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Subject: Comments Twenty-mile Project

Dear Ms. Hardwick:

Here are my comments on the recently released Proposed Action for the Twenty-mile project.

**Project Goals**

The project has two goals, the first of which is to improve forest health and the second goal is to improve access to the Sourdough wilderness portal by creating a shorter access route. A secondary benefit of the proposed new route would be to provide a secondary egress route for the public in the case of wildfire.

 **Forest Health**

According to the vegetative analysis only 350-acres (2.3%) of the project area are in stands exceeding 20+ inches in diameter. Most stands (52.8%) are in the 15-19.9 DBH size class suggesting they are mature stands that occurred in the early 1900s as the result of past wildfires. These historical wildfires are discussed in the Proposed Action document and the information provided suggests most stands in the project area are approximately 100-120-years old. According to the vegetative analysis most stands in the project are dominated by mixed grand fir (62.2%) or lodgepole pine (25.4%).

The proposed action blames these conditions on fire suppression, but this is highly unlikely given the habitat types found in the area. Stands that are dominated by grand fir and a mix of other species are likely best represented by western red cedar/gueencup beadlily or the grand fir/queencup beadlily habitat types (Cooper et al. 1991). According to Cooper et al. (1991), the major seral species in the cedar/queencup beadlily habitat type are Douglas fir, grand fir and western larch and that Western red cedar is the climax species. In the grand fir/queencup beadlilly habitat types Cooper et al. (1991) indicate that grand fir “in addition to being the climax dominant, is a major and most consistent dominate of seral stages, even following clearcutting or severe wildfire.” They also indicate that Douglas fir is the only consistently important seral species in the grand fir/queencup beadlily habitat type.

The cool moderately dry SAF habitats would be found in higher elevations and might be represented by the subalpine fir/beargrass habitat. Cooper et al. (1992) report lodgepole is considered an important seral component in most phases of this habitat type. Spruce and subalpine fir are also well represented here according to information provided by Cooper et al. (1991).

The Proposed Action suggests that mixed grand fir and lodgepole pine stands need to be regenerated so that more ponderosa pine and larch can be incorporated into the stand structure. They also claim there is a high risk of insect and disease attack and the existing stands have high fuel loadings that are uncharacteristic of the area.

The proposed action offers little evidence to support these claims. Most of the information presented on insects and disease only documents that several native insects and pathogens are present. No evidence of an epidemic outbreak is provided and most of the insect and disease agents found in the project area are natural components of stands across the Nez Perce – Clearwater NF. Native insect and disease agents are important components of stand development and their mere presence does not constitute a need for action. These agents can be found across most of the Nez Perce – Clearwater and nothing suggests the Twenty-mile project area is any different than most other areas.

Fuel loadings are another issue raised by the Forest Service. Claims are made that existing stands in the Twenty-mile project area have heavy fuel loadings and that need attention. Other than the fact that most stands are approximately 100-120-years of age, there is no evidence to support the claims that these stands vary from historical averages. Snags and downed wood would have been common in mature stands of this age and would be important components as these mature stands move towards old growth conditions which likely won’t occur for another 30-50-years.

Claims of the need for species conversion are also overstated. Grand fir and Douglas fir would have been common historically in most of the lower elevation areas. Higher elevations would have supported Engelmann spruce, subalpine fir and lodgepole pine. Larch would likely have been present in scattered amounts in most stands, but it would not have been considered a dominant forest type.

There is a good reason why 62.2% existing forest types in the project are composed of mixed grand fir and Douglas fir and that lodgepole pine is common (25.4% of the project area) in upper elevations. Species composition is consistent with the habitat type groups found in the area and has not been significantly influenced by fire suppression as alleged in the proposed action. Conversion to western larch and ponderosa pine is not consistent with existing ecological conditions.

**Second Access Route**

The idea that a second access route dotted by clearcuts would be desirable for people seeking to utilize the Gospel Hump wilderness area is questionable. What demand has surfaced that suggests the need for this proposal.

**Large Openings**

I am particularly concerned about the very large harvest unit complexes especially the one that will create a 642-acre opening. The proposal will create ten openings over 40-acres and six of these complexes exceed 100-acres. Not only will these large openings be unsightly, but they will also create significant barriers to movement of numerous wildlife species. Species such as the fisher and marten will likely avoid these openings entirely. Other species such as deer, elk and moose may use portions of the units for foraging, but it is likely that they will stick closer to forested edges and avoid the center of these large openings.

Vulnerability to hunting is likely to increase for big game and predator species like wolves. Poaching of big game and other protected species like the grizzly bear, wolverine and lynx could occur more frequently with these large open areas. Poaching is known to be opportunistic with chances being more likely in large open areas near open roads. The proposal opens more existing roads with the proposal to create a second access route to the Sourdough wilderness portal. Proposed regeneration harvest units are located all along these routes and most units are found on flatter ridge locations where the existing roads are located. These gentler slopes are attractive to many species such as elk which use these ridgelines for travel and resting.

**Prescribed Burning (6,807-acres)**

The objectives of the prescribed burning are unclear in stands that are largely classified as being composed of mature grand fir-mixed forest. Grand fir is a relatively thin-barked species that is not well adapted to understory fire, and understory wildfire is relatively uncommon in this moist forest type. More common are lethal stand replacing or mixed-severity wildfires that occur infrequently during late summer or early fall drought conditions. Young stands that develop after these events usually have high densities of small trees (Haig 1932) that gradually reduce in numbers due to forest succession and natural litter decomposition. Thus, the existing stands are the result of a past wildfire that occurred in the early 1900s and there is little evidence that fuel loadings are excessive. Mature grand fir stands commonly have a relatively open understory and it is still unclear what the purpose of under burning would be in these forest types.

The proposed prescribed fire is likely to kill a significant number of existing live trees and will be difficult to control due to the steep project area topography and the large size of the proposed burn. The Forest Service claims that prescribed burning operations are necessary are to reduce fuel loadings, but in mature grand fir stands under burning may have unintended consequences. Under burning could kill a large number of overstory trees which could then fall to the ground and actually increase understory fuel loadings.

The Forest Service presents no real evidence for the need for understory fuel treatment and the justification for this large proposed burn does not appear warranted. It is also hard to believe that fuel treatment is required in the entire 6,807-acres. If burning must occur, a more in-depth analysis of fuel loadings should be planned and burning should be limited to high-risk locations.

**Old Growth (5% minimum per old growth analysis area and impact to MA 20)**

The Draft Proposed Action claims that the minimum requirements for old growth protection outlined in the Forest Plan will be maintained in the project area, but no evidence is presented that suggests that an inventory of existing old growth has been conducted. We do not know if any existing old growth is included in the proposed harvest or fuel treatment units. The Draft Proposed Action does suggest that some areas in Management Area 20 may be impacted by burning operations, but there is no quantification of expected impacts. Existing old growth in the old growth analysis areas impacted by the proposal needs to be inventoried and impacts to old growth needs to be quantified in the final environmental assessment.

**Ten-percent Forest wide old growth standard**

The Forest Service claims there is 10% old growth on the Nez Perce National Forest, but they have not conducted a Forest wide inventory of old growth as required in Appendix N of the Forest Plan. Appendix N states “All stands will be inventoried and prioritized with highest priority for inventory in those drainages where timber sales or other activities that could adversely impact old growth.” Instead, the Nez Perce/Clearwater Forest relies on an analysis of 343 Forest Inventory and Analysis (FIA) plots to determine if they have sufficient old growth to meet the Forest level requirement of 10% old growth.

There are several problems with this approach since these 343 plots are widely spaced across the 2.2 million-acre Forest and they were never designed to inventory old growth. Their primary purpose is to provide an approximate estimate of the amount of timber in the entire United States. The plot locations occur on State. Private and National Forest lands and their exact location is not shared with local Forest managers. The plots are remeasured every ten-years to update changes that have occurred due to forest growth, timber harvest and wildfire.

To my knowledge, the old growth characteristics of the 343 plots have never been evaluated in the field by qualified ecologists or biologists. Instead, the Nez Perce/Clearwater has used the data from the plots to make estimates of the amount old growth strictly by looking at the size of the trees that were measured on the plots and/or if the plot takers recorded presence of more than one canopy layer. They have estimated that approximately 22.6% of the Nez Perce Forest is old growth using tree size and 14.7% when canopy layer information is added (Reyes and Morgan 2022). Old growth amounts presumably decline when canopy layers are added because young single layered stands are eliminated from the analysis.

The analysis does not consider factors outlined in Appendix N of the Forest Plan such as: stand age, the presence of rot or decadence, crown closure (Appendix N recommends overstory closure of at least 10-40% and an understory closure of at least 40%, total crown closure is supposed to exceed 70%), or the presence of snags and downed logs. The Forest Plan suggests there should be at least 0.5 snags per acre exceeding 40-feet in height and 21-inches DBH. Downed log numbers are not listed, but are assumed to be abundant in old growth stands. Green et al. (1992) reports the average number of standing dead trees in old growth type four is 14 trees per acre over 9-inches DBH, with a range from 0 to 35.

Under this analysis, many very young stands with a general scarcity of rot and decadence are likely to be included. Fast growing stands in Northern Idaho can reach stocking levels of 15-trees per acre over 21-inches in relatively short time frames (less than 100-years). Such stands would have little resemblance to old growth as described in Appendix N of the Forest Plan.

Green et al (1992) suggest it requires at least 150-years for most forest stands except lodgepole pine (120-years) to reach old growth status. In old growth type 4, which is the most common type in Northern Idaho and the project area, they found old growth stands had an average age of 210-years with a range from 160 to 264-years. These stands supported an average of 27-trees per acre over 21-inches DBH and had a range of 12 to 53 trees per acre over 21-inches. Note, that the minimum criteria of 10-trees per acre set in the Green et al. (1992) screening criteria is slightly below the range found in old growth stands examined by the authors. This assures that all or most potential stands to be evaluated in the field for old growth condition are included in the list of stands to be screened. The minimum number was never intended to be used as a definition of old growth.

The Forest Service cannot display the location of the old growth stands they report under their FIA analysis. One just has to trust that it is out there someplace based on plot locations which they can’t even identify. Field verification on the nearby Hungry Ridge project, does not support their FIA claims. Hungry Ridge is presumably a high-risk area with lots of mature forest, yet the Forest Service could only find 7% old growth in the 50,814 forested acres they examined for the Hungry Ridge Project (Supplemental EIS – Chapter 3, Page 14). This is in an area where they have targeted for the largest timber sale planned in 50-years and where there is scrutiny from the court to upgrade their old growth analysis process.

Similarly, information in the recently released for the Green Horse project area, suggests that there are six old growth units and none of them have 10% old growth? Old growth meeting Forest Plan requirements in four of the units equals 5.6%, 6.1%, 6.8% and 7.7%. Two of the units that were affected by the Wash Creek wildfire don’t even meet the 5% requirement and have 0% and 0.5% old growth. Total old growth in the 43,067-acre area examined for old growth condition was 1845-acres or 4.3% of the six old growth compartments.

In the Clear Creek project where the Forest Service has made a site-specific Forest Plan amendment to modify the Forest Plan old growth definition. The analysis (2015 FEIS, Page 3-121) reports that there are 4,654-acres of verified old growth in the 43,666-acre old growth evaluation area as measured by the Green et al. (1992) screening criteria. This is approximately 11% of the evaluation area, but it is unclear how many of these stands would actually meet the requirements of Appendix N of the Forest Plan. Given that the Green et al. 1992 screening criteria only require 10-trees per acre over 21-inches DBH instead of 15-trees per acre over 21-inches DBH it is very likely there is less than 10% of the area that meets the requirements of Appendix N.

I could go on with numerous other examples where the Forest Service has failed to find greater than 10% old growth to meet the requirements of Appendix N in project planning. If they can’t find 10% old growth in Hungry Ridge and Green Horse and have to modify their standards in Clear Creek to achieve 10%, where are they going to find the additional old growth to meet the Forest wide 10% standard?

**Emergency Action Declaration**

Forest Service claims that the Twenty-mile project deserves special treatment under section 40807 of the Infrastructure Investment and Jobs Act (PL 117-58). They are asking the Secretary of Agriculture to declare an emergency situation for the project area which would exempt the proposal from the Forest Service objection process and eliminate any further comment from the public on the on the proposal. This request should be denied.

The project is located far and away from any known community and there is no private land in the project area. The area is bordered by the Gospel Hump wilderness to the south and any fire that might occur would likely burn uphill towards the wilderness boundary. The community of Elk City is located over 14-miles away and on the opposite side of the South Fork of the Clearwater River from the project area. There is also a major highway on the opposite side of the river. It would be highly unlikely that a wildfire originating in the project area would spread towards the community of Elk River, any other community or private land. Risks from wildfire don’t appear to be any higher than other locations on the Nez Perce-Clearwater NF, and most existing stands appear to have originated from wildfires that occurred in the early 1900s. Stand age likely varies from 100 to 120-years which would be well below their expected longevity of 150 to 250-years for the habitat types found in the project area. The effort to declare an emergency largely appears to be an effort the expediate the review process for this highly controversial project

**Wildlife**

My overall impression is that the Twenty-mile project will have negative consequences to most wildlife species using the area. The proposed Alternative includes 1,822-acres of regeneration timber harvest, 387-acres of commercial thinning and 6,807-acres of prescribed fire.

In addition, the proposal includes 10 miles of temporary road construction and 36-miles of road maintenance on existing templates some of which are currently restricted yearlong and grown over. Access restrictions would be eased on 8-miles of existing road to allow motorized access to Sourdough Point during the summer.,

At least ten regeneration harvest unit complexes exceed 40-acres in size and six of these exceed 100-acres. Incredibly, one regeneration harvest unit complex is 642-acres. Prescribed burning is expected to create an unknown amount of additional opening. This has eliminated the idea of providing suitable hiding cover and thermal cover adjacent to harvest areas. Intermediate harvest and fuel treatments will remove snags, downed wood, shrubs, understory plants and important hiding cover.

The wildlife analysis makes several erroneous conclusions that are not supported by the best available science and fails to answer the “so what” question of what habitat losses associated with the project mean. Spatial requirements of territorial species have been identified, but there has been no actual analysis using potential impacts to existing territories. No thresholds of management activity have been set for most species. The examination of cumulative effects is also very weak and the nearby Hungry Ridge and End of the World projects are not even mentioned in the proposed action document. These two very large projects are expected to remove over 317-million board feet of timber. Hungry Ridge is less than five miles from the Twenty-mile project area and the End of the World project is located just to the west of Hungry Ridge.

Schultz (2010) outlined most of these problems in a critique of Forest Service wildlife analysis. Schultz found that the Forest Service often relies on stand exam (USDA 2016) queries to determine acres of suitable habitat, but then makes no interpretation as to what that loss of habitat means to the species. Similar to what has been done on the Twenty-mile project, they fail to set meaningful thresholds and assume that habitat losses are insignificant. Schultz (2010) concludes that “the lack of management thresholds allows small portions of habitat to be eliminated incrementally without any signal when the loss of habitat might constitute a significant cumulative impact.”

Schultz (2010) also examined the Sampson assessments (Sampson 2006a and 2006b) which are the mentioned in the discussion of several project area wildlife species. She states that the Sampson assessment “suffers from several problems, the most prominent being that the analysis is based on habitat availability, which alone is insufficient for understanding the status of populations (Noon et al. 2003, Mills 2007)”. Her recommendations generally call for more peer review of large-scale assessments and project level management guidelines. She suggests that we must adopt more robust scientifically sound monitoring and measurable objectives and thresholds if we are to be successful in meeting obligation of maintaining viable populations of all native and desirable non-native wildlife species. This has not been done on the Twenty-mile project.

An interesting observation of the Sampson assessment is that it focuses on short-term viability and long-term viability using what is called the 50/500 rule (Bessinger 2002). In fact, all six species considered in Sampson’s analysis are all evaluated for short-term viability using this “rule of thumb”. Sampson did not evaluate long-term viability for the fisher and marten, but he did do if for the goshawk, pileated woodpecker, flammulated owl and black-backed woodpecker. Sampson concluded that “In regard to long-term viability, this conservation assessment has found that long-term habitat conditions in terms of Representativeness, Redundancy, and Resiliency are “low” for all species.”

The Twenty-mile wildlife analysis does not mention Sampson’s long-term viability conclusions, and only focuses on his short-term projections which are based on maintaining 50 individuals (25 male and 25 female). In his analysis, Sampson merely uses home range size for each species and makes assumptions of overlap in ranges of males and females. Home range size is then multiplied by the effective population size (ne - a number that includes young and non-breeding individuals - Allendorf and Ryman 2002) and this is projected as the amount of habitat required to maintain a minimal viable population in the short-term. This simplistic approach ignores a multitude of factors and makes no assumptions about habitat loss or change over time. For the fisher and marten, Samson uses a “critical habitat threshold” as calculated in another publication (Smallwood 2002). Some of these numbers have been reported in the Proposed Action for the various species of concern.

There are several problems with such an approach and the risk to the species would be extremely high if any of the species ever reached these levels in the Northern Region. Surely, all six species would be listed as endangered if this were to occur and the probabilities for their continued existence would be very low. There is also no way that National Forest Management Act (NFMA) and Endangered Species Act (ESA) requirements could be met of maintaining species across their range and within individual National Forests with such an approach. Mills (2007) captured the futility of such approach in his book on Conservation of Wildlife Populations: “MVP is problematic for both philosophical and scientific reasons. Philosophically, it seems questionable to presume to manage for the minimum number of individuals that could persist on this planet. Scientifically, the problem is that we simply cannot correctly determine a single minimum number of individuals that will be viable for the long term, because of inherent uncertainty in nature and management….”

Sampson also admits that “Methods to estimate canopy closure, forest structure, and dominant forest type may differ among the studies referred to in this assessment and from those used by the Forest Service to estimate these habitat characteristics” and that “FIA sample points affected within the prior 10 years by either timber harvest or fire are excluded in the estimates of habitat for the four species” and finally that “FIA does not adequately sample rare habitats”. This especially concerning given the reliance on the FIA queries to identify suitable habitat and the fact that the data used in the analysis is now over 25 years old.

Since the Sampson short-term viability analysis was completed, we have seen more wildfires and the level of timber harvest has increased on the Nez Perce – Clearwater National Forest. Recent annual sale offerings have increased from approximately 50-MMBF at the time of Sampson’s report to over 90-MMBF today. Projects like Twenty-mile, Hungry Ridge and End of the World suggest that the Nez Perce-Clearwater intends to move those numbers higher. This is further evidenced by several other nearby projects such as Green Horse, Limber Elk and Red Siegel and the multitude of other projects that are occurring across the Nez Perce – Clearwater NF such as, Center Johnson, Clear Creek, Crane Point, Dead Laundry, Dixie-Comstock Community, East Saddle, French Larch, Gold Hill, Histloc Fuels, Johnson Bar, Little Boulder, Lolo Creek, Lowell WUI, Lower Orogrande, Newsome Fuels, Northside Powell, Orogrande Community, Parachute Fuel, Pete King, Red Moose Divide, Section 16, Smith Ridge, Stray Creek, Tinker Bugs, White Pine, Windy Shingle and Longleaf.

I therefore object to the use of the Sampson short-term viability analysis in the Proposed Action. The short-term viability analysis is scientifically unsound and it is very doubtful it could sustain scientific peer review. The analysis is clearly out of date and does not reflect recent increases in both logging and wildfire. Schultz (2010) captured this sentiment in her critique of the Sampson report: “some interviewees also thought the work should be peer reviewed, especially if it was conducted by USFS management, and several were skeptical that it would survive such review.” I agree with the reviewers.

The wildlife analysis assumes the project will not contribute to cumulative habitat losses at the Forest level, when the Nez Perce/Clearwater has no idea what the cumulative impact of numerous past and proposed projects are having on the species of concern. While I am encouraged to see that the Forest has included some project level monitoring for species like the goshawk and fisher, I am concerned that it has been over 30-years since the current Forest Plan was signed, yet there is currently no statistically reliable monitoring information on the impacts of Forest Service activities on any wildlife species of concern. With the possible exception of elk (populations monitored by the Idaho Fish and Game) and the North Idaho Elk Guidelines (Servheen et al. 1997), there is no habitat proxy that is being used on the Forest that has any field verification. For example, it has not been confirmed that old growth standards are truly protecting old growth-related species like the fisher, goshawk, pine marten and pileated woodpecker.

The Forest Service is fond of the argument that viability cannot be discussed at the project level, but they then use habitat numbers outside of the project area to defend excessive development within the individual project area. They rationalize that sufficient habitat is available in other areas to make up for losses within the project area. Under this scenario, no project ever creates a significant impact and species are lost by “10,000 cuts” as project after project is allowed to proceed. The Forest Service cannot have it both ways; either they need to have project designs that create minimal impacts to species of concern, or they need to have monitoring information that confirms their habitat proxies are “providing for a diversity of plant and animal communities based on the suitability and capability of the specific land area” as required by the National Forest Management Act.

My specific comments here largely focus on the protection of species that utilize older forests, but it should be recognized that numerous other more common species that have no special status like forest owls, song birds and small mammals will also likely benefit from the protection of older forest habitat.

**Fisher**

According to the Proposed Action document, the Twenty-mile project area is 15,105-acres and contains 350-acres of forests that have an average diameter of 20+ inches and 7,975-acres that have an average diameter of 15-19+ inches. These stands represent the mature forest component on the landscape that is discussed by Sauder and Rachlow (2014) and this acreage currently represents 55.1% of the project area. According to the Vegetation Report there are approximately 296-acres of shrub or herbaceous cover (2% of the project area), which would represent the open areas described by Sauder and Rachlow (2014). These conditions would provide ideal habitat for the fisher and other species that rely on older forests since there are very few openings and an abundance of mature forest.

Sauder and Rachlow (2014) found individual fishers “selected landscapes for home ranges, with larger, more contiguous patches of mature forest and reduced amounts of open areas. Landscapes that had >50% mature forest arranged in connected, complex shapes with few isolated patches, and open areas comprising <5% of the landscape characterized a forest pattern selected by fishers in our study.”

The proposed action document discusses the Sauder and Rachlow (2014) findings, but does not do a complete analysis of the impacts of the proposed action on the fisher. The proposed action analysis suggests that two HUC 12 watersheds were utilized for the fisher analysis, but does not display the boundaries of these watersheds. Presumably, one of the analysis areas is centered on the Twenty-mile watershed which is approximately 14,570-acres when the acreage in the Gospel Hump Wilderness area is included. This acreage corresponds to the acreage reported in the proposed action document. The project area (excluding wilderness) contains approximately 11,940-acres of the Twenty-mile watershed.

The boundary of the other analysis area is very unclear and is termed the Wing Creek – South Fork of the Clearwater River analysis area. It is listed as 14,607-acres in the proposed action document but the acreage in the project area only accounts for 3,165-acres. Project area lands located outside of the Twenty-mile drainage are found in the small Rainy-Day drainage and several other small face drainages that flow directly into the South Fork of the Clearwater River (Figure 1). There is no project area activity in the Wing Creek drainage.

The fisher analysis should have centered on the 15,105-acre project area for estimating direct impacts to the fisher, since the project area is so close in size to that of a female fisher, which has been reported to be approximately 12,200-acres (Sauder and Rachlow 2014). Adding large areas outside of the project area only serves to dilute the direct impacts of the project.

The proposed action analysis asserts that both analysis areas maintain 50% mature forest, but no analysis of the amount of open habitat that will be created by the project is included. The proposed action will regenerate 1,822-acres (12.1% of the project area), thin 387-acres (2.6% of the project area) and conduct prescribed burning on 6,807-acres. If just 10% of this burning results in the opening of the canopy there will be another 680-acres of new openings (4.5 % of the project area). Using these numbers (Table 1) and assuming that intermediate treatments move mature forest to the other category, the project proposal would drop the amount of mature forest to 5436-acres (36% of the project area) and increase the amount of opening to 2,798-acres (18.5% of the project area). According to the Sauder and Rachlow publication this would reduce the probability of fisher occupancy to around 20%.

This analysis does not even account for the fact that 10 openings created by regeneration harvest will be over 40-acres in size and unbelievably one opening is proposed to be 642-acres, two more exceed 200-acres and three more exceed 100-acres. Fishers can be expected to avoid these large cutting units as well as any other large openings that will be created by prescribed burning.

The proposed action does not examine cumulative effects for the fisher and claims “Connectivity exists to large swaths of fisher habitat just outside the project area boundary”. There is no mention of the nearby Hungry Ridge project that is only five miles away from the project area and will create significant impacts to fisher habitat (Figure 1).

There are also several other nearby projects such as End of the World, Green Horse, Limber Elk and Red Siegel. Not to mention the multitude of other projects that are occurring within fisher habitat across the Nez Perce – Clearwater as, Center Johnson, Clear Creek, Crane Point, Dead Laundry, Dixie-Comstock Community, East Saddle, French Larch, Gold Hill, Histloc Fuels, Johnson Bar, Little Boulder, Lolo Creek, Lowell WUI, Lower Orogrande, Newsome Fuels, Northside Powell, Orogrande Community, Parachute Fuel, Pete King, Red Moose Divide, Section 16, Smith Ridge, Stray Creek, Tinker Bugs, White Pine, Windy Shingle and Longleaf.

Most of these proposed projects occur in low elevation areas preferred by the fisher and they will harvest and fragment thousands of acres of mature forest in an area that has been termed the roaded front. These are the most productive areas on the Nez Perce-Clearwater National Forest and the best habitat for the fisher because of the productive forest types that are found there. Sauder and Rachlow (2014) report that “in our study area, composition and configuration of roadless areas differed significantly from occupied fisher home ranges, suggesting that roadless areas might not be preferred fisher habitat in this region. The abundance of open areas was significantly higher and the proximity of mature forest patches was significantly reduced in roadless landscapes relative to occupied fisher home ranges. The Sauder and Rachlow (2014) study was conducted on the Nez Perce-Clearwater National Forest.

**Figure 1 – Twenty-Mile Project Area Drainages and Proximity of the Hungry Ridge Project**

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**Table 1 – Current and Expected Habitat Conditions After Project Implementation based on 2011 Vmap Data (USDA Forest Service 2021) and the recommendations of Sauder and Rachlow (2014).**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Fisher AA | Area (Ac) | Mature Ac | Mature % | Open (Ac) | Open % | Other (Ac) | Other % |
| Project Area (Exist Condition) | 15,105 | 8,325 | 55.1% | 296 | 2.0% | 6,484 | 42.9% |
| Regen |  | -1822 |  | +1822 |  |  |  |
| Intermediate |  | -387 |  |  |  | +387 |  |
| Prescribed Fire |  | -680 |  | +680 |  |  |  |
| After Project Implementation |  | 5436 | 36.0% | 2,798 | 18.5% | 6871 | 45.5% |

1 Analysis assumes regeneration harvest units will be converted from mature forest to openings following timber harvest.

2 – Analysis assumes commercial thinning units will be converted from mature forests (Vmap Size Class 15-19”) to the “other” category following logging.

The results of the analysis suggest that the potential for occupancy of the project area will be reduced from the existing situation of near 100% of potential to 20% of potential according to Sauder and Rachlow (2014). This is largely the result of the creation of several new openings will be created as a result of regeneration harvest and the corresponding loss of mature forest (Table 1).

Canopy closure would be significantly reduced in intermediate harvest units and such treatments will remove most stand components that are important to the fisher and other species that utilize older forests. Although a few snags and decadent trees may be retained according to the Proposed Action, trees with evidence of decay, disease or insect infestation will generally be removed. Downed logs, snags and understory plants will also be removed and skid trails or cable corridors will be required for logging. These treatments will cause additional impacts to canopy closure and understory vegetation.

Use of stands that have been sanitized by intermediate harvest treatments by fishers and other species that utilize older forests is debatable, and I am unaware of any scientific study that suggests that fishers or other species that utilize older forests are attracted to stands that have been treated in this manner. I therefore considered such stands as moving from the mature forest to the “other” category in my analysis. Thus, the analysis predicts significant declines in the mature forest component and suggests that fishers would likely avoid such intensively managed areas. This is exactly what I would expect to occur as a result of implementation of this large project.

Likewise, there is a large amount of proposed prescribed burning in the project area. It is intended that burning would be conducted at low to moderate intensities, but some removal of overstory trees is anticipated. I have conservatively estimated that this activity will create openings in 10% of the prescribed burn units.

In summary, the proposed project is highly likely to displace fisher use from the project area and is similar to what I have seen on many other projects on the Nez Perce Clearwater NF. The nearby Hungry Ridge proposal reduces the potential for occupancy to 10% in three potential home ranges found in that project area. Similar impacts can be expected in the End of the World Green Horse, Red Seigel and Limber Pine project areas where there are similar levels of timber harvest in conjunction with large regeneration units like we see in this proposal. Although, I don’t recall that any of these other projects had a 642-acre regeneration harvest unit.

**Goshawk**

The Proposed Action document suggests there are 11,247-acres of potential goshawk habitat in the project area, but makes no mention of how this acreage was determined. Of this acreage 4,563-acres is considered nesting and remaining acreage is considered foraging habitat. Once again, there is no information regarding the differences in nesting and foraging habitat. Timber harvest is expected to impact 17% of the foraging habitat and 25% of the nesting habitat. Prescribed fire treatment areas overlap with an additional 44% of the foraging habitat and 56% of the nesting habitat.

Despite the fact that their own analysis suggests that 61% of the foraging habitat and 81% of the nesting habitat could be impacted by the proposal, the analysis still concludes “that Goshawk habitat is well-represented and available throughout the Forests and exceeds that required to maintain viable populations at the regional scale.” The analysis does not make any projections of direct impacts to goshawk habitat from all of this activity.

Moser (2007) reported that, goshawk home range size was largely related to nesting success and the amount of opening and mature forest within the home range. Birds of both sexes with successful nests generally had smaller home ranges. For example, males with successful nests (N=4) had an average home range size of 9,657 acres and females with successful nests (N=8) had an average home range size of 6,600 acres. Male bird home range size increased as the number of openings in the home range increased and the amount of closed canopy forest decreased, but these factors weren’t significant for female birds. Studies in other areas have reported smaller home range sizes in the neighborhood of 5,000-6,000 acres (Reynolds et al. 1992).

Thus the 15,105-acre project area would likely support two to three female goshawk home ranges. Based on the amount of potential habitat identified in their report, the proposed action document does suggest that the project area would support two female home ranges. There is no mention why 3,858-acres of the project area is considered unsuitable in this heavily forested landscape.

Reynolds et al. (1992) suggest that at least 180 acres of suitable nesting habitat be maintained in each goshawk home range. This nesting habitat be maintained in uncut blocks of at least 30 acres in size and that at least three suitable nesting areas be maintained in each home range. Regional direction based on Clough (2000) suggests the amount of nesting habitat should be increased to at least 240-acres and uncut nesting areas be increased to 40-acres. Reynolds recommends a suitable post-fledging area of at least 420-acres in size with at least 60% old forest surrounding the potential nest stands.

Thus, the Reynolds et al. (1992) guidelines actually require maintaining more than 180 or 240-acres of mature forest in each goshawk home range. The exact amount of mature forest to be maintained is dependent on the configuration of the existing nesting habitat and the composition of the surrounding post-fledgling areas. This needs to be determined prior to timber harvest based on the location of identified nesting habitat. Allowing post-fledging areas to be extensively harvested after the active nesting season (Aug 15th) will likely assure that the nesting area will be abandoned in the following year. This approach is proposed in the Twenty-mile project and several other projects on the Nez Perce – Clearwater NF. This provides little assurance of long-term protection of goshawk habitat.

When possible, Reynolds et al. (1992) recommend three additional replacement nesting areas. This recommendation fits well with the findings of Moser and Garton (2009) who found that alternate nest sites will be used within the home range if the previous year’s nest site is lost for some reason. Foraging habitat should maintain the diversity of conditions that Reynolds et al. (1992) discusses in his management guidelines. This means maintaining a sufficient component of older forest stands along with some stands in younger age classes.

Moser and Garton (2009) tested Reynolds et al. (1992) recommendation for leaving 60% mature forest in the post-fledgling area by experimentally clearcutting mature stands in the post-fledgling area after the nesting season (average harvest unit size 104 acres). When Moser and Garton (2009) experimentally clear-cut in the post-fledgling area they found goshawks, re-nested when approximately 39% of the post-fledging area (164 acres) remained as mature forest (potential nesting habitat). From their work, Moser and Garton (2009) suggested that the amount of mature forest in the post-fledgling area could potentially be reduced to 39%, but this will likely place greater risk on the species (Clough 2000) and I think the more conservative approach suggested by Reynolds is more appropriate for National Forest management.

The goshawk analysis does not display the location of nesting habitat or potential post-fledgling areas within the project area and it is very unclear how potential habitat will be directly impacted. Timber harvest is very concentrated along the existing road system in the northern and southeast portions of the project area and it is quite likely that goshawks will be displaced from these areas. There is a good possibility that at least one existing home range will be lost to all of this activity.

The determination of cumulative impacts is largely based on the outdated findings of Sampson (2006b) and Bush and Lundberg (2008). The analysis makes no mention of nearby timber sales such as Hungry Ridge and End of the World. Sampson (2006b) estimated that only 30,147-acres goshawk habitat would be necessary to support a viable population of goshawks in the entire Northern Region. Considering a 5,000-acre home range, this estimate would only support 6 nesting pairs of goshawks which is hardly a viable population.

Estimates of existing habitat from Bush and Lundberg (2008) are based on FIA data and suggest there are 47,117-acres of nesting habitat, 275,166-acres of post-fledging habitat and 682,261-acres of foraging habitat on the Nez Perce National Forest. The main criteria for estimating nesting habitat are defined as a stand with a basal area weighted average diameter of 13-18 inches and canopy cover of 34-71%, post-fledgling habitat is defined as a stand with a basal area weighted average diameter of 7+ inches and canopy cover of 50+%, and foraging habitat is merely defined as having 40+ percent canopy cover. There are other secondary criteria related to vertical structure, basal area and tree species.

These liberal interpretations (especially for post-fledgling and foraging habitat) do not agree with the literature and have not been updated in 15-years. They do not reflect both the increase in logging and wildfire that has occurred in recent years. The analysis is not spatially specific and there is no analysis of the proximity of nesting and post-fledgling habitat.

Moser and Garton (2009) reported that all goshawk nests examined in their study area were found in stands who’s average DBH of overstory trees was over 12.2 inches and all nest stands had > 70% overstory tree canopy. They described their findings as being similar to those described by Hayward and Escano (1989). Hayward and Escano reported that nesting habitat “may be described as mature to overmature conifer forest with a closed canopy (75-85% cover) ….” Moser and Garton state “this classification corresponds with Reynolds et al. (1992) vegetation structural stages four to six”.

Reynolds et al. (1992) describe foraging areas as a “mosaic of vegetation interspersed throughout the foraging area”. The indicate “the majority (60%) of the foraging area should ultimately be in the three older age classes VSSs (4,5,6), approximately 20% in each”. In mixed species stands they suggest the VSS 6 stands have a minimum crown closure of 60%, VSS 5 stands have a minimum crown closure of 50% and one third of VSS 4 stands have a minimum crown closure of 60% and the remaining two-thirds of VSS-4 stands have a minimum crown closure of 40%. Reynolds et al. (1992) classify VSS-6 as old forest exceeding 24 inches DBH, VSS-5 as mature forest 18-24 inches DBH and VSS-4 as mid-aged forest 12-18 inches DBH.

In summary, the goshawk analysis makes no estimate of direct impacts in the project area. It ignores the cumulative impact of nearby projects and relies on a questionable analysis of species viability and an outdated and very liberal interpretation of potential goshawk habitat across the Nez Perce NF. The analysis needs to be redone.

**Pileated Woodpecker**

The Proposed Action document suggests there are 10,509-acres of pileated woodpecker habitat in the project area and 195-acres of nesting habitat. The Forest Service analysis suggests that this is enough habitat to support 10 nesting pairs of pileated woodpeckers whose average home range is estimated at approximately 1,000-acres. Once again there are no maps or details that display how potential habitat was identified.

The Forest Service has estimated that timber harvest would impact 17% of the foraging habitat and 8% of the nesting habitat. Prescribed fire would impact an additional 47% of the foraging habitat and 31% of the nesting habitat. According to the Forest Service analysis implementation of these activities will result in a loss of two currently suitable home ranges. The Forest Service sums up their conclusions by stating “While woodpecker occupancy in the project area may be reduced by the proposed activities, habitat is well represented across the Forest and exceeds that which is estimated as necessary to maintain viable populations at the regional scale.”

The pileated woodpecker analysis is not spatially explicit. While it is mentioned in the Proposed Action that the average home range size of pileated woodpeckers is approximately 1,005 acres (Bull et al. 1992) and that the project area would likely support ten nesting pairs. These areas are not identified nor are any calculations apparent that actually display the suitability of potential home ranges.

Methods of determining home range suitability are available in publications by Bull and Holthausen (1993) and Bull et al. (2007). These publications are not utilized in the pileated woodpecker analysis. Using the Bull publications would have given the Nez Perce/Clearwater National Forest a way of evaluating habitat potential and setting cumulative habitat thresholds where habitat loss becomes significant (Schultz 2010). Such an analysis would have been based on the latest scientific information and would display some concern for maintaining management indicator species within the project area.

Bull and Holthausen (1993) recommend that approximately 25% of the home range be old growth and 50% be mature forest. They suggested that 50% of the area should have stands with greater than 60% canopy closure and at least 40% should remain unlogged (any type of logging). Follow up work (Bull et al. 2007) found that bird density did not change in 30 years (despite major infestations of spruce budworm) in home ranges meeting these guidelines, unless extensive regeneration harvesting (like that proposed on the Twenty-mile project) had occurred in the home range. They defined extensive regeneration harvest as 25% of the area. They also examined nesting success and found that birds that successfully produced young had on average 85% of their home range unlogged and less than 15% logged with any type of logging including fuel reductions. Whereas unsuccessful nesters had 62% of the home range unlogged and 38% logged (Bull et al. 2007).

In order to conduct such an analysis, it would be necessary to identify potential or theoretical home ranges across the project area. Home ranges should be roughly 1,000-acres in size and it is best if topographical features are utilized to define the home ranges and that all potentially suitable acreage in the project area is included. This assures that there is no overlap or unevaluated acreage in the project area. If areas of lodgepole pine (3,840-acres) are eliminated, ten potential home ranges for the 15,105-acre project area could be close to accurate, but it appears more impact will actually occur that predicted in the Proposed Action. Regeneration harvest is very concentrated and it is unlikely that intervening leave strips between harvest units will offer much habitat for pileated woodpeckers. With 1822-acres of regeneration harvest it is more likely that three or four potential home ranges would be eliminated.

Cumulative impacts have not been adequately addressed in the pileated woodpecker analysis and the analysis for other species. There is no mention of nearby projects such as Hungry Ridge or End of the World. Once again, the Forest Service relies on the Sampson (2006a, 2006b) and Bush and Lundberg (2008) reports to support their claims that habitat is “well represented” and will “maintain viable populations at the regional scale.” These documents are treated as static and there is no accounting for changes (timber sales and wildfires) that have occurred in the fifteen to seventeen years since these reports were produced. It is ironic that the proposed action document uses the Samson (2006b) short-term viability analysis and the Bush and Lundberg 2008 habitat estimates as a way to show that pileated woodpeckers are being maintained at the Forest level and that the Twenty-mile project will not contribute to cumulative impacts.

The Bush and Lundberg (2008) numbers are based on a simplistic query of FIA data is not spatially explicit and relies on meaningless definition of pileated woodpecker habitat that is not supported by the available literature (Bull and Holthausen 1993, McClelland and McClelland 1999, Mellen et al.1992). Nesting habitat is simply defined as a stand with one dead tree per acre over 15 inches DBH and foraging habitat is defined as a stand with one dead tree per acres over 9 inches DBH. This is not a defensible description of pileated woodpecker habitat and makes the analysis pretty much meaningless. There is no requirement for the snags to be part of a mature stand and 15-inch DBH snags are not suitable for nesting by this species. If methods used in the Sampson, Bush and Lundberg had been utilized in the project area it is likely that most of the stands in the project area would have been classified as nesting habitat.

In summary, the Twenty-mile pileated analysis shows the exact problem that Schultz (2010) identified in her analysis of Forest Service wildlife Based on their own analysis the Forest Service does identify some loss of pileated woodpecker habitat, but this loss if pretty much dismissed by the idea that there is plenty of habitat in locations outside of the project area. Impacts of habitat fragmentation also As Schultz (2010) “the lack of management thresholds allows small portions of habitat to be eliminated incrementally without any signal when the loss of habitat might constitute a significant cumulative impact.”

**American Marten**

The Proposed Action document suggests there 10,312-acres of marten habitat in the project area. Timber harvest is estimated to impact 18% of this acreage and the planned prescribed burning overlaps with 48% of the suitable habitat. There are no maps and information regarding how these acreages were identified. Once again, the conclusion is that “Concentrated areas of marten habitat exist both east and west of the project area boundary, making it unlikely that the level of harvest and burning associated with project will significantly reduce marten occupancy of the area. Additionally, marten habitat is well-represented and available throughout the Forest and exceeds that which is estimated as necessary to maintain viable populations at the regional scale.”

It appears that the pine marten analysis relies strictly on data base queries to identify potential habitat. The analysis is not spatially explicit and fails to recognize more recent literature on the effect that habitat fragmentation on the pine marten. For example, numerous recent studies have found that the species is particularly vulnerable to habitat fragmentation (Webb and Boyce 2009, Hargis et al. 1999, Moriarty et al. 2011, Potvin et al. 2000, Wasserman et al. 2012). For example, Hargis et al. (1999) reported that “Martens were nearly absent from landscapes having >25% non-forest cover, even though forest connectivity was still present.” Avoidance of openings is well documented in the literature (Potvin et al. 2000, Koehler and Hornocker 1977, Chapin et al. 1998 and Wasserman et al. 2012)

The Nez Perce/Clearwater National Forest needs to do a better job of identifying fragmentation impacts on the pine marten on the Twenty-mile project. I suggest that suitable habitat for the pine marten needs to be mapped at the project level. The findings of Wasserman et al. 2012 should prove useful in defining this habitat. They found that and elevation of 4,593 (1400 meters) was the peak elevation for the probability of marten presence and that the probability of marten presence declined as elevation either increased or decreased. Like many other studies they found that marten presence was positively influenced by the amount of mature closed canopy forest and negatively influenced by high road densities, non-stocked clearcuts and habitat fragmentation. They also found that marten make use heavy use of western red cedar stands occurring in these higher elevation areas. Use of spruce/fir forests was less than reported in some other studies such as Koehler and Hornocker (1997).

Theoretical home ranges should then be delineated within the suitable habitat and that fragmentation effects examined. Home range estimates are highly variable for marten (Buskirk and McDonald 1989, Powell 1994) and no good estimates are available for Idaho in the literature. I suggest using the findings of Bull and Heater (2001) who found that female home ranges averaged 3,500 acres in nearby Northeastern Oregon. They report that home ranges do not overlap significantly in the same sex, but larger male home ranges (6,700 acres) often overlap female home ranges. The number of theoretical home ranges that the 15,105-acre project area can support will be dependent on the amount of suitable habitat and it is expected to be 3 or 4 female home ranges.

Timber harvest should be then limited to actions that do not create extensive open areas in these home ranges. For example, Wasserman et al. (2012) report the probability of marten detection drops from 0.5 to 0.4 when the landscape is composed of 15% non-stocked clearcuts. Hargis et al. (1999) report little use of home ranges (landscapes) that have greater than 25% open habitat. Such an analysis would give a much more scientifically based projection of the impact of the proposed project on marten habitat and more appropriately deal with fragmentation and habitat arrangement impacts that have been ignored in the current analysis.

Wasserman et al. (2012) point out four main management implications of their work that have implications for marten habitat in the project area. First, is “that marten select habitat at multiple spatial scales, selecting home ranges within unfragmented landscapes with high canopy closure and low road density…” Second is “the importance of low fragmentation, middle elevation forests” and third is that timber harvest in northern Idaho National Forest System lands was disproportionately concentrated in high-productivity and highly valuable middle-elevation mesic forest types”. These stands are the exact target of actions on the Twenty-mile project. Fourth, “marten are highly sensitive to road density and patch density” and that “abandoned and decommissioned roads that do not appear on current travel plan maps still have substantial impact on marten habitat. The proposed action will construct 10-miles of new temporary road and maintain 36 miles of existing road some of which are currently grown over. Access restrictions will also be eased on 8-miles of existing road.

Direct impacts to marten habitat are apparent due to habitat fragmentation in the northern and southeast portions of the project area where the large number of proposed regeneration harvest units will cause significant habitat fragmentation. This fragmentation along with the very large harvest units that are proposed are likely to displace marten from those areas. It can be expected that at least one female home range will be lost as a result of the project.

Once again, the analysis of cumulative impacts relies on the outdated Sampson (2006b) viability analysis and the Bush and Lundberg (2008) habitat analysis and ignores the impacts of other nearby. The Sampson (2006b) analysis suggests viability for the American Marten would be maintained by 3459-acres of habitat across the entirety of Region One. This is the home range size of a single female marten and does make any sense. Bush and Lundberg (2008) suggest there are 1,002,659-acres of marten habitat on the Nez Perce National Forest. Once again this is an FIA analysis that does not consider habitat fragmentation. The query is based on stands with an average diameter of greater than 9-inches DBH and a crown closure of greater than 30%. A wide variety of tree species groupings are also included in the query criteria. These criteria seem very liberal for a species that prefers older mature forests with closed canopies.

**Elk**

The Proposed Action document suggests there are four elk habitat analysis areas in the project area and that all four analysis areas are currently above Forest Plan standards. Results of the calculations (Servheen 1997) for the existing condition of these four areas are included in the Proposed Action document (Table 3-24). The results of the impacts of the proposed action are also displayed in Table 3-25 and indicate that elk habitat effectiveness would remain above Forest Plan Objectives in all four EAAs.” There are no maps or background information displaying the actual data that support these conclusions.

I find it very hard to believe that elk habitat effectiveness would remain above standard in all four units given the size of the proposed harvest units and concentration of proposed activities. Several large openings will be created that will be over 100-acres in size and little cover will be retained be. Big game (especially deer and elk) will not fully utilize these large openings. The elk guidelines (Servheen et al. 1997) stress that in order to be fully utilized, openings need to be less than 500 feet from cover and be bordered on all sides by cover not less than 800 feet in width. According to the guidelines “elk forage is present in openings and under forest canopies, and quantity is usually not a limiting factor on summer range.”

Please display maps and background calculations for your elk analysis in your final EA.

**Moose**

Previous studies of moose habitat on the Nez Perce National Forest have documented the importance of dense understories of Pacific yew stands under old-growth grand fir communities (Pierce and Peek 1984). The importance of these habitats has been documented in the Forest Plan with a special management area (MA-21) and local habitat management guidelines that have been developed based on that past research (Peek et al. 1987). The guidelines suggest that no more than 45% of MA 21 should be in age classes younger than 90 years and that no more than 14% should be logged in any 30-year period.

Management area direction for MA-21 has a standard that only lands under 35% slope are suitable for timber harvest and that only 5% of the **suitable** acreage can be harvested each decade. Suitable lands (those under 35% slope) are to be managed on a 210-year rotation. Harvested stands are to be managed to maintain 50% of the live Pacific yew component.

The Proposed Action document suggests that 28% of Management Area 21 is scheduled for timber harvest and does not list how much of MA-21 is under 35% slope. Prescribed burning will impact another 21% of MA-21 according to the Proposed Action document. This level of activity appears to be a violation of the Nez Perce Forest Plan and is unexplained in the Proposed Action document.

**Aquatics**

The watershed and fisheries analysis predicts that sediment production will remain under Forest Plan standards and there will be no fisheries impacts. The analysis accurately suggests that sediment impacts must be analyzed in true watersheds such as Twenty-mile Creek and Rainy Day Creek. However, analysis in the Wing Creek South Fork Clearwater HUC 12 analysis area does not utilize a true watershed for the evaluation road density and water yield. Cutting units in this HUC 12 analysis area are either found in Rainy Day Creek or within small face drainages that drain directly into the South Fork of the Clearwater River. Portions of the Wing Creek South Fork Clearwater HUC12 analysis area outside of the project area are not displayed in the Proposed Action Document.

The greatest risk that proposed harvest units pose to water quality is the increased potential for landslides on the steep slopes above the South Fork. I am most concerned about units 21, 22, 23 and 24 that appear to be on steeper slopes above the South Fork and may create increased risk of mass failure along road 1875.

I also wonder about the proposed prescribed burning in the Twenty-mile Creek drainage. The proposed burn is quite large (6,807-acres) and will impact 100% of the West Fork of Twenty-mile Creek and a large portion of the remaining drainage which will be impacted by both burning and proposed timber harvest. The area contains steep slopes and the species composition, which is dominated by grand fir, is not conducive to under burning. There is a high potential for this under burning to get out of hand and create much more open area than what is predicted by the Forest Service. It is also questionable what value the proposed unburning would accomplish in mature stands that are now dominated by mature grand fir. Should the proposed under burning get out of hand there could be serious consequence to water quality.

**Wild and Scenic River Corridor**

Why is it necessary to conduct 24-acres of regeneration harvest in the eligible wild and scenic river corridor and timber harvest in units 22, 23 and 24? Unit 24 is 18-acres and entirely in the wild and scenic river corridor. Unit 22 is actually 19-acres and the Forest Service has estimated that six-acres will be in the wild and scenic river corridor. Unit 23 (26-acres) is located between the other two units and appears to be just outside of the eligible wild and scenic river corridor. All three units are located near existing switchbacks of road 1875 as it climbs out of the South Fork of the Clearwater River corridor.

While it is difficult to tell from the provided maps, it appears that most of the area involved with these three units is located in an area with a high probability of erosion or mass wasting. The units have the potential to increase landslide risk and the possibility of road failure near the existing road switchbacks. While the Proposed Action document claims that topography will hide most of the units from travelers using Highway 14, it still appears that the likelihood of the creation of a visual eyesore is high. Should a landslide occur, there will be major concerns for both fisheries and aesthetics. Please consider dropping these three units from your proposal.

**Summary and suggested modifications of the proposal**

In summary, I believe several of the proposed harvest units, especially those over 100-acres need to be reduced in size and number. Units on the steep slopes of the South Fork of the Clearwater River that are within the Wild and Scenic River corridor or located near the beginning of Road 1875 need to be dropped. If there are any old growth stands as defined in Appendix N of the Forest Plan or replacement stands in MA-20 that are being harvested these also need to be dropped. Cutting in MA-21 (moose habitat) needs to be redesigned to conform with Forest Plan standards. There is no need to open grown over roads to create a second route to Sourdough Point and the number and size of cutting units on flat ground near existing roads needs to be reduced.

I see no need for the proposed emergency designation by the Regional Forester and believe the proposed prescribed burning needs to be significantly refined and limited in scope to high risk stands. It is hard to believe the entire 6,807-burn area needs treatment. More emphasis needs to be on the protection of habitat for sensitive and management indicator species like the fisher, goshawk, pileated woodpecker and the pine marten. The cumulative impact of Hungry Ridge and other nearby projects also needs to be discussed.

Sincerely,

/s/ Harry R. Jageman

Literature Cited

Allendorf, F. W., and N. Ryman. 2002. The role of genetics in population viability analysis. Pages 50-85 in Population viability analysis. S.R. Bessinger, and D.R. McCullough, editors. University of Chicago Press, Chicago, Illinois, USA.

Beissinger, S. R. 2002. Population viability analysis: past, present and future. Pages 5-17 in

Population Viability Analysis. S. R. Beissinger, and D. R. McCullough, editors. University of

Chicago Press, Chicago, Illinois, USA.

Bull, E.L., R.S. Holthausen, and M.G. Henjum. 1992. Roost trees used by Pileated Woodpeckers in northeastern Oregon. Journal of Wildlife Management 56: 786- 793.

Bull, E. L., and R. S. Holthausen. 1993. Habitat use and management of pileated woodpeckers in northeastern Oregon. Journal of Wildlife Management 57: 335-345.

Bull, E. L. and T. W. Heater. 2000. Resting and denning sites of American martens in northeastern Oregon. Northwest Science, 74(3): 179-185

Bull, E. L., N. Nielsen-Pincus, B.C. Wales, and J.L. Hayes. 2007. The influence of disturbance events on pileated woodpeckers in Northeastern Oregon. Forest Ecology and Management 243:320-329.

Bush, R. and R. Lundberg. 2008. Wildlife habitat estimate updates for the Region 1 conservation
assessment. USDA Forest Service Region 1. Missoula, Montana, USA. 22 pp.

Buskirk, S.W. and L.L. McDonald. 1989. Analysis of variability in home-range size of the American marten. Journal of Wildlife Management 53: 997-1004.

Chapin, T. G., D. J. Harrison, and D. D. Katnik. 1998. Influence of landscape pattern on habitat use by American marten in an industrial forest. Conservation Biology 12:96-227.

Clough, Lorraine T. 2000. Nesting Habitat Selection and Productivity of Northern Goshawks in West Central Montana

Cooper, S. V., K. E. Neiman, and D.W. Roberts. 1991. Forest habitat types of northern Idaho: a second approximation. U.S. Forest Service, Intermountain Research Station, General Technical Report INT-236.

Green, P., J. Joy, D. Sirucek, W. Hann, A. Zack, and B. Naumann. 1992. Old-growth Forest types of the Northern Region. U.S. Forest Service, Northern Region R1, Missoula, MT.

Haig, I.T. 1932. Second growth yield, stand and volume tables for the western white pine type. Technical Bulletin 323. United States Department of Agriculture, Washington, D.C.

Hargis, C. D., J. A. Bissonette, and D. L. Turner. 1999. The influence of forest fragmentation and landscape pattern on American martens. Journal of Applied Ecology 36: 157-172.

Hayward, G.D. and R.E. Escano. 1989. Goshawk nest-site characteristics in western Montana and northern Idaho. Condor 91:476–479.

Koehler, G. H. and M. G. Hornocker. 1977. Fire effects on marten habitat in the Selway Bitteroot Wilderness. Journal of Wildlife Management. 41: 500-505.

McClelland, B. R., and P. T. McClelland. 1999. Pileated woodpecker nest and roost trees in Montana: links with old growth and forest "health." Wildlife Society Bulletin 27: 846- 857.

Mellen, T. K., C. E. Meslow, and R. W. Mannan. 1992. Summertime home range and habitat

use of pileated woodpeckers in Western Oregon. Journal of Wildlife Management 56: 96-103.

Mills, L. S. 2007. Conservation of wildlife populations: demography, genetics and management. Blackwell Publishing, Malden, MA, USA

Moriarty, K.M., W.J. Zielinski and E.D. Forsman. 2011. Decline in American Marten Occupancy Rates at Sagehen Experimental Forest, California. Journal of Wildlife Management. 75:1774-1787.

Moser, B.W. 2007. Space use and ecology of goshawks in northern Idaho. Ph.D. dissertation, Univ. of Idaho, Moscow, ID U.S.A

Moser, B.W., and E.O. Garton. 2009. Short-term effects of timber harvest and weather on Northern Goshawk reproduction in northern Idaho. J. Raptor Res. 43, 1–10.

Noon B. R., D. D. Murphy, S. R. Beissinger, M. L. Shaffer, and D. DellaSala. 2003. Conservation planning for U.S. national forests: conducting comprehensive biodiversity assessments. BioScience 53:1217– 1220

Peek, J.M., D.J. Pierce, D. C. Graham, and D.L. Davis. 1987. Moose habitat use and implications for forest management in North-central Idaho. Proceedings – Second International Moose Symposium. Swedish Wildlife Research, Biltrevy, supplement 1, part one, 1987. pp. 195-199.

Pierce, D.J., and J.M. Peek. 1984. Moose habitat use and selection patterns in north-central Idaho. J. Wildl. Manage. 48:1335-1343.

Potvin, F., L. Belanger, and K. Lowell. 1999. Marten habitat selection in a clearcut boreal landscape. Conservation Biology 14: 844-857.

Powell, R.A. 1994. Structure and spacing of Martes populations. in Martens, Sables, and Fishers: Biology and Conservation, pp.101-121. Edited by S.W. Buskirk, A.S. Harestad, M.G. Raphael and R.A. Powell. Cornell University Press: Ithaca, NY.

Reyes, Brian, and Natalie Morgan. 2022. Estimates of Old Growth and Snag Density on the Nez
Perce National Forest. Region One Vegetation Classification, Mapping, Inventory and
Analysis Report 22-22 v2.0. USDA, Forest Service. Northern Region, Missoula, MT. 7p.

Reynolds, R.T., R.T. Graham, M.H. Reiser, R.L. Bassett, P.L. Kennedy, D.A. Boyce, G. Goodwin, R. Smith, and E.L. Fisher. 1992. Management recommendations for the Northern Goshawk in the southwestern United States. USDA Forest Service General Technical Report RM-217, Fort Collins, CO U.S.A.

Samson, F. B. 2006a. A conservation assessment of the northern goshawk, black-backed woodpecker, flammulated owl, and pileated woodpecker in the Northern Region, USDA Forest Service. Missoula, MT, USA. 161 pp.

Samson, F. B. 2006b. Habitat Estimates for Maintaining Viable Populations of the Northern Goshawk, Black-backed Woodpecker, Flammulated Owl, Pileated Woodpecker, American Marten, and Fisher. USDA Forest Service. Missoula, Montana. Version June 6, 2006.

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

Schultz, C. 2010. Challenges in connecting cumulative effects analysis to effective wildlife conservation planning. BioScience 60:545–551.

Servheen, G., S. Blair, D. Davis, M. Gratson, K. Leidenfrost, B. Stotts, J. White, and J. Bell. 1997. Interagency Guidelines for Evaluating and Managing Elk Habitats and Populations in Central Idaho. Wildlife Bulletin No. 11, Idaho Dept. of Fish and Game. 75p.

Smallwood, K. S. 2001. Scale domains of abundance amongst species of mammalian Carnivora. Environmental Management 26: 102-111.

USDA Forest Service 1987. Nez Perce NF Forest Plan, Appendix N.

USDA Forest Service 2016. Region 1 Common Stand Exam and Inventory and Monitoring Protocols <https://www.fs.fed.us/nrm/documents/fsveg/cse_user_guides/R1_CSE_Append_v2016.pdf>

USDA Forest Service 2021. Northern Region Vegetation Mapping Project (VMAP) <https://www.fs.usda.gov/detailfull/r1/landmanagement/gis/?cid=stelprdb5331054&width=fu>

Waserrman, T. N., S.A. Cushman, and D.O. Wallin. 2012. Multi Scale Habitat Relationships of Martes Americana in Northern Idaho, U.S.A. Environmental Sciences Faculty Publications. Paper 20. http:// cedar.wwu.edu/esci\_facpubs/20

Webb, S. M., and M. S. Boyce. 2009. Marten fur harvests and landscape change in West-Central Alberta. Journal of Wildlife Management 73: 894-903.