be important for water retention. Coarse woody material may provide microsite moisture, shade, and protect duff and litter layers from disturbance." Gray, Kaye and Thorpe (2012)

Of interest, in the Bitterroot Mountains of Montana:

(Lolo and Kootenai National Forests): Cyfa occurs primarily in Douglas-fir/ninebark and grand fir/ninebark habitat types at elevations from 2,600 to 4,680 ft (Greenlee 1977), on both north and south aspects. Many occurrences are associated with root-rot "pockets" where the fungi Armillaria spp. or Phaeolus spp. have killed Douglas-fir and

created canopy gaps. Armillaria is a known orchid symbiont (Hadley 1982)."

Pollination – The species of pollinators are not known or even described.

"Studies of Cyfa pollination in southwestern Oregon, Colorado, and Idaho implicate a common Diapriid wasp in the genus Cinetus (Ferguson 2000, Lipow et al. 2002). It is a small wasp (<5 mm; 0.2 inches). Its larvae are parasitic on fungus gnats and the adults are found in forests where there is decaying vegetation and fungi. Cinetus is a common wasp that could occur throughout the species' range. The family Diapriidae is a large family with many undescribed species.

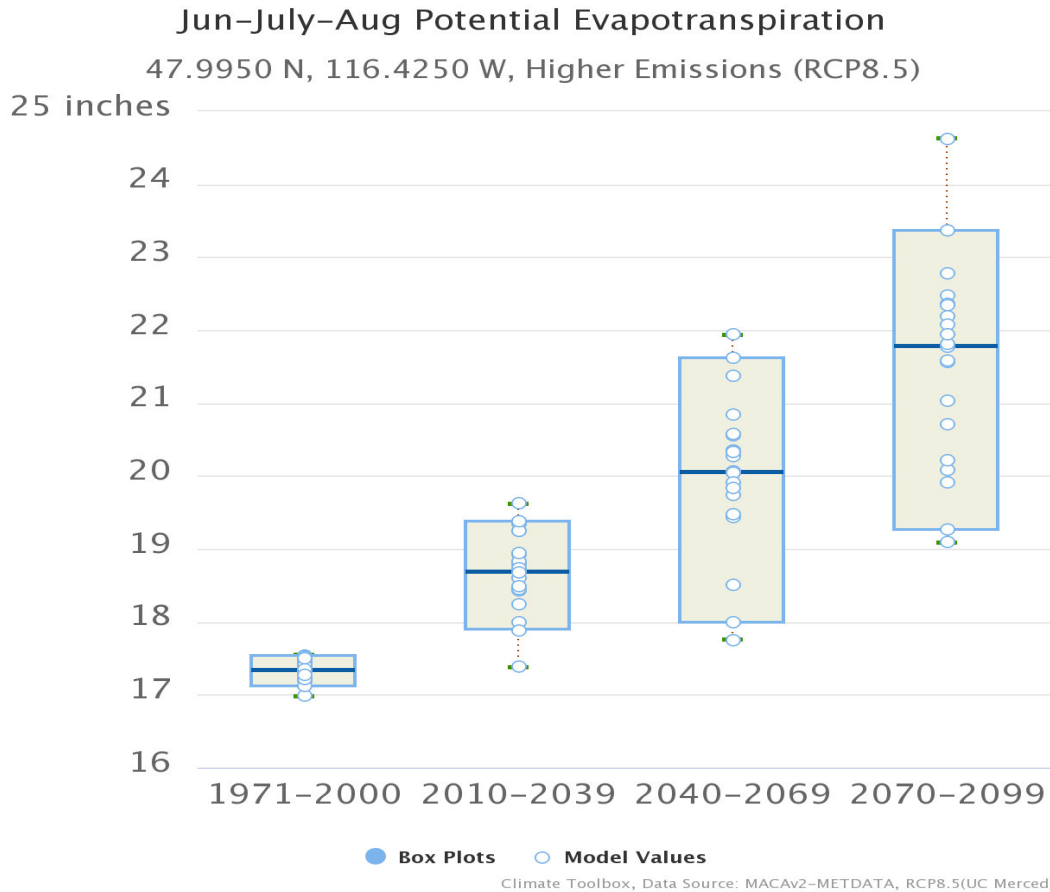
Cyfa, like many other orchid species, offers no apparent reward to its pollinators. Yet fruit set is relatively high for a non-rewarding species. In one study, the number of flowers setting fruit varied from 18 to 68% and was significantly different among populations (Lipow et al. 2002). Floral odor is currently being evaluated as a possible pollinator cue. Some researchers working with the plant have noticed a distinctive odor described variously as "musky" and "reminiscent of a barnyard odor with a citric component" (Ferguson 2000). Evidence from several studies indicates that insect pollinators of Cyfa influence seed production. A lack of pollinators or low pollinator activity, such as

Cinetus sp. Undescribed female wasp with pollina of Cypripedium fasciculatum (photo credits: Carol Ferguson, Southern Oregon University)



under adverse weather conditions or after fire, results in low fruit-set (Knecht 1996, Ferguson 2000, Mantas, pers. comm.)."

Photo of Cypripedium fasciculatum, Clustered Lady's Slipper from the South Twin Creek Population, June 2022 (iNaturalist Record, Paul Sieracki, hidden location <https://www.inaturalist.org/observations/122567478>)



We are concerned that experimenting on this population during a time of abrupt climate change emergency as stated by CEQ guidance documents is inappropriate for the following reasons.

“The United States faces a profound climate crisis and there is little time left to avoid a dangerous—potentially catastrophic—climate trajectory. Climate change is a fundamental environmental issue, and its effects on the human environment fall squarely within NEPA’s purview” CEQ RIN 0331-AA06”

Climate projections indicate severe changes in habitat conditions. The planet is tracking RPC 8.5 climate projections with a very low probability that GHG emissions will be controlled. This is putting stress on all lifeforms on the planet including this orchid.

One indicator of stress to plants is summer evapotranspiration. The boxplot above shows the increase in evapotranspiration over time. This should alarm anyone who is concerned about long term impacts of logging or underburning to the South Twin Creek orchid population. Removing canopy would increase heat and light to

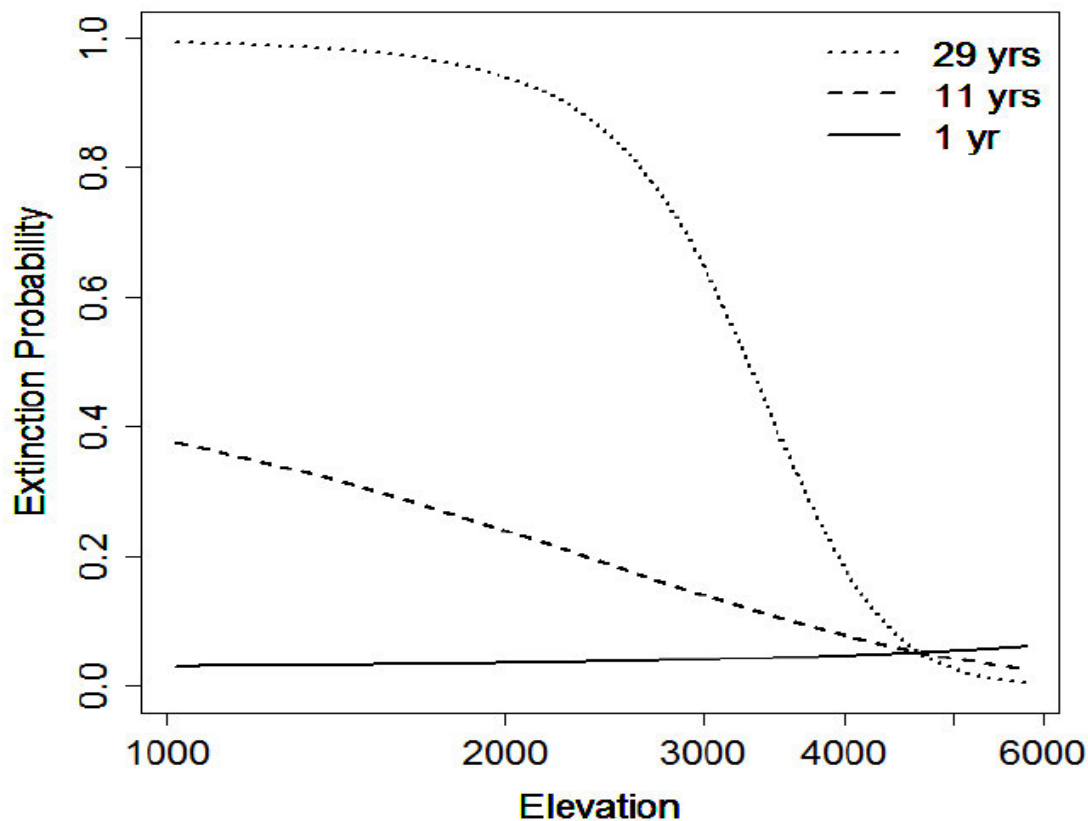


Figure 4. Extinction probability as a function of elevation and years between visits. Each line represents a specific time interval between population site visits. Starting population size = mean (26).

the existing orchid population and introduce disturbance to the fungal community due to soil compaction and changes due to decomposition of remnant stumps which have extensive root systems. Gray et al (2012), found that, in Oregon, lower elevation populations had a higher extinction risk and attributed this to climate change.:

"Populations at low elevations(below 3000 feet) were significantly more likely to go extinct than high elevation populations, but only after several years (Figure 4)."

The following numbers show a increasing summer Hargreaves climatic moisture deficit in mm from the "normal for 1960-1990 to 13GCMs_ensemble_ssp – 585_2041-2070.gcm, an increase of 60mm. These are downscaled projections for a location of clustered ladyslipper are from ClimateNA site.

<https://www.climatewna.com/> and indicate potential stress on vegetation.

period	CMD_sm
Normal_1961_1990	251
13GCMs_ensemble_ssp585_2041-2070.gcm	311

"Many native orchids are completely mycotrophic when immature, spending several years in a complex subterranean symbiotic state. In this state, plants rely on mycorrhizal fungi for water and nutrition (minerals and carbon) until sufficient growth occurs and stored food accumulates for leaf production (Case 1987, Rasmussen 2002). The plant will only develop a shoot after adequate food is stored (Hutchings 1989). It generally takes several years before the seedling emerges with an aerial stem above ground (Huber 2002)." Vance, N.C. 2007.

Lichart 2003 states that:

"Increased solar radiation causes early senescence, curtails seed production, and, in excessive amounts, will apparently kill plants. However, in dry forests, many Cyfa sites have much less than 60% tree cover (Applegate, pers. comm.) and it can apparently persist under a tree cover less than 30% (Lavelle, pers. comm.). Shrub cover may be important under these conditions. Nothing is known about the ability of seedlings to establish under these levels of radiation"

Requested Actions.

- **Do not log or underburn existing populations. The information below from LICHERT and OTHERS IS SPECULATIVE and not based on a PEER REVIEWED STUDY, therefore suggestions for experimenting by logging and underburning should not be implemented.**
- Compete a population viability analysis for the North Idaho populations as exemplified in Gray, Kaye and Thorpe (2012). This is also parroted in Lichert (2003).
- Model distribution of this orchid as was done in Montana to find out just where there is potential quality habitat in North Idaho. Why is there no habitat modeling for this species when it was completed for adjacent areas in Montana? See https://mtnhp.org/models/files/Cypripedium_fasciculatum_PMORC0Q060_2_0200610.pdf for modeling results and for instructions for the USFS to model Cyfs habitat
- Model where suitable habitat might occur due to climate change at several appropriate time steps
- Model the local distribution of the mycorrhizae that this orchid uses and the species of wasp that is necessary for pollination. Gray, Kay and Thorpe (2012) speculate that there is an "association" with mycorrhizae in the family Tulasnellaceae but provides no empirical evidence of what specie(s) of this family are critical for the orchid's growth or does not test if the association coincidental or statistically valid. Botanists often get away with sloppy work that would be frowned upon in other fields due to the sheer number of species involved and lack of funding.
- Verify the fungal distribution modeling with eDNA sampling.
- Do not log or underburn these moist site stands. Logging will open up a stand and allow increased light with heat and wind driven desiccation of vegetation.
- Logging may increase the risk of trampling from ungulates by opening up the forest. Ungulate populations may increase with the artificial more open habitat. This is especially true with the claims that this logging project will increase ungulate "forage" and therefore ungulates.
- Designate known population areas off limits to logging and as old growth recruitment strands. Lichert (2003) suggests this also. The process of stands opening up through natural succession is described. Lichert is describing successional recruitment to old growth. "

“Seral stage. It is very likely that *Cyfa* increases in numbers and distribution with increasing stand age and development, and, as suggested by Harrod (pers. comm.), may be thriving in some areas under conditions of fire suppression. As stands age they become patchy and multilayered, allowing more light to the forest floor and building up deeper duff layers and rotted wood that provides a medium for a rich fungal network.” Lichert (2003).

- Buffer these areas from logging to preserve moisture in the stands due to edge effect. This is very important in light of the increasing stressors from evapotranspiration and Hargreaves Moisture index. Lichert (2003) suggests,

“Patch size. Increased solar radiation can also result from opening the canopy adjacent to *Cyfa*-occupied habitat and creating a forest edge. In situations where occupied habitat is to be excluded from management, the question arises as to how much buffer should be allowed around the population. If habitat conditions are to remain relatively constant, it should be large enough that the population is not within the zone of edge effects. The width of this zone is dependent to some extent on edge physiognomy (forest structure) but primarily on aspect (Chen et al. 1995), with the widest zone on south-facing edges. When determining patch size for protecting *Cyfa*, connectivity between subpopulations, opportunities for expansion of the population, and the potential existence of non-emergent plants should also be considered. Due to the sparse distribution of *Cyfa*, densities as high as 10 clusters per 40 acres are rare, and large patch sizes will be required to protect a number of clusters (subpopulations)”

- Disclose the research for determining patch size for this orchid.
- Once capable habitat has been modeled, evaluate existing partial cuts, underburns and clearcut seedtrees and shelterwoods that occur in good habitat for any orchid reproduction.
- Data from Gray et al (2012) also indicate that small populations have a high risk of extirpation eg. Populations of 10 individuals had a 25% chance of going extinct after 5 years and a 91% chance after 30 years. See extinction probability graph from Gray et al (2012),

- Evaluate at the large landscape level how many populations have been lost to logging and wildfires and abrupt climate change in Idaho. Gray et al (2012) found that in Oregon:

"Of the ten higher elevation sites visited in 2012, seven had declined to zero, and of the three that were not extinct, two were in decline. These higher elevation sites exhibited evidence of past logging/canopy thinning which may impact appropriate habitat for this species"

In conclusion, experimental logging and underburning on these populations is not indicated. No researchers support logging as a way to increase the population of this orchid. In fact, most show logging as a factor in population declines.

"Other anthropogenic forces such as land conversion for agricultural uses and logging could decrease appropriate habitat for the species at low elevation sites and compound the stresses created by climate change. These results suggest that numerous factors, including climate change, have the potential to negatively affect population viability for C. fasciculatum, especially in the lower elevation sites."

Primary Forests, Old Growth and Mature forests must be conserved. This is required by EO Executive Order 14072

The amount of old growth is not sufficient in the area. There is logging proposed old growth recruitment stands. Because the USFS is using fire scare tactics to increase volume outputs, IETF requests:

Juel, 2021 describes the value of old growth forests.

"A. Biological diversity associated with old growth

Scientists recognize the wide diversity of living and nonliving features as a defining character of old growth. Franklin and Spies, 1991 note the "later stages in forest development that are often compositionally and always structurally distinct from earlier successional stages." They describe the complexity and diversity that are defining traits:

Structurally, old-growth stands are characterized by a wide within-stand range of tree sizes and spacing and include trees that are large for the particular species and site combination. Decadence is often evident in larger and older trees. Multiple canopy layers are generally present. Total organic matter accumulations are high

relative to other developmental stages. Functionally, old-growth forests are characterized by slow growth of the dominant trees and stable biomass accumulations that are constant over long periods.

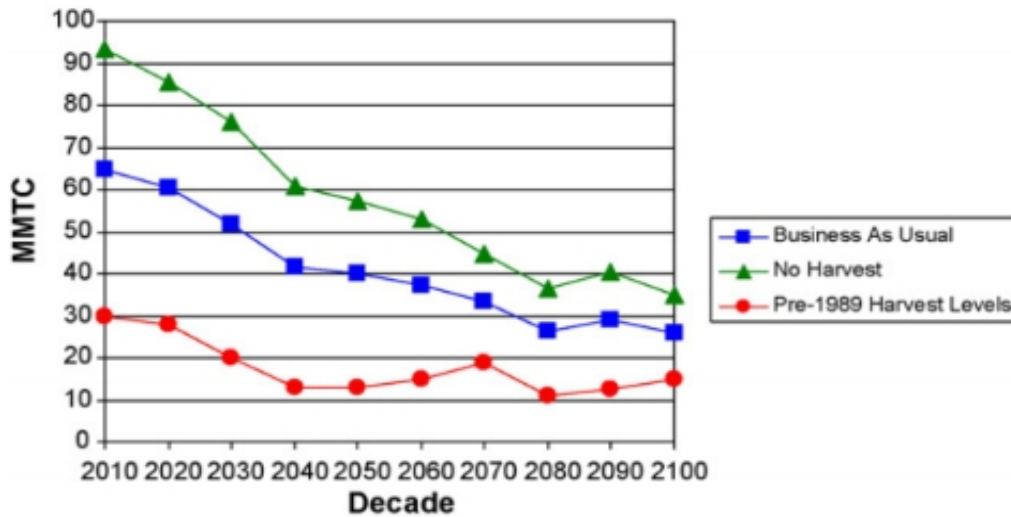


Fig. 6. Annual carbon sequestration in all public lands by scenario.

Countless scientific studies have explored the exceptional role old growth plays in providing essential habitat for wildlife species. Marcot, et al., 1991 recognize that old-growth habitat includes components serving many life functions:

Old growth provides optimal habitat for some management indicator species, including spotted owl, pileated woodpecker, and marten, and for many other species of plants, fish, amphibians, reptiles, birds, and small mammals. It also provides thermal and hiding cover for ungulates, especially in winter. ...Some wildlife species may have co-evolved with, and depend on, specific amounts and conditions of old-growth forests. Specific kinds, sizes, and patterns of old-growth environments are, therefore, keys to the long-term survival of these species. (Internal cites omitted.)”

Requested Actions.

- that all stands in the Chloride-Gold project area be modeled to 150 and 200 year old time steps to identify which stands will survive and succeed to moist site old growth based on the paltry IPNF old growth definitions in Green et al.
- That logging in moist site old growth down to the 10 stem minimum would destroy the diverse structure of the stand and should not be considered.
- that stands which modeling predicts will meet old growth criteria, be put in recruitment old growth status and not logged in any form.

- that the IPNF Forest Plan be amended to include 30-35% old-growth stand per OGMU and reinstate old growth management units (OGMUs) as in the old Forest Plan to allow for distribution of old growth throughout the IPNF.
- Disclose why additional recruitment stands have not been designated.
- Designate 30 - 35% of the project area for old growth and recruitment (why? To increase the odds that some mature stands may reach 150 years old and more).
- Implement proforestation techniques to allow old forests to increase.
- No entry into primary forests. Kellet et al, 2023 defines a primary forest as:

"Primary forest. A forest composed of native species that has never been logged and has developed following natural disturbances and under natural processes, regardless of its age (Kormos et al., 2018; FAO, 2020)". in (Kellet et al, 2023)

- Extensive Old Forests are critical for fisher habitat, a USFS R1 sensitive species (See fisher discussion). A good example of a larger moist site recruitment stand is the mostly north aspect 306 acre proposed shelterwood on the south side of North Gold Creek.
- Increase the size of dry site recruitment stands. Extensive dry site Mature and Old Forests are critical for flammulated owl habitat (see FLOW discussion).
- Mature and Old Growth Forests must be mapped according to EO 14072 .No logging in moist mature to old stands as required by the President's E.O. Disclose why the USFS is violating a Presidential Order.

Please see the position letter in the Appendix, prepared by Rocky Smith, Independent Forest Management Analyst for a discussion of what Forests need to do in relation to this EO and mature/old growth forests. This is incorporated by reference for these comments.

Abrupt Climate Change EMERGENCY, logging is NOT indicated.

This planet is in a climate change emergency and is in a period called the 6th great extinction, because of this complete emphasis must be placed on restoring healthy and resilient populations of wildlife in the context of combating climate change and biodiversity loss. Logging should be eliminated from National Forests as it causes a carbon deficit. Dr. Rees, professor of human ecology and ecological economics states that "Humans are Blind to Imminent Environmental Collapse" and that governments are dismissing scientists warning to humanity. "Bottom line?

The world seems in denial of looming disaster; the “C” word remains unvoiced. Governments everywhere dismissed the 1992 scientists’ [Warning to Humanity](#) that “...a great change in our stewardship of the Earth and the life on it is required, if vast human misery is to be avoided” and will similarly ignore the scientists’ [“second notice.”](#) (Published on Nov. 13, this warning states that most negative trends identified 25 years earlier “are getting far worse.”) <https://thetyee.ca/Opinion/2017/11/16/humans-blind-imminent-environmental-collapse/>

Edward O. Wilson is a professor emeritus at Harvard University (deceased) and a two-time Pulitzer Prize winner supports the half earth concept, expanding the existing system of biological reserves.

“Only by committing half of the planet's surface to nature can we hope to save the immensity of life-forms that compose it. Unless humanity learns a great deal more about global biodiversity and moves quickly to protect it, we will soon lose most of the species composing life on Earth. The Half-Earth proposal offers a first, emergency solution commensurate with the magnitude of the problem: By setting aside half the planet in reserve, we can save the living part of the environment and achieve the stabilization required for our own survival.

Why one-half? Why not one-quarter or one-third? Because large plots, whether they already stand or can be created from corridors connecting smaller plots, harbor many more ecosystems and the species composing them at a sustainable level. As reserves grow in size, the diversity of life surviving within them also grows. As reserves are reduced in area, the diversity within them declines to a mathematically predictable degree swiftly—often immediately and, for a large fraction, forever.” E. O. Wilson

Federal Lands are an important component providing large landscapes for biodiversity maintenance and carbon storage. This sale is not ecosystem restoration as touted, but an ecological disaster in the making. Conservation legislation like NREPA help conserve biodiversity and should be promoted by interested publics.

Chloride-Gold fails miserably in conserving biodiversity and storing carbon. These conservation objectives must be the first and foremost mission of the

USFS, the IPNF, the logging collaboratives and all environmental groups that are not big greens..

Local Climate Change

Predictive modeling indicates that Chloride-Gold area will have: hotter summers, warmer wetter winters and more variability; novel climates may emerge. Predictions based on RPC 8.5 for the Gold Creek drainage indicates that summer temperatures are going to spike, summer precipitation may decrease, winter precipitation will increase and stress caused by summer evapotranspiration increases. This is very concerning since the IPNF is converting native stands to fast growing genetically selected species that will increase local evapotranspiration as the trees enter the pole to immature stage. This will dry out the landscape faster than slower growing mature and old forests that transpire less. The younger trees will impact water yield to the streams listed as bull trout critical habitat..

This project is not carbon neutral or carbon negative. CEQ guidance

Please include the large distances logging trucks have to travel to the mills in carbon budget calculations. Only allow electric logging trucks and equipment to work in the area during true restoration activity. Depro et al (2008) found that a no harvest (logging) scenario on public lands retained the greatest carbon sequestration potential.

CEQ guidance is "Recommending that agencies quantify a proposed action's projected GHG emissions or reductions for the expected lifetime of the action, considering available data and GHG quantification tools that are suitable for the proposed action"

and recommends that "projected GHG emissions associated with proposed actions and their reasonable alternatives to help assess potential climate change effects;" CEQ-2022-0005.

Furthermore, NEPA requires analysis of connected actions such as the GHG budget of timber sale layout, road construction, transpiration by logging trucks, milling, transportation to markets and construction..

Requested Actions.

- Please develop a max carbon sequestration alternative for the project areas. Please actually do the science and provide an on-the-ground alternative, not just put it in the “alternatives considered but not analyzed” category.
- *The draft CEQ regulations require the USFS to complete a quantitative analysis of GHG emissions. Please Disclose this information in detail.*

NREPA – Northern Rockies Ecosystem Protection Act.

The project area lies within areas that should be rewilded based on the science in NREPA. This includes NREPA new wilderness, NREPA Biological Corridors and NREPA Recovery Areas. This is one of the alternatives that should be presented in addition to the the 10-20 year long logging and roadbuilding project that the USFS and the logging collaboratives want.

Requested Action.

- IETF requests that the IPNF include an alternative modeling NREPA and it's concepts that is NOT under the “considered but not analyzed” category. (<https://allianceforthewildrockies.org/nrepa/#map>).

Insect and disease thresholds.

The commentators disagree about the extent of insects and disease. There is insufficient information given in the Scoping Notice to make site specific substantive comments on this project.

Please provide a spatially explicit map showing the location of all the insect and diseases that the USFS is claiming is occurring in the area using the criteria below. “Our threshold value for mapping risk is defined as the expectation that, without remediation, at least 25% of standing live basal area greater than one inch in diameter will die over a 15- year time frame (2013 to 2027) due to insects and diseases. It seems that this low mortality rate would benefit snag dependent species.

https://www.fs.fed.us/foresthealth/technology/pdfs/2012_RiskMap_Report_web.pdf

Requested Actions.

- Disclose thresholds for Insects and tree diseases to determine if the stand is threatened or would not succeed to an old growth state without interference from roadbuilding and logging.
- Map areas that meet this arbitrary threshold by threat and display in the EA.
- Although HRV is a dated concept, discussion and analysis is required by the IPNF Forest Plan.
- Disclose the HRV for the insects and diseases that the IPNF states may be present in the area.

Implement Proforestation to achieve the 30x30 concept.

Proforestation is defined as *“growing existing forests intact to their ecological potential it is a more effective, immediate, and low-cost approach that could be mobilized across suitable forests of all types.” Moomaw et al (2019).* Logging primary and secondary forests and then convert them to plantations is not the most rapid way to sequester carbon. The young plantations take years to begin to sequester carbon, while growing existing forests to an old growth state, proforestation will increase the carbon reserve potential of the project area especially when coupled with implementing frequent underburns in strategic dry sites which are located based on simulating extreme fire behavior (not flammap).

“Proforestation serves the greatest public good by maximizing co-benefits such as nature-based biological carbon sequestration and unparalleled ecosystem services such as biodiversity enhancement, water and air quality, flood and erosion control, public health benefits, low impact recreation, and scenic beauty.” Moomaw et al (2019).

In addition letting these stands grow will provide additional values including temperature buffering, less evapotranspiration than younger fast growing stands thereby contributing to a more stable groundwater supply to streams, and there is an increase in songbird populations associated with proximity to old growth stands along with differential genetic diversity in different areas of the same old tree. The value of proforestation utilizing existing stands that can grow to old growth status outweighs the need to create larch and white pine plantations for future logging. The IPNF has created literally thousands of acres of these young plantations already. Logging to HRV is now irrelevant because of the rapid climate change trajectories that are happening.

Wild Turkey Federation (WTF), please restore powerline vegetation in this sale area. This request to WTF is identical to the request for Buckskin-Saddle EA which was ignored.

There are one or two members of the WTF on the PFC logging collaborative group. In other areas the WTF has restored vegetation along power line and gas pipeline ROW's. This EA intends to "soften" the impact of the powerlines and the USFS botanist has expressed concern that the adjacent logging to powerlines will result in noxious weed spread. This would be a good opportunity for the WTF to assist the USFS, preventing the spread of noxious weeds and increase early seral stage pollinator habitat.

"Enable Midstream cooperated with the NWTF and a variety of other conservation partners to make a pollinator preservation project possible along its natural gas pipeline rights of way. Staff, which included wildlife experts and botanists, managed invasive vegetation with herbicide, stimulated plant growth and reduced risk of catastrophic fire with controlled burns, and planted pollinator-friendly vegetation on these sites. Enable Midstream won the NWTF Energy for Wildlife Award this year for this program. <https://www.nwtf.org/about/state-news/energy-wildlife-43rd-annual-nwtf-convention-sport-show> "

Wildland Urban Interface mapping is arbitrary or capricious. Federal courts have enumerated that, under the APA.

[a] decision is arbitrary and capricious if the agency [1] has relied on factors which Congress has not intended it to consider, [2] entirely failed to consider an important aspect of the problem, [3] offered an explanation for its decision that runs counter to the evidence before the agency, or [4] [has offered an explanation] so implausible that it could not be ascribed to a difference in view or product of agency expertise.

*George v. Bay Area Rapid Transit, 577 F.3d 1005, 1010 (9th Cir. 2009)
(internal quotation and citations omitted).*

The delineation of the southern and eastern boundaries of the WUI encompassing the project area are arbitrary and capricious. This Bonner County delineation is not logical, extends very far away from existing settlements, eg to the ridge of the Gold Creek Drainage and sometimes ends in arbitrary locations with no rhyme or reasoning behind it.

Requested Actions.

- Delineate the WUI based on legal guidelines, not Bonner Counties "lust for timber dollars" delineations.
- Follow the guidelines for fire safe homes and a home protection zone instead of using WUI definitions.
- **Eliminate the State of Idaho's involvement on this project.**

These foresters are noted for butchering State of Idaho Lands and have no business assisting the USFS in any way. The checkerboard south of Priest Lake is known worldwide as a bad example of management because it can be seen by satellite. Their strip clearcuts are unacceptable. Sale names can be construed as anti - wildlife, whether intentional or not eg. "Caribou Flatten". Almost EVERY major stream on Priest Lake State Forest (IDL property) is violating beneficial uses for temperature by not meeting shading requirements (IDEQ Priest Lake TMDL Addendum, 2016). This is not even considering the effects of climate change to those streams. These "foresters" should not be allowed on Federal Lands.

Response to the Scoping Notice Requesting Exceptions to the 40 acre opening limit.

This project proposes to have 43 openings greater than 40 acres. "Openings" are seed tree and shelterwood clearcuts. Although it is the IPNFs objective to increase the size of "openings" this objective must be carried through all successional stages. Eg, how many large moist or dry site old growth stands are there in the area? Why are there not any large areas set aside for old growth recruitment? These old forest areas are important for flammulated owls in the dry sites and for fisher, pine marten and pileated woodpeckers on moister sites. Having "insects and disease" is normal for older forests. The commentors recognize that the "North Idaho root disease complex" exist but question the management of these areas. Attaining HRV is a dated concept because of abrupt climate change.

The Chloride-Gold project, through regen clearcuts will devastate habitat for wildlife needing a forested component and will severely impact watersheds through increasing sedimentation and changing water yield. **The commentors do not support exceptions to the 40 acre limit.**

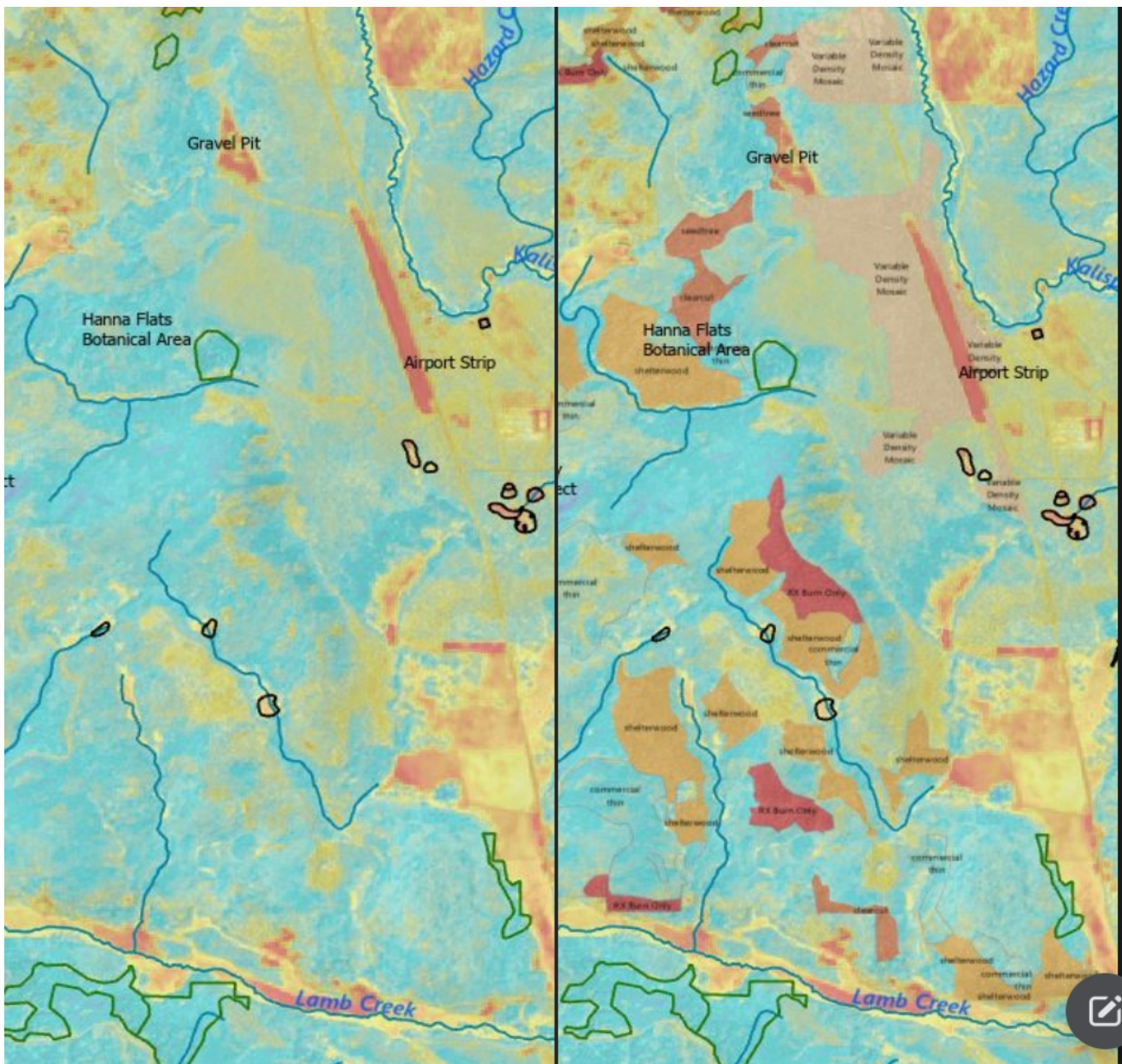
"Forest-clearing advocates assert that, in parallel with the presumed lack of "young" forests, there is an overabundance of "mature," and "even-aged" forests across the landscape. They contend that these forests do not provide an adequate diversity of habitats, and that "active management" can "restore" forest diversity and resiliency by "mimicking" natural forest disturbances and conditions (National Commission on Science for Sustainable Forestry, 2007; Fergus, 2014; King and..." (Kellet et al. 2023)

This assertion of imitating natural processes is incorrect. Bilodeau and Juel (August, 2021) discuss the extreme extent and effects of large clearcuts in Region 1 of the USFS. They state:

"No natural ecological disturbance exists in the Northern Region where dead trees disappear from the forest. Science demonstrates that biodiversity depends upon standing "snag forests" of dead trees as well as fallen dead trees. These trees provide structural habitat for wildlife—dens and nests—and dead trees are consumed by organisms that become food sources for other organisms. Clearcut trees hauled away, on the other hand, provide none of these ecological services. Also, the location or the genetics of a tree can contribute to survival during a

large-scale ecological disturbance and a better, more heterogeneous regeneration after a disturbance. While natural ecological disturbances can selectively remove vulnerable trees, clearcuts remove all trees, including those that might have otherwise survived. So, natural ecological disturbances renew forests better than the Forest Service's clearcut disturbances do." Bilodeau and Juel (August, 2021, p3)

Extensive regen clearcutting in Gold, North Gold and Declaration Creeks will harm bull trout and adversely affect cutthroat trout. These large openings will severely impact the watersheds of Gold Creek (37.5% forest liquidation) and Declaration



*Map 12. Thermal imagery of the existing condition of Hanna Flats CE on the left, increased heating for the proposed action on the right. Blue is cool and forested, followed by yellow, orange and red for the most heating due to logging.**

Creek (33.3% liquidation), both flowing into critical bull trout habitats. Logging these drainage so severely will be a section 9 violation of the ESA.

Fishers require extensive forested habitat in order to occupy a territory. The entire project area will be made unsuitable for fishers for the foreseeable future because of their know avoidance of recent "openings"

Increased insolation will heat up the openings faster than existing forests causing an increase in flammability with heat and increased wind speeds and resultant desiccation. It is clear that large fire events are weather driven and can only be partially modified at best by logging practices. (see Map 12).

Options for letting natural succession happen with the existing tree species composition should be explored by modeling. If there are 10 stems per acre of trees or more that can persist to 150 years, the stands should be designated as old growth recruitment (proforestation in part).

Other prescriptions need to be explored in areas outside of the roadless expanse in areas that are losing stems rapidly to the North Idaho Root Disease complex, including site prepping and planting larch and white pine in areas that have reached the definition of "Opening" through natural processes and letting the "North Idaho Root Disease Complex" create openings. Although the complex apparently thins the forest gradually over a large area, there are openings created which then can be underburned and planted.

Also please provide a definition of "opening" in relation to the 40 + acre requests. The current proposal clusters openings in watersheds that have other, much more important functions than production of fiber for timber industry.

Shelterwood and Seed Tree Clearcuts increase the risk of fire by heating and drying out the landscape.

"Clearcuts can increase the risk that an area experiences a high-severity fire. In the West,²¹ climate and weather—not fuels—primarily drive fire severity. Because regeneration logging contributes to global warming, logging directly feeds the primary cause of increasingly severe fires. But, regeneration logging additionally indirectly impacts fire severity. These intensive cuts create openings and eliminate overstory canopy, which allow

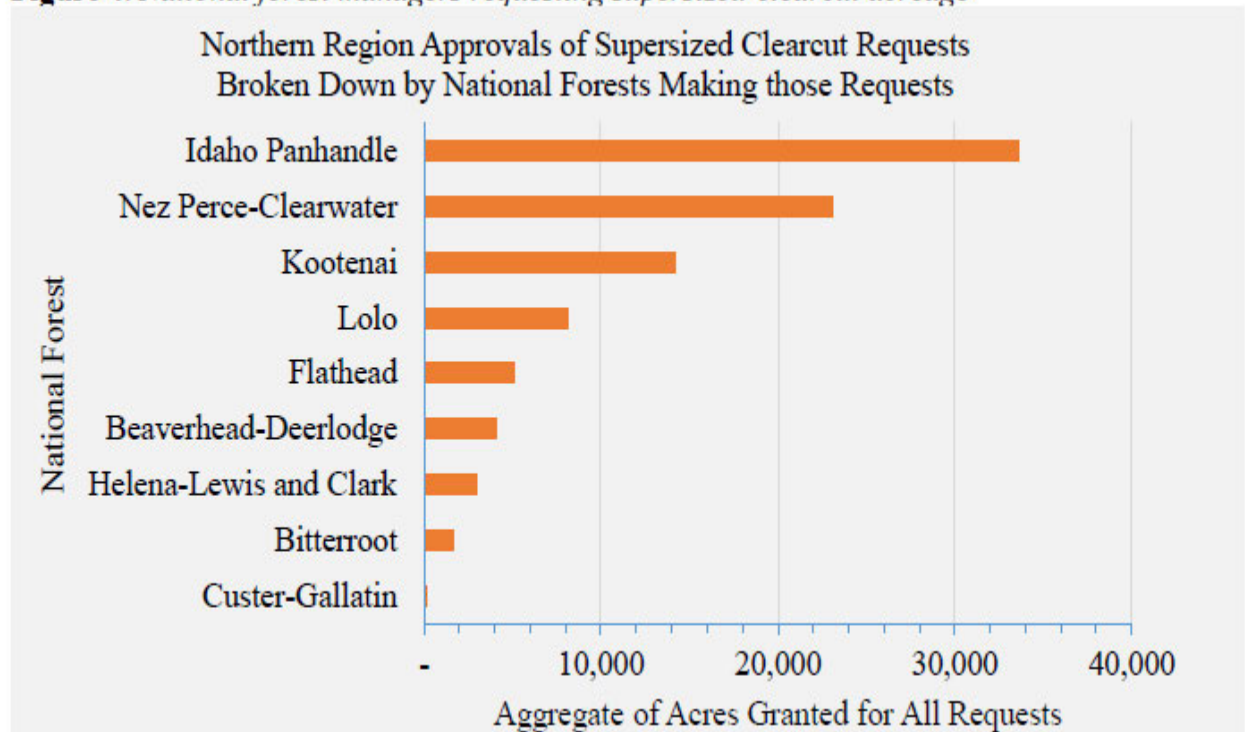
sunlight to reach and dry out the ²² forest floor and understory vegetation." *Bilodeau and Juel (August, 2021, p3)*

"What to do on a scorching afternoon? Look at thermal imagery and see how tree removal could affect an area's temperature. These two maps have a background of Landsat 8 thermal imaging. Color grades from dark blue (cool, on closed canopy northerly aspects, less so in the Hanna Botanical Area) to orange (hot, at the local Priest Lake Airport). The first map is from June 26, 2021 when the heat wave was just starting, the second is a rough approximation of surface temperatures if Hanna Flats gets logged. I assumed from looking at other areas that clearcuts, burns and seed trees would be hot - orange, shelterwoods and variable retention thins would be a lighter yellow orange. I did not approximate other logging methods. The images speak for themselves. An increase in local heating is evident. The change in local heat budget could be calculated but this is for illustration purposes only. " *from a Facebook post for Selkirk Conservation Alliance. Image analysis by Paul Sieracki, geospatial analyst.

The IPNF and Northern Region are the worst for approving supersize clearcuts.

Bilodeau and Juel (August, 2021, p3) found that the IPNF requested the most exceptions to the 40 acre limit in the Northern Region, severely impacting the ecological functioning of the IPNF and project area.

Figure 4. National forest managers requesting supersized-clearcut acreage



Chloride-Gold fails to take a landscape-scale approach.

As stated above, while the IPNF falsely thinks large clearcuts imitate the landscape patterns, they do not allow for equally large expanses of native stands which can recruit to old growth.

Requested Actions.

- **Regional Forester: Deny the request for over 40 acre openings.**
- Disclose the landscape fragmentation statistics for the area including stand size segregated by habitat type, topography and roads.
- Because the extreme extent and number of supersized clearcuts in the Chloride-Gold project area would cause a significant negative effect on the environment, an EIS must be prepared.
- Disclose acres and stand size of mature forest recruited to old-growth.
- Identify and map fire refugia to assist in recruitment old growth location.

Please see the basic requirements section in the Appendix for additional suggestions.

Respectfully submitted..

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Appendix

The following are basic requirements for management of the area:

- Map all old growth stands in the area.
- Do not log in moist site old growth stands.
- Use fire or very light thinning of younger trees for dry site old growth stands and fall underburns.
- Develop additional dry site stands to allow for a large proportion of the dry site habitats to become suitable for dry site bird species.. white-headed woodpecker, flammulated owl (nests in dry sites over 4000' in elevation), pygmy and white-breasted nuthatches, etc.
- Recruit additional stands for up to 30-35% of the project area as potential old growth. This is important for fisher habitat and all the other species that may occur in the area.
- Select enough suitable and capable habitat for fisher to live and breed in the area, when they are reintroduced. (Capable habitat means stands that would grow into suitable fisher habitat). The roadless areas should not be included in the assignment of recruitment stands or in the project area.
- Reintroduce fisher to the area if habitat is deemed suitable presently.
- For regenerated plantations in potential (capable) fisher habitat, manage the young stand to provide for snowshoe hare prey, similar to the lynx management plan.
- Implement an area closure on trapping all animals (this has been done by the USFS) to allow for repopulation of the area by fisher and other furbearers and to reduce the risk of harm to wolves.
- Do not log in subalpine series habitats as it is under pressure from global warming.
- Identify fire refugia through modeling.
- Allocate recruitment stands for moist site old growth in these areas.
- Construct no roads or skid trails through recruitment or existing old growth.
- Eliminate any allotments in the area. Cattle and other livestock have the most biomass of terrestrial mammals on the planet. This is alarming and incredibly destructive to the environment and our climate.
- Do not do "feel good" logging in RHCA's, or disguise logging as means for achieving a conservation objective.
- Analyze in detail the existing and alternative conditions to surrogate and sensitive species.
- Map existing beaver colonies including bank denning beavers.
- Incorporate an area closure for trapping beaver. Yes the USFS can and is doing this in other areas for other species, despite the denial of this.

- Reduce total road density to as close or below 0.5 miles per square mile, measured on a drainage basis, to provide functional large carnivore habitat. The proposed action, developed through a logging collaborative does not reflect the guidance of other interested groups.
- This area provides a corridor between grizzly bear recovery areas, please provide connectivity to a possible wildlife overpass over route 90 to the south. There has been documented use of the area by grizzly bears.
- The use of the Packsaddle Roadless areas by motorized recreation is precluding use by grizzly bears as bear-year and denning habitat and interfering with connectivity. Providing secure areas in a corridor is essential because of the way female grizzlies set up territories adjacent to their mother.

“FW-GDL-WL-17. Connectivity. In wildlife linkage areas identified through interagency coordination, federal ownership should be maintained. ”

- Allowing motorized use in these roadless areas is counter to the IPNF Forest Plan Desired condition

“FW-DC-WL-02. A forestwide system of large remote areas is available to accommodate species requiring large home ranges and low disturbances, such as some wide-ranging carnivores (e.g., grizzly bear). ”

Currently there are only localized areas slated to provide for wide ranging carnivores such as the grizzly bear, wolf or mountain lion.

- Do not log in existing roadless areas or previously virgin (unlogged) areas of the project to protect biodiversity.
- Identify and map opportunities for additions to the roadless areas.
- Consider controlled burning in the roadless areas, avoiding areas with old growth.
- Provide for recent burn forest habitat in areas allocated for timber production. Either burn an area or log 1/3 or the crown and torch the rest. (proportions are admittedly guesses).
- Please burn the slope on adjacent to Pend Oreille Lake on the north edge of the project area regardless of a temporary visual impact to residents who do not appreciate burns.
- Seed trees and shelterwood cuts are not co equivalents of burn habitats.
- Eliminate the use of logging collaboratives. These groups are offensive and have a resource extraction bias. Logging is NOT a tool for moist site restoration.
- Please involve all interested public's in the IDT discussions for alternative development, not just the logging collaborative.

- Please use all science, not just biased USFS science that is not peer reviewed supportive of logging, and complete all analysis in a spatially explicit and quantitative manner. The use of terms like “plenty” of habitat as a substitute for quantitative analysis is unprofessional.
- Under no circumstances poison ground squirrels or other species to assist with tree regeneration. These poisons biologically magnify and cause mortality to carnivores further up the food chain.
- It is important to maintain early stages of natural succession to provide for insect and songbird habitat.
- Please seed roadsides with fireweed and other local native species to provide pollinator and other habitat. Try not to include bear foods on roads that are permanently open.
- Request an exemption from the plantation planting time limits to allow for some semblance of mature brushfields to persist. This would be in accordance with “FW-OBJ-WL-03. Landbird assemblage (insectivores). The outcome is the management of planned ignitions on 1,000 to 5,000 acres annually to provide habitat for olive-sided flycatchers, hairy woodpeckers, chipping sparrows, and Hammond’s and dusky flycatchers. (Also see FW-OBJ-FIRE02, which provides additional habitat for these species). ”
- I need not mention the drastic effects that global heating and subsequent climate chaos that is about to overtake even the somewhat protected inland temperate rainforest that the project area is in. This will occur just after the first blue ocean event and sooner than later. Be scared.
- Please do not log any standing dead trees. If there is an OSHA conflict, leave the live trees near the snag for recruitment and to promote structural diversity.
- Another option is to top hazard snags and trees using mechanical equipment. See the example of the ponderosa pine on the Sandpoint Ranger district Grounds.
- Large tree retention. Please permanently exclude from logging any trees with a diameter greater than 21 inches.
- Do not log mistletoe larch.
- American dippers are projected to decline with global heating. Please install dipper nest structures under all bridges on appropriate streams.
- Please pass controlled burns through riparian areas to encourage broadleaf trees, shrubs and forbs such as black cottonwood, aspen, red-osier dogwood etc. in areas that would not negatively affect water quality. This would provide riparian habitat for songbirds and food for beavers.
- Eliminate motorized recreation in the roadless areas. This is a CO2 producing activity that is not needed and is displacing wildlife.

- Please do not allow use of electric bicycles on non motorized trails.
- Please remap the WUI according to ecological features based on fire ecology and legal WUI definitions and not false arbitrary boundaries parroting that of Bonner County.

Via web portal: <https://cara.fs2c.usda.gov/Public/CommentInput?project=NP-3239>

August 19, 2022

Dear Forest Service and Bureau of Land Management:

The following are comments from the undersigned on the Request for Information (RFI) vis a vis Executive Order 14072 concerning mature and old growth forests in the July 15, 2022 Federal Register (87 Fed Reg 42493 et seq.).

I. INTRODUCTION

We are glad to see the Forest Service and Bureau of Land Management (BLM) propose actions to fulfill Executive Order (EO) 14072. However, the agencies seem focused on developing criteria for old growth and mature forest definitions, when much of this already exists. The existing definitions and descriptions of old growth could be quickly updated using the best available science, and definitions/descriptions of mature forests could be developed. This would allow the agencies to complete the inventories within one year as required by section 2 of the EO.

This would also advance the time that the agencies could begin to “analyze the threats to mature and old growth forests” and “develop policies ... to institutionalize climate-smart management and conservation strategies that address threats to mature and old-growth forests on Federal lands”, per EO sections 2(c)(ii) and (iii).

In any case, the agencies should begin conserving and protecting at least the higher quality old growth forests immediately.

II. THE IMPORTANCE OF OLD GROWTH

The importance of older forests cannot be overstated. They are a reservoir of biological diversity, as they provide essential habitat for many animal and plant species that are not found, or at least don't survive well, in younger forests or in non-forested areas. These forests anchor watersheds, providing high-quality sources for much of the water used for agriculture and domestic needs in at least the western United States. They help develop rich soils high in organic matter. And they often provide outstanding opportunities for scientific research, recreation, and appreciation of nature.

Of prime importance, older forests with their larger trees will be absolutely critical in implementing any strategy to reduce the impacts from climate change. Large trees store much more carbon than smaller ones. See Mildrexler et al, 2020. Even if the world were to reform its ways and stop emitting so much carbon pollution, an unlikely reversal of the existing situation in the foreseeable future, large trees would be still needed to absorb the carbon already in our atmosphere.

The Forest Service and Bureau of Land Management (BLM) should be managing older forests to retain their critically important values. However, this is not always the case, as some older forests are at least partially cut down in commercial timber sales and fuel reduction projects. With the President's Executive Order, the agencies have a golden opportunity to identify and protect these ecological treasures; indeed, they now have absolutely no excuse for failing to do so.

II. DEFINING OR DESCRIBING OLD GROWTH FORESTS

In the late 1980s, the Forest Service, feeling pressure from a public concerned about the loss of older forests, especially in the Pacific Northwest, but not limited to that region, realized it needed to devote more attention to old growth forests. At least some Forest Service regions developed definitions or descriptions¹ of old growth by vegetation type. See:

<https://www.fs.fed.us/projects/hfi/field-guide/web/page24.php>

It seems the agencies could, fairly quickly, review and update the previous work and produce draft updated definitions/descriptions for public review. If the agencies take too long in developing at least interim old growth definitions, they will be unable to complete the inventories within one year (i. e., by April 22, 2023), as required by E. O. 14072, section 2(b). Also, analysis of threats to older forests and development of strategies for their conservation, required by EO at section 2(c)(ii) would be further delayed. In any case, the existing definitions should be considered, and then updated or modified as appropriate using the best available science, rather than starting from scratch.

The Forest Service and BLM should not rely solely on a generic or universal definition of old growth. Such a definition would hide the complexities in old growth ecosystems, which vary by latitude, elevation, vegetation type, disturbance history and regime, and precipitation regime. What constitutes old growth may also vary by aspect and elevation, as growth rates for trees and other vegetation, and decay rates for down dead material, differ with these factors. For this reason, age alone should not be used to delineate old growth.

It is important to recognize that old growth is an ecosystem, not just stands of old trees. Each area of old growth exists in a certain context within its respective landscape. The Forest Service's website for the RFI (<https://www.fs.usda.gov/managing-land/old-growth-forests>) has the following statement:

Even within a specific geographic area, no one definition represents the full diversity of old-growth ecosystems – definitions are specific to the vegetation type.

¹As is further discussed below, we believe “descriptions” is a better and more accurate term for lists of characteristics denoting old growth forests.

The president's Executive Order 14072 states that old growth and mature forests are to be defined, identified, and inventoried "accounting for regional and ecological variations, as appropriate". Id. at 2(b).

Therefore, it will be important to develop old growth definitions or descriptions for each major vegetation type for each Forest Service region.

Moir, 1992, stated:

Exact definitions of old-growth forest of the Southwest and southern and central Rocky Mountains cannot be given because of the great variation in forest environments and old-growth conditions. However, certain ecological principles may be applied to help conceptualize old growth.

Developing precise definitions for when a given stand in its respective vegetation type and ecosystem becomes old growth would be impossible, as there is much variation by site, i. e., elevation, precipitation regime, disturbance history and regime, soils, and other factors. For example, definitions for high-elevation vegetation types with very infrequent (but usually high-intensity) fire, such as Englemann spruce-subalpine fir would need to be much different than for types that historically had fairly frequent, low-intensity fire, such as northern Front Range (Colorado) montane ponderosa pine.

Also, it would be impossible to identify a precise point in time (such as age) or in the appearance of identified ecological characteristics when a mature forest becomes an old growth one, even for vegetation types with similar disturbance regimes. It might thus be better to develop old growth *descriptions*, rather than definitions. Indeed, this was done in 1992 for Forest Service Region 2. See Mehl, 1992. The introduction to these descriptions states:

These old-growth descriptions are not precise definitions. There is a certain amount of subjectivity in defining old growth. Old growth is conceptual and difficult to define precisely. For that reason the term "description" was chosen instead of "definition."

While definitions or descriptions of old growth for the various vegetation types on national forest land are being developed, the agency could use a generic, universal definition as an interim measure for deciding which late successional forests to protect, i. e., manage for retention of old growth character. Such a universal definition should be broad enough to include all stands that could be considered old growth, even if they are only marginally in the old growth condition. In other words, it should not allow exclusion of stands that may be, or will soon become, old growth. Designations of old growth can later be adjusted as needed after the definition/descriptions for specific vegetation types are developed.

General old growth characteristics include, but are not necessarily limited to, the following (in no order of priority):

- large and old trees for the species and location;
- variation in tree sizes and ages;
- variation in tree spacing;
- signs of decay in standing live trees, such as broken tops, stem and root rots, and cavities;
- standing dead trees, known as snags;
- down dead logs in various stages of decay;
- presence of wildlife and plant species that only exist or thrive best in ecosystems with mature/old growth forest character (see Moir, 1992); and
- in some vegetation types, distinctive features such as deep bark, branch patterns, flattened crown tops, etc. that appear in later ecological stages.

Identify high quality old growth areas. Not all old growth stands are equal in displaying old growth character. Some stands display old growth characteristics much more so than others. Any definitions/descriptions of old growth must allow determination of the quality of old growth in each location. Otherwise, marginal old growth stands might be conserved and higher quality ones would be cut, but the overall inventory for a national forest unit might show that sufficient old growth remained.

To help determine quality of old growth stands, a scorecard format can be used. Such a format was developed on the Medicine Bow National Forest in the late 1980s. This allows surveyors to inventory more than just presence or absence of old growth characteristics, as quality or intensity of at least some of the characteristics can be noted.

III. INVENTORIES

The agencies can begin to assess how much old growth and mature forest exists and where each exists on each management unit using existing information. This will help the agencies decide what areas need to be protected now while they analyze threats to older forests and develop the strategies for conservation of older forests required by the EO at the earliest possible time, consistent with applying best available science.² As soon as updated definitions/descriptions of old growth and mature forests are available, the agencies should complete the inventories.

Inventories of old growth and mature forests will be based on data, such as from aerial photos, that is not necessarily 100 percent accurate in determining which forested areas are in older stages. Thus as time, personnel, and funding allow, areas of old growth and mature forests should be field checked whenever possible, and the inventories adjusted as needed.

IV. EXCLUSIONS FROM OLD GROWTH DEFINITIONS/DESCRIPTIONS

²At the July 21 webinar, the Forest Service indicated it would finalize the definitions by April, 2023, and only then analyze threats and develop conservation strategies. This is not acceptable - the agencies need to start analyzing threats and developing conservation strategies while the definition/descriptions and inventories are being completed.

Do not have a minimum area size for old growth. In some areas, old trees and old growth ecosystems may exist only in small areas due to recent or persistent logging and/or recent high-intensity fires or other disturbances. In such circumstances, patches of old growth would still be worth saving, especially if the surrounding areas could, with proper management, become part of a connected older forest landscape.

Though old growth forests of almost any size should be conserved, the agencies should issue strong direction for keeping the largest areas of old growth intact. These areas provide the best and most secure habitat for resident wildlife and fish species. The forests surrounding small (less than 100 acres or so) patches of old growth should, to the extent practicable, be managed to increase the size of older forest patches.

Do not automatically remove stands that have received human treatment (logging, mining, leasable mineral development, etc.) from consideration as old growth. Depending on the history and intensity of treatments, stands can recover to display old growth characteristics. This will particularly be true of eastern national forests and some lower-elevation national forests in the west, where the growing season is long enough and the sites are sufficiently productive to allow relatively rapid recovery.

V. OLD GROWTH RECRUITMENT

Old growth is not static on the landscape. Some old growth forests will become young forests (or for awhile, even non-forest) after a major disturbance such as fire or insect attack. Some existing forests will gradually become old growth.

Before forests can become old growth, they must first be in younger stages, then grow to a mature stage and old growth. But not all forests make it into the latter ecological stages. Thus direction for inventorying and protecting mature and old growth forests must include recognizing what forest areas could develop into old growth and protect them to ensure they have the best chance to become old growth.

VI. DEFINING/DESCRIBING MATURE FORESTS

As Moir, 1992, put it: “Old growth differs from mature forest in the complexity of its ecological interrelationships.” The difference can be subtle.

To be able to protect potential future old growth stands and ensure they will have a chance to become old growth, definitions of mature forests will be needed for the various vegetation types found on each national forest. One characteristic that can be used to denote mature forests is culmination of mean annual increment of growth, or CMAI. Simply stated, the age of CMAI is the peak of growth for each respective stand. Once a forest stand has reached this point, it can be considered mature. Size criteria could also be used to help identify which stands are mature, but they would have to be tailored to

specific stands or groups of them, considering soils, aspect, elevation, precipitation regime, and other factors, just as for identifying old growth.

CMAI is widely used and understood by forestry professionals. It is likely determined in stand exams, since the National Forest Management Act (NFMA) generally prohibits, with some exceptions, cutting stands until they have reached CMAI. 16 U.S.C. 1604(m). Thus it could very easily be used in any procedure designed to identify and inventory mature forests. For vegetation types that are not normally sold commercially, such as pinon-juniper, other parameters will have to be used.

VII. ANALYZING AND ADDRESSING THREATS TO OLD GROWTH

The EO requires the Forest Service to analyze threats to old growth and mature forests, and to develop “conservation strategies” to conserve the older forests. EO at 2(c)(ii) and (iii). We believe the agencies should begin fulfilling this requirement as soon as possible.

It is commonly assumed that fire is a big threat to old growth, and that fuel reduction is thus necessary to ensure protection of old growth. However, logging remains the biggest threat to old growth. There is always the temptation for the agencies to include large trees in any timber sale or service contract for reducing fuels, in order to make the offering more attractive to industry.

Fire can indeed change or eliminate old growth. But stand-replacement fires are natural occurrences in most vegetation types in the U. S., though they are very infrequent in some types. Also, large trees are the last to ignite in a wildfire, as it takes much more heat to ignite, say, a tree 18 inches in diameter than it does for a tree one a third that size.

The Forest Service needs to have strong policies or even regulations that generally prohibit logging in old growth forests, especially the highest quality old growth forests, with narrow exceptions, such as for removal of hazard trees. Another exception could be for forests which have become denser than they were historically because of fire suppression and/or other human actions. This is, e. g., the case in lower elevation forests (generally below 7200 feet elevation) in the northern Front Range of Colorado. See Sherriff and Veblen, 2006. For these areas, responding to a possible fire threat with any form of vegetation management must require a site-specific determination that the area in question has been substantially altered from the historic condition, and that any proposed treatment would help restore the natural, older forest stage.

In forests that have not been substantially altered by fire exclusion or other human actions, any thinning, say to reduce ladder fuels, would thwart the development of old growth or the replacement thereof, as the trees that might eventually become large and old would instead be removed. Broad-scale thinning would also result in an increase in atmospheric carbon, as the numerous trees cut would no longer store carbon. See Law et al, 2022, at 6-7.

Any thinning would only be effective in reducing fuels for 10-20 years, as new trees would likely grow in the spaces where the previously thinned trees were. Thus such areas would have to be treated regularly. Roads would likely be needed to access areas for treatment. All of this would interrupt, if not degrade or destroy, the development of old growth forest characteristics and the wildlife habitat they provide.

Old growth forests can certainly burn, but when they do, most of the carbon stays in the forest³ and slowly decomposes, renewing the soil. Law et al, 2022, concluded that “overall harvest-related emissions were about 5 times fire emissions” in the west coast states they examined. Id. at 7.

Therefore, the potential for fire to hit old growth forests that have long fire return intervals is no excuse for logging them.

The use of fire, both wildlife and prescribed burning, may be appropriate in vegetation types that have or historically had a frequent, low intensity fire regime. Application of such fire could help maintain old growth in such forests.

The Forest Service and BLM should provide guidance for units to conserve old growth. This should include development of desired conditions, standards, and guidelines for forest plans. All old growth must be unsuitable for timber production. Units should be directed to save all of their highest quality old growth in each vegetation type, and also save sufficient old growth recruitment stands to replace existing old growth. Sufficient old growth and replacement old growth must be retained in each major vegetation type on each management unit to support the wildlife and fish species that commonly reside in forests in the older ecological stages.

We recommend the agencies issue draft direction and guidance as soon as possible. The goal should be to have final direction, consistent with best available science and public review, ready when the inventories are complete, i. e., in April, 2023.

CONCLUSION

The Forest Service and BLM should begin to identify the areas of old growth and mature forest on each management unit using existing definitions/descriptions and data. The former should be updated, using the best available science, for each major forested vegetation type found on federal lands. Then the agencies should complete the inventories when the updated definitions/descriptions are finalized. The agencies should immediately begin developing policies to conserve older forests, even while definitions/descriptions and inventories are being updated.

Sincerely,

³One can easily observe this, even in a forest that has had a high-intensity burn. The needles or leaves, small branches, and some of the bark may have burned up, but the tree boles remain.

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