October 5, 2018

[redacted]

Objection Reviewing Officer
USDA Forest Service
Regional Office
26 Fort Missoula Road
Missoula, Montana 59804

Subject: Center-Johnson Project – Nez Perce-Clearwater National Forest

Dear Sirs:

Here are my objections to the recent Center-Johnson project on the Nez Perce Clearwater National Forest.

Objection 1 - Use of the 2014 Farm Bill to prevent meaningful comment and avoid NEPA requirements

I am disappointed that the Forest Service has chosen to conduct the Center-Johnson project under the provisions of the 2014 Farm Bill. Those provisions effectively remove the opportunity of the public to comment on the Environmental Assessment in any meaningful way. Anyone who has not responded to the rather vague scoping letter is basically forced out of the NEPA process and those like myself who have responded to the scoping letter are now forced to file a formal objection. This is no way to conduct a meaningful public comment process, especially when the Forest Service has released four other projects in the same 30-day comment period (Clear Creek, Tinker Bugs, White Pine and Smith Ridge). Trying to respond to all of these projects in the same timeframe and also meet personal commitments has influenced my ability to respond as thoroughly as I would have hoped on this project.

Objection 2 – Deceptive designation of the project area as Wildland Urban Interface

It is also suggested that timber harvest is needed because the area is in the Idaho County Wildland Urban Interface for Whitebird and Riggins. Interestingly there are no homes nearby to the proposal and the project is over 8 miles from the community of Whitebird (population 91) and 15 miles from the small town of Riggins (population 267). Other than the desire to treat more acreage, there is a very large uncertainty that the proposed timber harvest will actually do

any good in reducing fire risk for the small towns of Whitebird and Riggins which are located downslope from the project area and already separated from the project area by a large expanse of non-forested habitat on the Salmon River breaks.

It appears that the Wildland Urban Interface designation has been very liberally applied by Idaho County and other counties on the Nez Perce/National Forest and is merely being used as a rationalization for garnering more federal funding and increasing local timber harvest. Wildland Urban Interface designations like we see on the Center-Johnson timber sale often extend for miles from small communities like Riggins and Whitebird and the presence of a few summer homes or backcountry ranches can extend the boundaries even larger distances.

Projects like Center-Johnson are rationalized because they are "within the wildland urban interface" and when they are conducted with limited public scrutiny with use of the Farm Bill the potential of abuse is high. These practices have national implications since they tend to divert money and resources away from high density population centers in mixed ownership high-risk landscapes where fuel treatments are actually needed.

Objection 3 - Inadequate Range of Alternatives

The Forest Service has not examined a reasonable range of alternatives as required by NEPA and has used a narrowly defined purpose and need to reject other reasonable alternatives. Under existing law, the Forest Service cannot define the purpose and need so narrowly as to preclude all other reasonable alternatives.

Given the small size of the project area (9,848 acres) and the fact that over 1,517 acres are not forested, the Forest Service has really proposed a great deal of activity. Alternative 2-Modified proposes 1,128 acres of regeneration harvest and 1,916 acres of intermediate treatment which is over 36.5% of the forested portion of the project area. Given the project area size and the conditions in the surrounding landscape (the project is really is an island surrounded by grassland types along the breaks of the Salmon and Snake Rivers). Listed below are some things that should have influenced alternative development.

Drop or modify units not meeting regional soil standards.

Drop all units and road construction in landslide prone areas

Drop regeneration and intermediate timber harvest in old growth stands. Change to hand methods and/or prescribed fire

Limit harvest to pose less risk to water quality and aquatic resources.

Limit harvest to pose less risk to fish and wildlife resources and regionally recognized species of concern.

Keep harvest units under 1000 feet in width (openings less than 500 feet from cover) and maintain adequate buffers of at least 800 feet in width between units, to assure full use by elk and other big game species.

Protect known goshawk nesting and post-fledging areas with measures recommended by Reynolds et al. (1992).

Objection 4 - Inadequate Evaluation of Cumulative impacts

The examination of cumulative effects is minimal and incorporates little analysis of the impacts of activities on private land, ongoing adjacent projects or future proposals into the analysis. There is no mention of the Windy-Shingle project located to the south of the project area or other projects such as End of the World and Hungry Ridge to the north. All of this proposed activity in a relatively short distance have significant implications for species like the goshawk, pileated woodpecker, fisher and marten.

Objection 5 - Failure to conduct an upward trend analysis

The Forest Service has used NEZSED to estimate the sediment yield at the Forest Boundary for seven partial drainages that extend outside of the project area. Three of these drainages (Deer Creek, Christie Creek and Sherwin Creek) are known to support a fishery. A resident fishery of red band and cutthroat trout is expected to occur in all three streams, while steelhead trout may occur in Deer Creek. One other stream (Joe Creek) is not known to support a fishery at this time, but is identified in the Forest Plan as potential fishery stream. Past activities on private land may have limited the fisheries potential of Joe Creek.

Cobble embeddedness surveys of these four streams indicate that none of them are currently meeting Forest Plan standards for water quality (Fisheries Biological Assessment – Table 5). Existing cobble embeddedness estimates are 63% in Christie Creek, 58% in Deer Creek, 61% in Sherwin Creek and 43% in Joe Creek. This translates to 14% of fisheries habitat potential for Christie Creek, 25% of potential for Deer Creek, 19% of potential for Sherwin Creek and 53% of potential for Joe Creek. Forest Plan standards are 70% of fisheries habitat potential for Christie, Sherwin and Joe Creeks and 80% of potential for Deer Creek. The Forest Plan requires an upward trend analysis before new activities can be pursued under these conditions.

Conditions do not look good for such an analysis. The Forest Service only has two data points (2005 and 2016) related to cobble embeddedness for three of these streams. Christie Creek has shown a significant decline (37% to 63%) in cobble embeddedness based on these two data

points, and there is only a slight improvement in Deer Creek (60% to 58%) and Joe Creek (48% to 43%). Data is limited to 2016 for Sherwin Creek.

NEZSED and FISHSED estimates suggest additional impacts as a result of proposed timber harvest and road construction, which the Forest Service largely discounts with the idea that not all impacts will occur in one year, that there will be sediment reductions with road improvements and that PACFISH buffers will prevent sediment introduction. FISHSED predictions suggest cobble embeddedness would decline by 3% in Christie Creek, 1% in Deer Creek, 10% in Sherwin Creek and 9% in Joe Creek due to Forest Service activities alone (Draft Biological Assessment – Table 7). There are no estimates of additional new activity that might occur on private land in the portion of the drainage that exists beyond the Forest boundary. Such increases would clearly move these two streams below the Forest Plan Fisheries standard.

Objection 6 – Dismissal of ECA changes in light of the existing stream conditions

According to the National Oceanic and Atmospheric Administration (NOAA 1998) a watershed with less than 15% ECA is considered in good condition, 15-30% ECA is considered moderate condition and over 30% is considered poor condition. According to the watershed analysis all project area streams except Poe-Deer Creek are considered to be in the good category. Poe-Deer Creek which was analyzed at the HUC-12 scale and is listed as being in the moderate category (19% ECA). Poe-Deer Creek is expected to go from 19% ECA to 22% ECA under Alternative 2-Modified.

Two streams (Christie Creek and Joe Creek) which were calculated at the true watershed scale are expected to move from the good (Existing ECA 3% and ECA 2% respectively) moderate category (ECA 16%) as a result of the Center-Johnson Alternative 2-Modified. Rather than acknowledging this as a concern and scaling back the proposal, the Forest Service rationalizes their actions by claiming that unit sizes may be reduced in size during sale layout and that activities will not occur in the same year.

Given that most of the streams are already exceeding Forest Plan Standards and that an upward trend in water quality is required to proceed, one would think the Forest Service would be more sensitive to water quality issues. Moving watershed condition from good to moderate based on ECA is not an example of an improving trend in water quality condition. Please modify the proposal to at least keep it below the 15% ECA threshold.

Objection 7 – Possible use of BPA funding to accomplish road obliteration and road improvement work such as culvert replacement

The EA states that sediment modeling has included the benefits of road decommissioning (EA Page 104). However, no sources of funding or requirements are presented in the EA that would assure the accomplishment of this work.

Historically, most of the recent road obliteration that has occurred on the Nez Perce Clearwater National Forest has been accomplished by the Nez Perce tribe with funding from the Bonneville Power Association. That funding is designed to mitigate for habitat losses associated with the Snake River dams and it is not to be utilized to offset sediment production that results from new timber sales or new road construction. The EA provides no new sources of funding for road decommissioning, other than the possible use of Knutson-Vandenberg (KV) dollars which are likely to be used up with mandatory reforestation and slash disposal costs.

If the Forest service is using BPA funding to support upward trend determinations or including BPA funded road decommissioning in their sediment modeling to offset sediment that is being produced by the proposed timber sale that is illegal. The public deserves an accounting of funding sources that are proposed to be used for road decommissioning and road repair projects in the Center-Johnson project area drainage. The Record of Decision needs to make road decommissioning a mandatory requirement if it is to be counted in the sediment modeling or upward trend modeling. Such work needs to be accomplished prior to the timber sale and funding sources need to be identified. Any work using funding from the BPA should not be included in the sediment modeling or upward trend analysis

Objection 8 – Unrealistic expectation that PACFISH buffers prevent sedimentation

The EA suggests that because PACFISH buffers are being used and that field observations back up the observation that PACFISH buffers stop sediment from reaching the stream and that there will be "no substantial change in cobble embeddedness or winter rearing from proposed activities". PACFISH buffers do not stop sedimentation once it gets into the road ditch or into the stream.

I attach recent photos (Sept 2018) from two projects on the Palouse Ranger District (Robo Elk and Upper Basin) to emphasize my point that sediment is still being introduced despite PACFISH buffers. Note how all of the tractor units come directly to the road with no intervening PACFISH buffer. I believe these photos are typical of tractor logging and road construction practices across the Nez Perce/Clearwater project and activities are similar to those proposed in Center-Johnson

According to the EA (page 26) much of the proposed logging and fuel treatments (2,040 acres) will be conducted with ground based heavy equipment. Use of such equipment will create skid

trails that will link directly to existing roads and road ditches (See attached photos). Temporary roads (See attached photos) create a similar situation since PACFISH buffers do not intervene between these facilities and the existing ditch line on the main road.

During storm events sediment will be created from areas of exposed mineral soil that are common on skid trails, machine piled areas and temporary roads. System roads generally are located at the base of most tractor harvest units. Skid trails are usually planned to enter the roadway from upslope areas often traversing the cut-bank of these roads at steep gradients and terminating in large excavated areas that are created to accommodate the landing of logs and loading of trucks. There are no PACFISH buffers between the skid trail, landing and the system road at the bottom of the harvest unit. Sedimentation from these facilities (ski trails, landings and temporary roads) connects directly to existing roads and drainage ditches. These in turn are linked to small streams that can carry sediment to larger fisheries streams.

Machine piling creates similar impacts as heavy equipment moves from the road into the harvest unit and back to the road (See Upper Basin photo). Areas of exposed mineral soil are common following machine piling. Your sediment analysis and conclusion that PACFISH buffers stop sediment does not appear to consider the connectivity of skid trails, temporary roads and denuded areas such as log landings to waterways. PACFISH buffers will not stop sediment once it reaches the ditch line!

Robo Elk Harvest unit (Tractor logged in 2018 - UTM 559657 5189590 – Just past the Morris Cedar Grove Trailhead – Note how the unit comes down to the foreground road)

Robo Elk – Same havest unit immeidately across the road (Note all of the dirt which has acculated in the riparian area on the downside of the road – logs were likely stored here)

A different Robo Elk Unit (UTM 559097, 5189599 – End of Road 1969-D - Again note all of the dirt on the downstream side of the road)

Upper Basin Harvest Unit 6 (Harvested 2017 – Photo Taken Sept 2018 - Road 1965 – UTM 0560501 5187968 – Note areas of exposed mineral soil in the machine piled unit)

Start of recently opened grown over Road 3212 (Road is to be decommissioned after logging - The following culvert location is just around the bend in the road) – UTM 560501 5187968 – Near Morris Creek

Downstream side of new culvert on Road 3212 that was installed in the reconstructed road (Just around the corner from the previous picture)

Upstream side same culvert on Road 3212 - This road is to be obliterated once logging is completed

Another new culvert installation on the same previously grown over Road 3212 – UTM 560333, 5188566

Robo Elk - Upstream entry same culvert on Road 3212

Objection 9 – Failure to identify harvest units and roads that occur in landslide prone areas and the potential risk of these activities

The Soils Report and EA suggest there are 568 acres of landslide prone areas within proposed harvest units, but that "many of these mapped areas do not present landslide prone characteristics" based on field review by the soil scientist and forest service personnel. There is no information on how many miles of new and/or temporary road cross landslide prone areas. Potential impacts of harvest units are dismissed in the Soils Report because landslide prone areas will be buffered out of the units and roads will be decommissioned after logging.

Clearly lacking in Soils Report and EA is a discussion on how timber harvest and road construction can increase landslide risk. The Nez Perce-Clearwater has had many landslides in the past (McClelland et al. 1999) and most landslides have been related to forest roads (usually occurring at a plugged or undersized culvert). Timber harvest can also contribute by increasing stream flow or by providing a source of material which actually blocks the culvert.

Roads and timber harvest should not be planned in areas with a high landslide risk. Sale layout measures have not prevented landslides in the past, and there is no real scientific data to support the conclusion they will on the Center-Johnson Project. Decommissioning of roads does not prevent or reduce the risk of a landslide during the time when the road is being constructed or when the road is actually being used for logging.

In addition to the landslides reported in 1995 and 1996, there have been a number of new landslides on the Forest since the McClelland report. Information on newer landslides has been difficult to obtain on the Nez Perce Clearwater National Forest and has been limited to scattered references in documents like the Johnson Bar and Clear Creek EIS. There has been no comprehensive listing of recent landslides since the McClelland report, and no scientific assessment of the effectiveness of sale layout in preventing landslides has ever been completed. Without such an assessment it is difficult to determine if the sale layout measures being utilized in Center-Johnson and a variety of other projects on the Forest are actually effective in preventing landslides.

The NEZSED model does not consider landslide risk and thus could significantly underestimate actual sedimentation in the Center-Johnson project area. One slide could introduce more sediment into the drainage than the entire project and pose a real risk to the aquatic species that live here. Please remove all roads and units from areas with a high risk for landslides.

Objection 10 – Failure to account for increased sedimentation related to logging traffic

There have been no adjustments to sediment model predictions for increased traffic associated with project activities. Reid and Dunn (1984) found that "During a period of heavy traffic, here considered to be a traffic load of more than four loaded trucks per day, monitored roads in the study area contribute sediment at 7.5 times the rate of the same roads on days when they are not being used." Clearly there is an impact of logging traffic, especially during rainy weather most sedimentation occurs. Dust clouds created by logging trucks and logging equipment can cause problems under dry conditions. The impact of increased logging traffic on sedimentation rates should have been considered in the watershed analysis.

Objection 11 – Failure to follow Regional guidance on keeping the amount of Detrimental Soil Disturbance (DSD) under 15%

According to the Soils Report, at least 29 proposed harvest units will exceed the Regional soil guidelines of 15% Detrimental Soil Disturbance (DSD) and seven additional units will have DSD levels right at 15%. Presumably, the Nez Perce/Clearwater Forest believes this is OK because the Nez Perce Forest Plan allows up to 20% soil disturbance (DSD). All units not meeting the Regional Soil standards should be dropped or modified to achieve the Regional standard.

Objection 12 - Assumptions regarding wildfire, road maintenance and road decommissioning under and Alternative 1 (No Action) are unfounded and impossible to predict

Assumptions, that the no action Alternative 1 will increase wildfire risk are unfounded and the idea that 100% of the area would be converted to early seral stages is completely ridiculous. Wildfire in the project area is going to largely be controlled by weather conditions and the risk of wildfire is not going to be that much different regardless of the selected alternative. Much of the proposed treatment includes commercial thinning (1,889 acres) or precommercial thinning (22 acres) where fire risk can actually increase due to the accumulation of understory fuels that result from thinning and the drying effects of wind and sun in the resulting open stands (Brown 2000).

In Northern Idaho, regrowth of forbs, grass, shrubs and young trees can soon create sufficient fuel in regeneration harvest units to carry a wildfire, especially under hot and dry weather conditions that are becoming more common due to climate change. In a Western Montana study, (Stone et al. 2004) found that heavily logged forests on private land actually burned with greater intensity than nearby national forest lands that contained a more natural mosaic of different forest conditions. They state: "Our results show that, perhaps counter intuitively, heavy harvest can increase subsequent fire severity."

Finally, there is no reason why road decommissioning by the Nez Perce tribe or road decommissioning with Forest Service appropriated dollars could not continue within the project

area without the proposed timber sale. Similarly, road maintenance does not require a timber sale. The Forest Service has an obligation to correct road maintenance problems that are causing resource damage regardless if there is an active timber sale in the area or not. Road maintenance does not require any documentation in an environmental document and all that would be required to implement road reconstruction, culvert replacement or decommissioning is funding and a simple NEPA document that likely could be accomplished with a categorical exclusion. While the timber sale may help with funding for road improvements, it does not solve the problem of lack of funding for road decommissioning.

Objection 13 - Failure to use the best available science in the wildlife analysis and lack of monitoring data to confirm wildlife habitat proxies

Unfortunately, I did not have time to comment on all wildlife species evaluated in the EA and wildlife report due to the short comment period on this project, several other projects being released at the same time and personal commitments. I have focused my comments on old growth and three management indicator species known to occur in the project area due to time constraints, but be aware that I am also concerned about other species like the black-backed woodpecker, white-headed woodpecker and forest bats. These species are heavily dependent on dead and dying trees which will be reduced in number across the project area. Why is there no analysis for the fisher and pine marten?

Overall the wildlife analysis is of poor quality and lacks any monitoring data to confirm any of the conclusions. The 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. The analysis underestimates potential habitat and in turn potential impacts for most species. The examination of cumulative effects is minimal and incorporates little analysis of the impacts of activities on private land, ongoing adjacent projects or future proposals into the analysis. Spatial requirements of territorial species have not been considered and no thresholds of management activity have been set for most species. The current landscape setting (island of forest surrounded by grasslands) has not been considered.

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 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 Center-Johnson; 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 assessment (Sampson 2006a and 2006b) which is the basis of the Nez Perce Clearwater cumulative effects defense for the Center-Johnson project.

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 Center-Johnson 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 Center-Johnson wildlife analysis does not mention Sampson's long-term viability conclusions, and only focuses in 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 (n_e - a number that includes young and non-breeding individuals - Allendorrf 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. Some of these numbers have been reported in the FEIS 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 was 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 20 years old. We have seen more wildfires in this time frame and large projects like Clear Creek, Hungry Ridge, End of the World, Lolo Creek, Windy Shingle, White Pine, Smith Ridge, Red Moose and Tinker Bugs are being scheduled to increase logging at much higher rates on the Nez Perce Clearwater National Forest than when Sampson did his analysis in 2006.

The use of the Sampson short-term viability analysis in the wildlife report and EA is scientifically unsound and it is very doubtful it could sustain scientific peer review. Schultz (2010) captured this sentiment in here critique: "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 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. It is over 31 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, 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 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.

The wildlife analysis generally relies on queries of Forest Service Stand exam information or Vmap data as the basis of the analysis. Assumptions are made as to what constitutes suitable wildlife habitat based on four parameters (Primary tree species, Average tree diameter, Tree canopy cover and average stand age). Most of the queries appear to have weak ties to appropriate scientific publications and large gaps in habitat identification are apparent. There is little investigation into the spatial arrangement of these habitats and little investigation into disturbance factors that may be affecting potential habitat use.

Because of the strict requirements of the queries, much potential habitat appears to have been missed within the project area analysis. For example, the acreage of each vegetative size class is listed in Table 1 and compared that data to acreages of suitable habitat from the wildlife analysis for the goshawk and pileated woodpecker.

Large discrepancies were apparent between vegetative and suitable habitat data. For example, there are 1,007 acres of stands in the 20+ size class and 4,613 acres in the 15-19" size category, yet the wildlife analysis claims there are only 3,395 acres of potential goshawk nesting habitat in the project area. Goshawks are known to be associated with older forests for nesting (Moser and Garton 2009, Hayward and Escano 1989).

Table 1 – Existing Tree Size Class compared to estimates of habitat potential

DBH	**Existing (Acres)**	**Goshawk[1]**	**Pileated Woodpecker[1]**
Non-Forest	1517		
<4.9"	246		
5-9.9"	167		
10.0-14.9"	2,298		
15-19,9"	4,613	3,395	
>20"	1,007		648
Total	9,848		

1 - Numbers displayed for the goshawk and pileated woodpecker are the estimated suitable habitat acres from the wildlife analysis

Objection 14 – Misleading old growth analysis and inclusion of proposed timber harvest in existing old growth stands

The wildlife specialist report includes an analysis of old growth condition in the project area. Two old growth units are represented (2090401 and 2090404) and the amount of existing old growth has been determined in each of the old growth units. Existing old growth has been determined using Forest Plan definitions and the old growth screening criteria from a publication called "Old-growth forest types of the Northern Region" (Green et al. 1992). The analysis indicates there are 260 acres of old growth meeting the Forest Plan definition in compartment 401 and 319 acres meeting these criteria in compartment 404. There are an additional 124 acres in compartment 401 and 113 acres in compartment 404 meeting the Green et al. 1992 screening criteria.

Management area 20 is identified as an area where stands are to be managed for long-term management of old growth, but all of the stands within this management area are not old growth. Many younger stands have been included in this designation that do not meet either the Forest Plan definitions or the screening criteria of the Green et al. 1992 publication. This can be seen in the Table 9 of the Wildlife Report, where it is displayed that only 54 acres in compartment 401 and 60 acres in compartment 404 within Management Area 20 meet either the Forest Plan definitions or the screening criteria of the Green et al. 1992 publication.

In reality, the analysis has only identified 384 acres (5.8%) in compartment 401 and 432 acres (6.5%) in compartment 404 meeting either the Forest Plan definitions or the screening criteria of the Green et al. 1992 publication. These are the only stands that potentially meet Forest Plan standards for old growth and the stands identified by the Green et al. 1992 criteria are still questionable. The Green et al. 1992 guidelines were never meant to be an absolute definition of old growth as the Nez Perce/Clearwater National Forest appears to be using them in the Center-Johnson project and for their 2010 Forest wide inventory (Bush et al. 2010). Rather they are to be used as a minimum screening criterion to identify stands that might be considered old growth. Consider the following statement from the guidelines:

"The minimum criteria in the "tables of old growth type characteristics" are meant to be used as a screening device to select stands that may be suitable for management as old growth, and the associated characteristics are meant to be used as a guideline to evaluate initially selected stands. They are also meant to serve as a common set of terms for old growth inventories. Most stands that meet minimum criteria will be suitable old growth, but there will also be some stands that meet minimum criteria that will not be suitable old growth, and some old growth may be overlooked. Do not accept or reject a stand as old growth based on the numbers alone; use the numbers as a guide" (Green et al. 1992).

The wildlife report (Table 10) suggests Alternative 2-Modified will harvest 172 acres (maybe 150 acres) with regeneration harvest and 302 acres (maybe 195 acres) acres with intermediate harvest in stands meeting either the Forest Plan definition of old growth or the Green et al. 1992 screening criteria. However, it is unclear if there is some double counting is occurring in Table 10, since unclear how acres meeting both definitions are incorporated. The information is not specific to old growth compartment, but with only 816 acres of potential old growth identified this will leave the two compartments well below the 5% minimum standard. With 474 acres of proposed treatment, the project actually proposes to treat approximately 57% of the potential old growth in the two compartments. The proposal also includes 3.2 miles of temporary road and 0.3 miles of permanent road in existing old growth stands which will be a complete loss of old growth stand characteristics. This loss is estimated at 15 acres in the EA

The wildlife analysis talks at great length about the encroachment of understory trees in old growth stands and how harvesting will improve old growth conditions. However, 172 acres of the proposed treatment in potential old growth stands will utilize regeneration harvest. Such treatments will replace the existing stands and not improve them. Intermediate harvest treatments will remove snags and downed wood due to safety considerations and the need for construction of skid trails and logging corridors. Some live larger trees will likely need to be felled to accommodate logging corridors and skid trails. Logging will also impact understory components of old growth like shrubs, forbs and grasses along with small trees that are also important components of old growth. Old growth is more than sanitized stands of large trees! Why not consider hand treatments and understory burning if existing old growth stands must be entered?

Objection 15 – No analysis for pine marten and fisher

I really question the assertion that there is no habitat for the pine marten or the fisher. There is no discussion on why these species would not be present in the project area and no monitoring data to support claims that there is no existing habitat. What is the basis for this determination?

Objection 16 - The goshawk habitat analysis is not supported by the best available science and significantly underestimates suitable habitat and project level impacts

I object to the overall poor quality of the goshawk analysis and the fact the best available science has not been utilized in developing a management strategy for this species. The analysis does a poor job of first identifying potential habitat and then of addressing the impacts of the project on the species. It is unclear why there are only 3,295 acres of potential nesting habitat in the project area when the vegetation analysis suggests there are 5,620 acres in size classes that exceed 15 inches in (Table 1), Fifteen inches was the query minimum used in the wildlife analysis to determine the amount of potential goshawk nesting habitat.

There is no recognition in the wildlife analysis that the goshawk is a territorial species and there is no attempt to address how the proposal might impact potential territories of goshawk use within the analysis area. Previous work (Reynolds et al.1992) has outlined approaches that could have been utilized, and I think these approaches would have identified more meaningful results than just running a set of stand exam or Vmap queries and reporting the results. Without meaningful thresholds of habitat loss and no monitoring of goshawk populations at the Forest level, projects will continue to degrade goshawk habitat across the Nez Perce/Clearwater over time (Schultz 2010, Schultz 2012). This was also the long-term conclusion of the Sampson (2006a) Conservation Assessment that the Nez Perce/Clearwater failed to report in the Center-Johnson wildlife report and EA.

I object to the Forest's strong reliance on the short-term viability analysis that was done for the goshawk (Sampson 2006b) and its use in the Center-Johnson analysis. The analysis is based on maintaining a very small number of goshawks (25 male and 25 female) across the entire Forest Service Region One and uses very small estimates of home range size to determine habitat needs for the minimum viable population. It does not include adequate monitoring goshawk populations at any level (Region or Forest) and includes no tests of its habitat proxies to see if they are actually protecting goshawks populations at the Forest and Regional levels.

The conclusions of the long-term viability analysis (Sampson 2006a) have not been included in the Center-Johnson. Sampson (2006a) concluded that the long-term viability analysis is "low" for the goshawk and three other species he evaluated. He based these findings on a variety of factors, but one of the main issues is that older forests needed by these species are gradually being reduced on all ownerships. Projects like Center-Johnson move large acreages to younger age classes on National Forest lands and most of the existing older forests on State and private land have already been eliminated. Sampson (2006a) indicates that representativeness, resiliency and redundancy are all "low" in the long-term for the four species he evaluated (goshawk, pileated woodpecker, black-backed woodpecker, and flammulated owl) in his conservation assessment. I agree with that conclusion and believe it should have been reported in the Center-Johnson wildlife report.

Moser (2007) and Moser and Garton (2009) reported the mean home range size of male goshawks (N=7) was 12,710 acres and female goshawks (N=12) was 9,532 acres in Northern Idaho. Studies in other areas have reported smaller home range sizes in the neighborhood of 5,000-6,000 acres (Reynolds et al. 1992). Moser's larger home range sizes may be related to the fact that Moser's study was conducted in an industrial forest landscape with a large amount of timber harvest. Other factors may be differences in methodology, use of satellite technology by Moser (2007) or differences prey availability in Northern Idaho.

Moser reported that, home range size was largely related to nesting success and the number of openings 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.

These numbers have some major implications for both the project level analysis and the short-term viability analysis conducted by Sampson (2006b). First let us discuss the project area analysis. I believe an approach should have been conducted in the project area that would have considered the territoriality of the species and the habitat requirements within each territory. The project contains 8,331 forested acres, but it is essentially a forested island surrounded by grasslands that occur along the breaks of the Salmon and Snake Rivers. Because of the linear nature of the project area it is likely that two goshawk territories would occur in the project area. One of the territories would most likely be centered on the Deer Creek drainage and the other would probably be centered on Christie and Sherwin Creeks. These home ranges would likely extend outside of the project area and include forested areas on private land.

Using Moser's or Reynolds numbers for home range size, two for theoretical home ranges of approximately5,000 - 6,600 acres could be centered on the project area. Such home ranges would need to extend onto private land or USFS land in in the northern part of the Deer Creek drainage. The job of the wildlife analysis at the project level would be to predict how these two potential home ranges have been impacted by past actions, the new proposal and any other foreseeable actions. In short, a cumulative effects analysis must be completed.

There are no formal goshawk management guidelines for the Pacific Northwest, but management recommendations for the Southwestern United States (Reynolds et al. 1992) have suggested a way on how this can be done. They suggest that at least 180 acres of suitable nesting habitat be maintained in each goshawk home range. Nesting habitat is to 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. When possible, they 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.

Reynolds recommended maintaining post-fledging areas of at least 60% older forests around the uncut nest stands. Moser and Garton (2009) suggested that this could be potentially reduced to 39%, but this will likely place greater risk on the species and I think the more conservative approach suggested by Reynolds is more appropriate for National Forest management.

Moser and Garton (2009) experimentally clearcut nest stands after the nesting season (average harvest unit size 104 acres) and compared use with unharvested nest stands. They found goshawks, re-nested when approximately 39% of the 420-acre post-fledging area (164 acres) remained as potential nesting habitat. This number has been erroneously applied to individual nesting stands in the environmental assessment. In Moser's study, goshawks did not re-nest in harvested stands. Rather they moved to other nearby mature forest stands within their nesting territory, which is what is likely to happen in Center-Johnson. Using the Reynolds et al. guidelines would assure that goshawks have sufficient remaining habitat to do this.

The two theoretical home ranges should then be classified into potential goshawk nesting habitat based on the guidance of the Hayward and Escano (1998). An analysis should be completed to assure that sufficient old forest is maintained around each of the three potential nest stands to meet the Reynolds post-fledging requirements. Thus, each home range should have at least three suitable post-fledging areas at least 420 acres in size with at least 60% old forest surrounding the potential nest stands. Foraging habitat should maintain the diversity of conditions that Reynolds et al. (1992) discusses in his management guidelines. That will likely mean a sufficient component of older forest stands along with some stands in younger age classes.

The EA has a mitigation measure of maintaining a 40-acre no harvest buffer around known nest trees, but does not provide any measures for protecting the post-fledgling area other than restricting activity between April 15th and August 15th. Evidently there is at least one historical nest in the project area that is identified in the project file. Post-fledgling areas need better protection and measures recommended by Reynolds et al. (1992) should have been incorporated into project. These recommendations recommend leaving 60% of the 420-acre post-fledgling area in uncut older forest.

Now let us look at Sampson's short-term viability analysis. He suggests that only 30,147 acres (122 km^2) would be required to support 25 nesting pairs or a net effective population of 110 individual goshawks (includes young and non-breeding adults) which he considers to be the minimum number to maintain a minimum viable population. I have previously discussed several problems with this approach (Mills 2007) and do not agree that the minimum viable population approach has much validity in our current understanding of population viability analysis. This is approximately 1,206 acres of habitat per nesting pair or only 18.3 % of the 6,600-acre home range size of a successfully nesting female goshawk reported by Moser (2007) or only. Thinking of it another way each bird in Sampson's minimum viable population of 110 individuals would have 274 acres.

Sampson (2006b) says "the spacing of nests at 1.6 km suggests use of an area (hexagon) of 2.2 km^2". He then calculates the net effective population size for 50 breeding birds at 110 based on

curves by Allendorf and Ryman (2002). He multiplies this number by the 2.2 km^2 home range size and divides by two to account for overlap of home ranges between the sexes. Thus, his minimum viable habitat estimate is 2.2km^2 * 110 / 2 = 121km^2 or 122 km^2 as reported by Sampson (Presumably due to rounding errors).

This creates a serious error in Sampson's "short-term" assumptions regarding the amount of habitat required for a minimum viable population of goshawks. If Sampson had used a more reasonable estimate of home range size (Moser 2007 or Reynolds et al. 1992) his habitat requirements for a minimum viable population would have been much higher. For example, using Moser's 2007 estimate of the size of a successful female goshawk's home range of 6,600 acres or 26.7km^2 would have yielded the following result (110 * 26.7 km2 /2 = 1,468.5 sq. km). Thus, the minimum acreage requirement would have been twelve times the estimate calculated by Sampson or 362,872 acres.

The Center-Johnson wildlife analysis makes several assumptions regarding maintenance of the goshawk populations on the Nez Perce National Forest based on the short-term viability analysis by Sampson (2006b) and reports of available habit that have been prepared by Bush and Lundberg (2008). The overall conclusion of that analysis is that because we have several times the amount of habitat required for a minimal viable population in the short-term, there are no population concerns at the Forest Level. All conclusions are therefore based on un-validated habitat proxies and no population monitoring information has been offered to support these conclusions.

I have already shown that the short-term viability analysis has underestimated goshawk habitat needs by 12-fold for the entire region. Examination of the Bush and Lundberg (2008) report also causes us some concerns. Goshawk nesting habitat has been defined differently by three regional groupings (Northern Rocky, Middle Rocky and Southern Rocky). The Center-Johnson project and the Nez Perce Forest are in the Middle Rocky Forest Group, where nesting habitat is limited to stands in the 13-18" DBH size class, 34-71% crown closure and basal areas between 121-253 and drier forest groups (lodgepole pine, ponderosa pine, and Douglas fir). This description of nesting habitat does not match the most appropriate investigations of nesting habitat in Northern Idaho (Moser 2007 and Hayward and Escano 1989) and will tend to eliminate nesting habitat on moister sites, stands of larger diameter and stands of higher crown closure which have all shown to be important characteristics of nesting habitat in this area.

A similar pattern can be seen in the queries for the identification of post-fledging habitat. Habitat is once again defined differently by zone, but this time Middle and Southern Rocky Zones have been collapsed into one group. Thus, there are two descriptions of post-fledging habitat. The two groups basically include the same parameters (Trees > 7", Basal Area 115-250, and most tree species except western red cedar) but lower crown closures (<50%) are permitted

in the Middle and Rocky Zones. In the Northern Rocky zone crown closures must exceed 70%. I have problems with this estimate of potential post-fledging habitat since it also doesn't agree with the literature and identify the most important component of post-fledging habitat which is older forest. Stands in the 7-13" DBH category likely will not be that important as post-fledging habitat. Moser (2007) suggested that stands in with over 70% crown closure and average DBH of 13" were most important in the post-fledging area. For this reason, I suspect the Bush and Lundberg (2008) queries will tend to overestimate post-fledging habitat.

Finally, we arrive at the foraging habitat estimates which are very broad. The only requirement is that stands have over 40% crown closure and that they be one or two-storied stands. Most tree species except western red cedar are considered acceptable habitat. I believe this query will give very broad estimates of suitable foraging habitat and not necessarily provide the diversity of habitats used by goshawks for foraging. Under the analysis, we have no idea how much of the foraging habitat is composed different structural stages that are important to goshawk foraging. I agree that some diversity is required in goshawk foraging areas, but doubt that home ranges with extensive amounts of young forest will be attractive to the goshawks. With no spatial component the Bush and Lundberg (2008) queries make it impossible to determine if there is a good interspersion of nesting habitat, post-fledging areas and suitable foraging sites.

The Bush and Lundberg (2008) queries are very broad brushed and not spatially explicit. I object to the use of these queries and the Sampson (2006b) short-term viability analysis as a substitute for Forest level monitoring and habitat analysis. The habitat proxies used by Bush and Lundberg (2008) do not match goshawk research that has been done on the Nez Perce/Clearwater forest and are not representative of the most habitat conditions found in the Center-Johnson project area. I have pointed out large errors in the short-term viability analysis and the Bush and Lundberg (2008) surveys and the bottom line is that the Forest Service doesn't have any good idea of how goshawk populations are doing on the two Forests.

I believe that a spatially habitat analysis based on the Reynolds et al. (1992) management guidelines, other pertinent scientific literature and monitoring data is required before outside areas can be relied on to make up for losses of goshawk habitat associated with the Center-Johnson project. The National Forest Management Act requires that National Forests are to "provide for a diversity of plant and animal communities based on the suitability and capability of the specific land area". In the past this has been interpreted as "maintaining viable populations of native and desired non-native species at the Forest level" however under the 2012 planning rules this has been modified to maintain suitable habitat at the Forest level. With many large errors and lack of a tie to existing literature, I believe that the current goshawk analysis for the Center-Johnson project has not sufficiently addressed project level impacts or cumulative impacts to the goshawk at the Forest level.

Objection 17 - The pileated woodpecker habitat analysis is not supported by the best available science and significantly underestimates suitable habitat and project level impacts

The pileated woodpecker analysis in the wildlife report suggests there are 648 acres of pileated nesting habitat in the project area. This number appears low, given that the vegetation analysis suggests there are 1007 acres of forest over 20+ inches DBH and 4,613 acres in the 15-20-inch DBH size class. Stands in the 15-20-inch DBH size class likely support individual trees that are suitable for nesting, while at the same time meeting the 60% crown closure and mixed conifer habitat requirements that were also used in pileated woodpecker habitat query. While pileated woodpeckers are known to nest in dead trees that are larger than 21 inches DBH (McClelland 1999, Bull and Holthausen 1993), limiting the query to stands that are categorized by an average DBH of 20 inches severely limits the amount of potential nesting habitat. If the individual nesting tree size is adequate and there are closed canopy conditions that would be found in mature stands, all trees do not need to exceed 20 inches DBH. In summary, at least some of the stands with an average DBH of 15-30 inches should also be suitable for nesting.

Regardless of the amount of available nesting habitat and the reliance on stand exam and Vmap queries to complete the analysis, the pileated woodpecker analysis is very weak. No cumulative habitat thresholds have been set for habitat loss (Schultz 2010) and the analysis fails to answer the "so what" question about how the project will affect the pileated woodpecker. Based on existing size classes and the fact that 1,517 acres of the project area is non-forested, we do know that 43% of the project area is already unsuitable for pileated nesting due to the lack of existing snags and older forest conditions preferred by this species.

New harvest would regenerate 69 acres of trees with an average DBH of 20+ inches and 635 acres of the 15-20 DBH size class (EA = Table 10). This would impact about 12.5% of the older stands in the project area. Foraging habitat quality will also be reduced in stands scheduled for commercial thinning (845 acres) or variable density thinning (1044 acres). It is unknown how much of this activity will occur in the older stands, but will do know that at least 67 acres of intermediate treatment will occur in stands that the wildlife biologist has suggested are suitable for nesting (Wildlife Report - Table 8).

Again, a more spatially explicit analysis of pileated woodpecker habitat is required. The revised analysis should start by identifying potential or theoretical pileated woodpecker home ranges within the project area. I agree with the home range size of approximately 1005 acres (Bull et al. 1992) utilized in the Sampson (2006a) report. Thus, the project area could potentially support approximately 8 nesting pairs of pileated woodpeckers in the forested portions of the project area. To identify project level impacts I suggest use of habitat management guidelines developed by Bull and Holthausen (1993). These guidelines have been field tested and home range use in the areas were the guidelines were developed have been tracked for over 30 years (Bull et al 2007).

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 had occurred in the home range. They defined extensive regeneration harvest as 25% of the area, a number which will be exceeded with the implementation of Center-Johnson Modified Alternative 2. They also examined nesting success and found that birds that successfully produced young had on average 85% of their home range unlogged and 15% unlogged (any type of logging including fuel reductions). Whereas unsuccessful nesters had 62% of the home range unlogged and 38% logged (Bull et al. 2007).

Clearly, the best available science does not support the contention that pileated woodpeckers will be unaffected by the Center-Johnson proposal. Long-term studies (Bull et al. 2007) suggest that the pileated woodpecker is highly sensitive to both regeneration harvest and other activities like commercial thinning and variable density harvest. Fuel treatments on the Starkey Experimental Forest which were similar to activities proposed to intermediate harvest in Center-Johnson, where shown to reduce reproductive success for pileated woodpeckers significantly (Bull et al. 2007).

I object to the use of 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 Center-Johnson project will not contribute to cumulative impacts at the Forest level for this species. I mention once again that Sampson's long-term viability analysis (2006a) suggests that the chances of long-term viability are low for the pileated woodpecker. I again raise issues with the short-term viability analysis and its reliance on a minimal viable population (Mills 2007). The analysis does not "provide 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.

I strongly object to the Bush and Lundberg (2008) habitat analysis of suitable foraging and nesting habitat for the pileated woodpecker. This 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. One snag per acre does not constitute suitable nesting habitat for this species!

Objection 18 – Continued use of the 1984 Leege elk guidelines and failure to recognize the unique setting of the project area in terms of elk management

I am disappointed to see that the Nez Perce-Clearwater National Forest continues to hold onto the Leege 1984 elk guidelines in light of past judicial decisions on the Clearwater National Forest Travel Plan that suggest these guidelines are not the best available science. The analysis should have utilized 1997 version of the North Idaho Elk guidelines (Servheen 1997) as directed by the court on the Clearwater Travel Plan.

The analysis has failed to recognize the unique situation for elk in the project area. The project area is a forested island surrounded by open grasslands along the Salmon and Snake Rivers. The importance of the area to elk is largely for security and not for forage production because of the proximity of these grasslands. Other than the proposed road decommissioning, which has no source of assured funding, the EA has taken no measures to improve elk habitat security. Access restrictions are basically the same as the existing situation (EA Table 33).

Without the benefit of the model calculations in the wildlife report it is impossible to tell what factors are influencing the elk habitat analysis. However, it appears that the project biologist has placed a good deal of emphasis on forage production and is only minimally concerned about the loss of security habitat and hiding cover. The analysis takes a very myopic view of the project area and fails to recognize the larger landscape setting. The analysis is basically the same as would occur in a totally forested locations located in more northerly portions of the Nez Perce Clearwater National Forest.

The elk guidelines primarily talk about deductions in forage quality that result from large openings that are greater than 1,000 feet in width and those that do not have at least 800 feet of cover surrounding them. For example, the guidelines recommend a 10% reduction in habitat quality when "About 13% of usable acres in an evaluation area are more than 500 feet from cover…."

The EA indicates that Alternative 2 Modified will create 12 openings that exceed 40 acres is size These units will range from 44 to 192 acres in size and total 992 acres (EA-Appendix B – Page 3B). These large units will likely have a significant amount of area that will be over 500 feet from cover.

I wonder about habitat deductions for roads and trails open to motorized use. Even though 23.4 miles of temporary road and 0.9 miles of permanent road will be constructed, the wildlife analysis has taken no deductions for increased human access. The impact of human use along roads and trails is the primary focus of the elk guidelines and habitat quality can be expected to decline significantly during the life of the project. Even after the project is completed, elk

security can be expected to decline due to the loss of hiding cover and improved human access related to all of the proposed road improvements. I also wonder how the elk analysis treats the eleven miles of road proposed for decommissioning when there is no assured funding for this work.

There are 0.9 miles of new road construction and 6.0 miles of road reconstruction on roads that are grown over. Presumably, these roads will be closed with gates. Many studies have indicated that gates are easily breached and do not provide the amount of security as obliterated roads or roads closed with earthern barriers. In the elk guidelines, this fact is well recognized and roads that are only closed during the hunting season with gates generally have coefficients that are almost as high as open roads.

The Nez Perce/Clearwater NF has had significant problems with user created routes along old so-called temporary routes. ATV and motorcycle users have taken considerable effort to reopen many of these routes and the Nez Perce/ Clearwater has not had the resources to effectively control this activity. The EA basically admits this on page 137 "Field review indicates that poorly maintained signs and physical restriction devices are ineffective at preventing unauthorized public access." Without effective monitoring and enforcement of restrictions the outputs of the elk model are undefendable.

Sincerely,

Harry R. Jageman

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