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First name: Harry

Last name: Jageman

Organization:

Title:

Comments: Attached is my objection to the Nez Perce - Clearwater Forest Plan. I have previously commented on the proposed plan on several occasions which should be part of the project record.

January 14, 2024

1228 Ponderosa Drive

Moscow, Idaho 83843

Objection Reviewing Officer

USDA Forest Service Northern Region

26 Fort Missoula Road?

Missoula, MT 59804?

Subject: Nez Perce-Clearwater Forest Plan Objection

Dear Sir,

Objection 1 - Overall Disappointment with the Proposed Plan

Overall, I was very disappointed in the quality of the proposed plan and the assumptions that were used in the analysis. There are very few measurable standards and guidelines that provide assurances to the public that the Forest Service is actually protecting water quality, soils, cultural resources, sensitive plants, fisheries and wildlife habitat. The proposal is largely a plan to increase logging, prescribed burning and motorized access with little regard to other resource values.

For example, there are 1.5 million acres of roadless habitat on the two Forests that have the potential to be added to the wilderness system, but the proposal only includes 263,357-acres of recommended wilderness. Only three areas have been proposed for recommended wilderness and several areas that were considered in the existing Forest Plans for recommended wilderness have been eliminated or modified. For example, the new plan drops 43,598-acres from the 151,874-acre Idaho portion of the previously recommended Great Burn wilderness and the entire 19,330-acres near Sneakfoot Meadows and the North Fork of Spruce Creek that the previous plans had suggested as additions to the existing Selway Bitterroot Wilderness Area. The reductions in

the Great Burn are largely to accommodate snowmobile use along the Idaho/Montana border and motorized access to Fish Lake. Reasons why the Selway Bitterroot Wilderness additions are being dropped remain unclear. This is despite the fact that a large number of comments were received by the planning team in support of a citizen alternative designed by the Friends of the Clearwater that would have designated all existing roadless areas as proposed wilderness.

Timber harvest levels and burning objectives are very excessive with the proposal including timber harvest on 10,000-acres per year and 50,000-acres of annual burning from both planned and unplanned ignitions. The preferred Alternative is estimated to produce 190 to 210 million board feet which is only 31-million board feet below the long-term sustained yield limit of 241 million board feet. Over the last 20-years the Nez Perce-Clearwater has sold approximately 50-million board feet per year, but this number has been increasing in the last few years to 90-100 million board feet. We are already seeing stresses to old growth, fish and wildlife habitat and water quality under the existing level of harvest and the new goals for both timber harvest and burning will put increasing pressure on these other resources.

It appears that very little consideration has been given to the incorporation of measurable guidelines and standards into the preferred alternative as requested by the Friends of the Clearwater and others. Most of the standards, guidelines and desired conditions are very subjective and rely on the opinion of the line officer to make the call if the standards, guidelines and desired conditions are being achieved. Personal opinions vary by individual and provide little assurance to the public that their concerns are being addressed. For example, there is virtually no guidance in the proposed Forest Plan for the protection of wildlife habitat. Several previously identified sensitive species (wolverine, black-backed woodpecker, pygmy nuthatch, Townsend's big eared bat, long-eared myotis, long-legged myotis, fringed myotis, etc.) and management indicator species (goshawk, pileated woodpecker, and pine marten) previously identified by the regional forester or in the within the current Forest Plans are not even considered in the revised plan.

Consider the following desired conditions from the wildlife section of the proposed Forest Plan.

FW-DC-WL-02. Ecological conditions on the Nez Perce-Clearwater contribute sustainable habitat to maintain species of conservation concern. Habitat is resilient and adaptable to stressors and likely future environments.

FW-DC-WL-03. The arrangement and distribution of vegetation patches is consistent with the natural range of variation and varies widely in size, shape, and structure to provide connectivity for native wildlife.

These measures offer no real measurement of achievement and likely will have little influence on forest management projects. What exactly are the ecological conditions that contribute to "sustainable habitat to maintain species of conservation concern" and what is the arrangement and distribution of vegetation patches that is "consistent with the natural range of variation"? With no measurable components, the desired conditions basically come down to a subjective evaluation of ecological conditions and the adequacy of the vegetation patches to allow for dispersal, migration, genetic interaction and species recruitment.

The fisher is a species of conservation concern that avoids open areas and home ranges generally have less than 5% open habitat and more than 50% mature forest (Sauder and Rachlow 2014). The species is commonly associated with the warm moist vegetative type. In contrast to the needs of this species, the proposed

objectives for the warm moist forest group (FW-DC-FOR-08) are 5-20% grass and shrubs in MA 1 and MA 2 and 1-5% grass and shrubs in MA 3. There is also a management objective for stands that have a DBH of 0-4.9-inches of between 10-25% in MA-1 and MA-2, and 5-25% in MA-3.

With 10,000-acres of timber harvest and 50,000-acres of burning each year there are likely going to several open areas across the Nez Perce-Clearwater National Forest. These activities will remove mature forest stands and cause forest fragmentation. Although there is a desired condition that 50% of the warm moist habitat be maintained in stands of [ldquo]tall forests over 82-feet[rdquo] on a Forest wide basis for the fisher (FW-DC-WL-04), there are no restrictions on the amount of open areas that can occur in fisher home ranges or no requirements for maintaining a significant amount of old growth and mature forest on individual home ranges occupied by the fisher. According to Table 6 in the Forest Plan, mature forest over 15-inches DBH could vary from 25-50% in MA-1 and MA-2 and from 35-68% in MA-3. With most proposed timber harvest in MA-3 and the extensive prescribed burning planned in MA-2 it will be unlikely that the home range conditions described by Sauder and Rachlow 2014 will be maintained.

The fisher example represents a problem the Forest Service has had for several years in regard to the management of sensitive and other indicator species. Schultz (2010) eloquently captured this in a review of Forest Service practices for maintaining populations of native and desired non-native species as required under the National Forest Management Act. She concluded that [ldquo]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.[rdquo]

My specific comments on the Proposed Forest Plan Revision follow:

Objection 2 =Simplified Management Areas.

I found the proposed Forest Plan approach to management areas and geographic areas to be very simplified and limited in scope. The approach generally does not suggest that an integrated approach to resource management is being considered by the planning team. For example, there are only three management areas proposed in the Revised Forest Plan (MA- 1 -Wilderness, MA-2 - Back country restoration which primarily focuses on timber harvest and prescribed burning, and 3 - MA-3 - Front country where commercial timber harvest is emphasized). There are no management areas that focus on high value fish and wildlife areas, big winter range, scenic corridors, areas of cultural significance, municipal watersheds or high value recreation sites. I believe the 1987 Clearwater and 1987 Nez Perce Forest Plans did a much better job of describing management area direction than what is being considered in the Revised Forest Plan. The three management areas that have been included in the Revised Plan are much too simplistic and not sufficient for management of the complex landscape of the Nez Perce-Clearwater National Forests.

I suggest a revised management area strategy based on system that would be similar to the 1987 Clearwater and Nez Perce Forest Plans. For the most part I believe with some modification that the existing designations of the 1987 Clearwater Forest Plan would work well and that those designations could be modified to accommodate current management allocations on the Nez Perce National Forest. This of course would need to be done to provide consistency of management allocations on both Forests in the new Forest Plan.

Having worked on the Clearwater National Forest, I am more familiar with existing management allocations on that Forest. For the most part, I believe the preparers of the 1987 Clearwater Forest Plan did a pretty good job of describing and designating management areas on the Clearwater National Forest and see no need to change to the simplified system outlined in the Revised Forest Plan. Similar allocations were developed in the 1987 Nez Perce Forest Plan. The Revised Forest Plan should only change those things that are not working in the current Forest Plan. There is no need to modify parts of the current plan that are working well.

While I can see the need for consolidating and updating management area descriptions, I can see no possible explanation for abandoning existing management areas as outlined in the existing Forest Plans for the simplistic approach outlined in the Preferred Alternative and FEIS. My suggestions for revised management areas in the new Forest Plan are based largely on the existing Clearwater Forest Plan and the existing Nez Perce Forest Plan. I believe these management areas would do a much better job of representing management objectives and resource issues across the Nez Perce-Clearwater than what you are proposing. My recommendations for possible management areas to be used in the Revised Forest Plan are listed below:

High Value Dispersed Recreational Sites [ndash] I believe high value dispersed recreation sites deserve a special management designation. These areas are not wilderness candidates, but they receive a high level of recreational activity and should not be included in the timber base. The Elk Creek Falls recreation area (MA-A2 in the Clearwater Forest Plan [ndash] 790-acres) is good example of an area that receives heavy recreational activity, but does not qualify as roadless and is not suitable for high levels of timber management and prescribed burning.

Such areas do not fit well into the simple three category management area system proposed in the Revised Forest Plan. Besides Elk Creek Falls, I am sure there are other similar areas across the two Forests. Places like Lolo Pass, the Upper Basin Interpretive Trail, Colgate Licks, Jerry Johnson Hot Springs, Wilderness Gateway, Pittsburgh Landing, etc. come to mind.

Visual Travel Corridor [ndash] Different management practices are needed in the visual travel corridor and it is likely that vegetative practices will need to be modified to protect the scenic values in these areas. Identification of these areas in a separate management area is important to meet visual quality objectives and account for the different management practices that will be necessary to achieve both visual management and vegetative treatment objectives. Revised Forest Plan Management Areas MA-2 and MA-3 primarily stress timber harvest and prescribed burning and are insufficient to adequately address the issues associated with maintaining scenic objectives. This management area is identified in the current Clearwater Forest Plan as Management Area A4 (47,466 acres) and in the existing Nez Perce Forest Plan as MA-13 (11,500-acres), MA-14 (1,765-acres) and MA-17 (104,529 acres). I believe all of these management areas could be consolidated to a single management area that emphasizes scenic values.

Developed Recreation and Administrative Sites [ndash] I believe these facilities should be identified as a separate management area as was done in the existing Clearwater Forest Plan (MA-A7 - 1,752-acres) and the existing Nez Perce Forest Plan (MA-2 -1600 acres, and MA-7 [ndash] 400-acres). Management is much different on administrative sites and within developed Recreation Areas and the management area descriptions in the Revised Forest Plan are inadequate to manage these facilities.

Historical Travel Corridor - This allocation is largely associated with the historic Lolo Trail on the Clearwater National Forest. In the existing Clearwater Forest Plan, it is identified as MA-A6 (16,175 acres). Because of the National Historical significance of this area, I believe it is important to maintain this area as a separate management area. Lumping the area into MA-1 with wilderness and wild and scenic rivers does not seem

appropriate since management practices are completely different in the two areas. Unlike existing and proposed wilderness areas, the historic travel corridor has a major road running through the middle of it. This creates a much different set of circumstances than management of wilderness and proposed wilderness areas.

**Designated Wild and Scenic River Corridors** [ndash] The Clearwater National Forest has two wild and scenic river corridors, the Lochsa River and the Middle Fork Clearwater (MA-A7, 23,606-acres). The Nez Perce National Forest includes portions of the Middle Fork of the Clearwater River that it shares with the Clearwater NF and the Selway River (21,602-acres), the Salmon River (9,241-acres) and Rapid River (4,218-acres). The existing Nez Perce Forest Plan lists the Wild and Scenic River corridors as Management Area 8. Again, I believe the portions of these rivers that occur outside of wilderness and proposed wilderness boundaries have special management needs that differ significantly from wilderness management objectives.

**Proposed Wild and Scenic River Corridors** [ndash] I support inclusion of several additional rivers into the wild and scenic river system and believe these areas need to be managed in a unique management area to protect their integrity until they can be designated by Congress.

**Designated Wilderness** [ndash] There are three designated wilderness areas on the Nez Perce-Clearwater National Forest and most of this wilderness is located on the Nez Perce National Forest. The existing Clearwater Forest Plan identifies the Clearwater's portion of the Selway-Bitterroot Wilderness Area as 259,165-acres in Management Area B-1. The existing Nez Perce Forest Plan identifies 560,088-acres in the Selway-Bitterroot, 200,464 acres in the Gospel Hump Wilderness and 105,736 acres in the Frank Church River of No Return Wilderness. These are identified as MA-9 in the Nez Perce Forest Plan.

**Recommended Wilderness** [ndash] I support considerable expansion of lands currently considered roadless into the recommended wilderness category. If existing roadless areas are not moved into the recommended wilderness category, I believe it is appropriate to have other options rather than just moving the lands into the [ldquo]back-country[rldquo] restoration category (Revised Forest Plan MA-2). Other options include managing for dispersed recreation in an unroaded setting (Existing Clearwater Forest Plan MA-A3), management high value summer range (Existing Clearwater Forest Plan MA-C1) or managing for key fisheries habitat (Existing Clearwater Forest Plan MA-C6). The back-country restoration option under the Idaho Roadless Rule does not offer sufficient protection to recommended wilderness to protect their integrity until Congress can act.

**Dispersed Recreation in an Unroaded Setting** - This management area was designed to accommodate recreational activity in unroaded settings that were not selected for recommended wilderness. In the Clearwater Forest Plan, 78,000-acres were in Management Area A3 (Elizabeth Lakes, Moose Mountain, North Lochsa Slope, Lochsa Face and Coolwater Ridge [ndash] 78,000 acres). The Nez Perce National Forest did not have a similar management area, but I suspect there are roadless areas on the Nez Perce National Forest that could be highlighted with this management designation as an alternative to recommended wilderness.

**High Value Big Game Summer Range** - This Management Area is described in the Clearwater Forest Plan as Management Area C1 (45,100-acres). It occurs in older burns in the Fourth of July drainage and is part of the Weitas Roadless Area. It is managed without roads and objectives are to maximize big-game summer potential.

I see no reason why this concept could not be expanded to other roadless areas across the Forest instead of the back-country restoration theme that does not emphasize wildlife and fisheries values.

**Key Fisheries Habitat** - This Management Area is described in the Clearwater Forest Plan as Management Area C6 (102,440 acres). It occurs three high value drainages for fisheries (1 - Hungery /Fish Creek, 2 - Cayuse/Toboggan Creek and 3 [ndash] Colt Creek. The management area is managed without roads and objectives are to maximize fisheries habitat potential. The Nez Perce National Forest has a similar management area in their existing Forest Plan (MA-11, 126,846 acres) for Rapid River, the East Fork of Meadow Creek and

Silver Creek.

Big Game Winter Range - I believe the lack of identification of big game winter range is a significant and important oversight of the Proposed Forest Plan. Without proper identification of these areas and special management measures designed to protect wintering big game, there is a high potential for detrimental impacts to wintering big game.

Both of the existing Forest Plans identified two types of winter range primarily associated with winter requirements for elk. On the Clearwater these were termed MA-C3 and MA-C4. Management Area C-3 (39,000 acres) was generally associated with brush fields and open grasslands on steep south facing low elevation slopes. In the existing Nez Perce Forest plan this type of winter range was identified as MA-16 (151,683 acres).

Management area C4 (94,000-acres) in the Clearwater Forest Plan was identified as low elevation forested areas where some timber harvest could occur with the overall objective of improving big game winter range. In the existing, Nez Perce Forest Plan this area was identified as MA-15 (72,003-acres) and MA-18 (10,468-acres).

I believe these areas need to be updated and refined based on monitoring and current information that is likely available from the Idaho Fish and Game. For example, I know that no big game winter range was identified on the Palouse Ranger District in the 1987 Clearwater Forest Plan. Animals are obviously wintering on the Palouse District in lower elevations along the Palouse, Potlatch and Elk River drainages. Similarly, there are likely other winter range oversights and inclusions in the 1987 plans that need to be updated and refined. However, I do not support the idea of completely dropping winter range management areas as is the current proposal in the Proposed Forest Plan.

Moose Winter Range - The existing Nez Perce National Forest Plan has a unique management area for the management of moose winter habitat (MA-21, 45,140-acres). Unlike most of the Clearwater National Forest, it is common to have older forest stands with a yew understory. These stands have been shown to important wintering areas for moose (Pierce and Peek 1984). I believe this management area needs to be updated to ensure winter range protection of all stands with yew understories and older forest canopies that are important for wintering moose. I do not support the total elimination of this management area.

Big Game Summer Range/Timber Management - These areas include most of the existing roadless areas that were scheduled for timber management in the existing Clearwater Forest Plan (MA-C8S, 207,500-acres). It is similar to the back-country restoration alternative proposed in the Revised Forest Plan. I don't think that timber management is appropriate for existing roadless areas and believe that all existing roadless areas should be modified to either A3 (Non-motorized Dispersed Recreation in an Unroaded Setting), B2 (Recommended Wilderness), C1 (Key Big Game Summer Range) or C6 (Key Fishery Habitat).

Timber Management - These areas include the primary timber producing areas on the Clearwater and Nez Perce National Forests. In the existing Forest Plans, they are identified as Management Area-E1 (503,567 acres) on the Clearwater NF and Management Area-12 (539,884 acres) on the Nez Perce National Forest. These are largely the same front-country lands that are listed as MA-3 in the Proposed Forest Plan.

Research Natural Areas and Special Areas - These areas are identified as management area M1 (8,292-acres) in the existing Clearwater Forest Plan and MA-6 (8,015-acres) in the Nez Perce Forest Plan. Because of the unique nature of these areas, I believe this should have been done in the Revised Forest Plan.

Riparian Areas - Riparian Areas were originally listed as MA-M2 (107,263-acres) in the existing Clearwater Forest Plan. In the existing Nez Perce Forest Plan riparian areas are listed as MA-10 (11,859-acres). The 1987 plans were modified by PACFISH and INFISH. These areas need to be removed from the timber base and managed according to PACFISH and INFISH guidelines. I do not support the changes in riparian management

that are outlined in FW-STD-RMZ-01 where non-commercial vegetation management would be permitted in areas immediately adjacent to the stream and commercial logging would be allowed in the outer half of the riparian management zone.

Municipal Watersheds [ndash] The existing Nez Perce Forest Plan had two management areas for municipal watersheds. These included Wall Creek for the town of Clearwater (MA-22, 2,042-acres) and Big Elk and Little Elk Creek for the town of Elk City (MA-23, 7,061-acres). The existing Clearwater Forest Plan did not have a management area for municipal watersheds, but the town of Elk River has subsequently established a municipal watershed in Elk Creek. I believe a separate management allocation is warranted to help protect these streams as drinking water for these three communities.

Unsuitable [ndash] The Clearwater National Forest identified 92,000 acres of unsuitable habitat in the existing Forest Plan. The Nez Perce Forest Plan identified unsuitable habitat as a separate Management Area (MA-1, 19,388 acres). Unsuitable habitat was generally considered as an inclusion in other management areas in both Forest Plans. I agree with this approach.

### Objection 3 [ndash] Across the Landscape Standards, Objectives and Guidelines

I generally agree with the landscape standards, objectives and guidelines outlined in this section of the proposed Forest Plan, but have the following two concerns:

FW-OBJ-TE-01. This objective calls for the treatment of 3,000-4,200-acres of riparian habitat every five years to restore hardwoods and understory plants. It is unclear, how this objective relates to other riparian objectives and how existing PACFISH and INFISH would need to be modified to accommodate this objective. I do not support the modification of PACFISH and INFISH.

FW-GDL-TE-01. Why is the protection of uncommon elements limited to habitats that protect critically globally imperiled (G1) species and globally imperiled (G2) species? Several other species such as the American Pika and big game utilize these that are not globally imperiled and utilize these habitats. Uncommon elements such as mineral licks, talus slopes, fractured wet bedrock, rocky outcrops, scree slopes, waterfalls, and geologic inclusions should be protected regardless of the global rank of the species that utilize these elements. What sorts of protection will be applied when these uncommon elements once they are located? For example, will no harvest buffers be maintained around the areas and if so, how large will these buffers be?

### Objection 4 - Questionable Conclusions Regarding the Historic Range of Variability of Forestlands

I believe the Nez Perce [ndash]Clearwater National Forest needs to re-evaluate the need for so called [ldquo]restoration[rdquo] in the new Forest Plan. There appears to be a misconception that stands are densely overstocked due to fire suppression and I believe this is driving management actions toward solutions that are in my opinion ecologically unsound. The [ldquo]idea[rdquo] that stands are somehow overstocked due to recent fire suppression is only applicable to a small area of the Forest in the Warm Dry PVT, but the concept appears to be driving the management prescriptions across the entire Nez Perce [ndash] Clearwater.

In every biophysical setting there seems to be a perception that stands are in need of restoration by removing small diameter Douglas fir, grand fir and western red cedar. The whole idea of [ldquo]back-country restoration[rdquo] (MA-2) seems to be driven almost entirely by this concept, when in reality most stands in these areas are quite healthy and at normal stocking levels. Yes, the amount of white pine is less, but given the

introduction of white pine blister rust that is to be expected. If you want to [ldquo]restore[rdquo] these unroaded areas, introduce more prescribed fire and plant some rust resistant white pine and whitebark pine in the openings you create. Don[rsquo]t schedule a bunch of logging and build several miles of so called [ldquo]temporary[rdquo] roads in the name of [ldquo]back-country[rdquo] restoration.

I have serious questions regarding your analysis of the Natural Range of Variability and modification of those ranges by the Forest Management Team into Desired Conditions. The analysis relies on backward projections using the SIMPPLLE model and rudimentary data from the Bitterroot Forest Reserve establishment reports (Leiberg 1900) and other forest inventory reports that were completed around 1937. Information from these initial inventory reports was summarized by Losensky (1994) to project forest pre-settlement conditions prior to the arrival of European settlers (circa 1900 reference period). The analysis also utilizes potential vegetation types identified by (Jones 2004) and a variety of other GIS layers to establish a 150 by 150-meter raster grid across the Nez Perce [ndash] Clearwater NF.

The SIMPPLLE model is then run for 100 decades (full model) or a subset of the 4 driest decades (dry model). Model results are then reported by tree species and size classes and the results are regarded as the historical range of natural variability. This is possible because the SIMPPLLE model is a stochastic model that can incorporate random events such as a wildfire ignition, insect attack or insect infestation. Modeled wildfires, insect attacks and disease can spread to neighboring raster polygons based on existing condition of the adjacent polygon and model weather patterns. Various model rules attempt to emulate the natural occurrence of these events.

Many assumptions have to be incorporated into such a complex model and those assumptions are particularly problematic when there is very little historical data on which to base the initial condition. The large size of the required data input is also very problematic. You have used numerous GIS layers to identify conditions in each individual raster polygon and errors are bound to exist in each of these layers. The accuracy of your data is very questionable and your predictions of the historical range of variability likely lack the precision you claim in your analysis.

My comments below focus on MA-2 and MA-3 where you propose active management practices. I have not included wilderness (MA-1) in the discussion since you have not proposed active management in this management area and the addition of numbers for wilderness only serve to complicate the discussion.

Warm Dry PVT. Your idea of understory encroachment is most applicable to this PVT, but even here your thinking appears to be very cloudy. Removal of small diameter understory trees with a focus on grand fir would likely be an appropriate treatment, but your emphasis on wholesale conversion to ponderosa pine dominance types does not make any sense. In Management Area 2, you have a goal of converting 50-65% of this area to the ponderosa pine dominance type when the current condition is only 6%. Your goal for Douglas-fir dominance types is 15-20% when the current condition is 31%. Goals are similar in Management Area 3, but this management area has more existing Ponderosa Pine (27%) and less Douglas-fir (14%). This is likely due to more timber harvest and subsequent tree planting in MA-3.

Conversion to this level of stands dominated by ponderosa pine seems very unrealistic in the relatively moist

climates of the Nez Perce [ndash] Clearwater National Forest and the current condition. It is likely that Douglas-fir played a much more dominant role than you suggest in this PVT and that historical stands in the Warm Dry PVT were composed of a mixture of Douglas fir and ponderosa pine. Losensky (1994) reported cover types in Section M332A were approximately 20.7% ponderosa pine and 27.2% Douglas-fir in 1900. Douglas-fir is a thick barked species that is relatively resistant to understory fire and older trees would have survived understory wildfires much like older ponderosa pine.

In Management Area 2, your desired condition is 15-25% of the landscape in older forests exceeding 20+ inches DBH. Goals in Management Area 3 are similar with a target of 15-28% older forests in excess of 20+ inches DBH. In forests that are dominated by ponderosa pine and Douglas-fir and have understory fire regimes at frequent intervals as you suggest, this number should be much higher. It would not be unrealistic to expect that 35-60% of this PVT was composed of older stands exceeding 20+ inches historically. Losensky (1994) reported 58.2% of the ponderosa pine stands in Section M332A were composed of over-mature forest greater than 150-years of age in 1900.

Warm Moist PVT. Your concept of understory encroachment appears to have gone most astray in the Warm Moist PVT. According to your numbers MA-2 has 3% of the area in ponderosa pine, western larch and white pine, yet your goals for these three species are 25-55%. Management area-3 has 7% of this PVT composed of ponderosa pine, western larch and white pine, but your objectives are to convert 40-75% of the PVT to these three species. Your objectives suggest that you would reduce grand fir, Douglas-fir and western red cedar to 30-45% in MA-2 and to 17-40% MA-3. Currently Douglas-fir, western red cedar and grand fir compose 70% of MA 2 and 74% of MA-3.

Such wholesale conversions are very risky and make no sense from an ecological perspective. There is a good reason why over 70% of this PVT is currently composed of Douglas fir, grand fir and western red cedar. All three of these species find prime habitat in this PVT and historically they always made up a significant component of the mixed species stands that are common in this PVT. Their presence does not indicate a need for [ldquo]restoration[rldquo]. In fact, western red cedar is one of the longest lived and most resilient species found on the Nez Perce/Clearwater National Forests. Western red cedar has few problems with insects and disease and historically old growth cedar stands where the hallmark of stable stands that lasted for hundreds of years on the Nez Perce - Clearwater.

The warm moist forest types of the Clearwater and Nez Perce Forest are generally competition-based systems that develop after large scale stand replacing fire. Stand density is usually not the driving factor in the initiation of these large-scale fires that generally occur at intervals of 250-300 years and under drought conditions such as those that occurred in 1910 and 1933. Intolerant species like western white pine and western larch have an initial advantage in these systems due to fast growth rates that allow them to capture the site and outpace the growth of other more tolerant species like grand fir, Douglas fir and western red cedar. Ponderosa pine, while present, is generally out competed in all but the driest locations in this system.

White pine and larch can dominate the site for long periods of time, but they are gradually replaced by more tolerant grand fir and western red cedar on more northerly aspects. On southerly aspects Douglas fir has an advantage due to its greater tolerance of drought and intermediate shade tolerance. White pine is not favored on

southerly aspects due to moisture requirements, but western larch does well. The introduction of white pine blister rust changed this dynamic and gave a greater advantage to grand fir and cedar especially on northerly aspects.

Unlike the ponderosa pine system most of the competing trees would have been present at the time of stand establishment and stands would have changed overtime due to competition, blowdown, and insect and disease attacks. Understory fire would have also had some influence, but it is not a major driver like it is in the ponderosa pine system. Except for past harvest operations and the introduction of blister rust, this system pretty much operates as it did historically. Overtime, white pine may make a comeback as foresters develop and plant rust resistant stock and the tree develops resistant mechanisms on its own. However, a strategy that relies heavily on white pine is unrealistic given the current situation with blister rust.

The fact that these systems always had high densities of trees is well documented by Haig (1932) in his description of the white pine type years ago and long before the effects of fire suppression was considered a major issue. He reported that [ldquo]The extremely rapid decrease in number of trees with increasing age is strikingly apparent. On good sites (site index 60) the total number of trees per acre drops from 4,700 at 20 years to 720 at 80 years, and to 390 at 120 years. The number of trees also decreases rapidly with increase in site index.[rdquo] On excellent sites (Site index 70) Haig found an average of 2,800 trees per acre over a diameter of 0.6 inches in diameter at 20 years of age, on fair sites (site index 50) Haig[rsquo]s tables show approximately 7,800 trees per acre over a diameter of 0.6 inches DBH at age 20 and on poor sites (Site Index 40) he found an 11,500 trees per acre at age 20.

Clearly, the idea of understory encroachment is not applicable in the moist cedar habitat types that predominate in the Warm Moist PVT. Tree species found here like cedar, grand fir and white pine have made very little genetic investment in mechanisms to survive fire. Instead, they rely on fast growth and extensive canopies that allow for light capture in densely stocked stands.

I agree that the retention of disease-free white pine should be included in harvest prescriptions and planting of disease resistant stock practiced. However, a strategy that emphasizes white pine as the primary component of most stands is highly questionable given the current status of white pine blister rust. White pine is subject to an introduced pathogen that has resulted in catastrophic losses across the species range and we don[rsquo]t know how that pathogen might respond to climate change.

In the Warm Moist PVT your desired condition is to have 10-25% of MA-2 and 15-33% of MA-3 composed of stands exceeding 20[rdquo] + DBH inches. Again, this appears to be an underestimate for an area that is dominated by moist habitats that seldom burn except in large scale stand replacing fire events. Trees grow quickly on these sites and stand replacing fires generally occur at intervals of 250-300 years or longer as evidenced by historical logging photos and large diameter old growth trees that can still be found on the Forest. Assuming trees can reach 20[rdquo] + DBH in as little as 100 years on these sites (Haig 1932) it is not unrealistic to suggest that 25-40% of the historical stands in this PVT would have had stands exceeding 20[rdquo] + inches.

Cool Moist PVT. Your objectives in this PVT are similar to those you have described for other PVTs in that you hope to favor intolerant western larch, white pine and whitebark pine at the expense of sub-alpine fir, grand fir, mountain hemlock and spruce. The existing condition is that these three intolerant species have 4% representation in both MA-2 and MA-3. Subalpine fir, spruce, grand fir and mountain hemlock compose 50% of MA-2 and 69% of MA-3. Your goals would decrease the amount of subalpine fir, grand fir, mountain hemlock to 26-42% in MA-2 and 26-37% in MA-3.

It is likely that the cool moist PVT will be found mostly in existing roadless areas and in most cases, there has not been a lot of existing logging. Wildfire is the primary change agent here and both stand replacement and mixed severity fires are common. Because of high elevations and reduced rates of decay, fuels tend to accumulate in greater amounts in this PVT. Lodgepole pine is also an important species component of this PVT and you suggest increasing the amount of lodgepole pine from the existing level of 19% in MA-2 and 12% in MA-3 to 20-30% of the PVT in both MA-2 and MA-3.

Your management strategy would generally target stands in the 10-14.9[rdquo] inch size class in this PVT. You would reduce this size class from the existing condition of 32% to 10-20% in both MA-2 and MA-3. You would increase the amount of forest in the 0-4.9[rdquo] size class from the existing condition of 5% in MA-2 and 3% in MA-3 to 15-30% of the PVT in both management areas.

Once again, I have some serious reservations about your strategy which is basically to increase intolerant species, create more young forests, and log and burn more roadless areas. In the name of restoration, you have decided to promote conversion to western white pine and whitebark pine in a PVT where they never were very common. The cold moist PVT was never a stronghold for western white pine, and whitebark pine is generally found at higher elevations in the Cold PVT. Both species are subject to white pine blister rust, which casts doubt on your management strategy. You intend to remove subalpine fir and Engelmann spruce that better characterize this PVT and stands in the 10-14.9[rdquo] DBH size class that could develop into the older stand structures that are needed. According to your numbers, only 9% of MA-2 and 8% of MA-2 in this PVT is in the 20+ inch size class and 11% of MA-2 and 16% of MA-3 is in the 15-19.9[rdquo] size class. Your goals for both management areas for these older age classes is 5-10% in the 20+ size class and 15-30% in the 15-19.9[rdquo] size class.

Cold PVT. In this PVT the major focus appears to be on increasing the amount of whitebark pine. I agree that this PVT is the most likely area where the species could be located. I support efforts to increase whitebark pine resistance to blister rust and could support efforts to help to establish this species on an experimental basis. However, I think your desired composition of 35-50 % whitebark pine is unrealistic and has the potential to compromise wilderness and roadless values. I base this observation on the existing condition of MA-2 which currently has only 1% existing whitebark pine according to your numbers and that no existing whitebark pine is found in MA-3, and my previously stated concerns about trying to manage a species that has been severely impacted by a non-native pathogen. None of this PVT should be in the commercial timber base or assigned to MA-3. Prescribed burning and subsequent planting of rust resistant whitebark pine should be the primary treatment prescription in this PVT.

#### Objection 5 [ndash] Extensive Levels of Timber Harvest and Burning

According to FEIS Appendix B Table 25 there are 1,240,251-acres in MA-3, but not all of this acreage is suitable

for timber management. Most of the unsuitable acreage (197,821-acres) is found in interspersed riparian areas and other special designations such as research natural areas, areas of historical significance and municipal watersheds. The acreage suitable for timber production is 1,042,630-acres (Table 1).

The objectives for vegetation treatment are to treat 10,000-acres per year with timber harvest and an additional 50,000-acres with burning from planned and unplanned ignitions. Most of the timber harvest is expected to occur in MA-3. If timber harvest were confined to the suitable acreage in MA-3 it would mean the entire suitable acreage in Management Area 3 would be treated in approximately 104-years. Thus, most older stands (15-19.9[rdquo] and 20+[rdquo] DBH stands) would be increasingly confined to the unsuitable portions of MA-3 (likely riparian areas) over the next several decades as stands are treated under the guidance of the Proposed Forest Plan. Stands are not likely to reach larger size classes and even if they do it is unlikely that such stands would have important stand characteristics such as an abundance of downed logs, decayed trees and snags that are generally important to a variety of wildlife species.

Given the past history of extensive timber harvest in Management Area 3 (including riparian areas) and the level of activity proposed under the preferred alternative, it appears that it will be very difficult to meet objectives for the retention of older stands and other resource values in MA-3 by strictly by confining timber harvest to the suitable acreage found in MA-3. For example, the abundance of young stands will not provide mature and old growth habitat for species like the fisher. Prime fisher habitat is generally associated with MA-3.

Prescribed burning is most likely to occur in MA-2 in the 1,203,630-acres located outside of recommended wilderness. It is also obvious that a considerable amount of timber harvest will have to occur in MA-2 if the objectives of the Forest Plan are to be achieved. When timber harvest is coupled with burning objectives there is a real concern about maintaining older forests across the Nez Perce Clearwater NF. Planned and unplanned ignitions on 50,000-acres per year would mean burning the entire Nez Perce [ndash] Clearwater NF outside of the suitable acreage in MA-3 (2,896,426-acres) in 58-years.

In summary, there does not appear to be much management flexibility in MA-3 for more timber harvest under the Preferred Alternative. Considerable timber harvest can be expected in MA-2 under the preferred alternative and this fact is not readily apparent in the proposed Forest Plan. The extensive amount of burning with both planned and unplanned ignitions is also going to accelerate the trend towards younger age classes across the Forest. These changes will place species that utilize older forests at great risk. There is also concern that aquatic resources will be negatively impacted by the excessive amount of logging, burning and road construction that will be required to meet vegetation management goals.

#### Objection 6 [ndash] High levels of treatment in existing aspen stands

Aspen treatment targets seem very unrealistic for the Nez Perce-Clearwater National Forest which has very few stands that are dominated by this forest type. Under the Proposed Forest Plan, the annual level of aspen harvest

would be 680-acres per year. Treatment levels seem very excessive and would likely be detrimental to the wildlife species that utilize these unique areas. Annual treatments of less than a 100-acres seem more than adequate for these valuable stands and present much less risk of causing negative impacts. Until some monitoring is done that indicates the necessity of aspen treatment, the Forest should take a conservative approach to the regeneration of this relatively rare resource.

#### Objection 7 - Lack of any Standards or Guidance on the Level of Old Growth Retention Across the Forest within individual watershed

The proposed Forest Plan offers no plan for the protection for existing old growth. There are only recommendations that allow for the removal of certain types of old growth and timber harvest and other manipulations in existing old growth stands. It is assumed forest size class desired conditions FW-DC-FOR-05, FW-DC-FOR-08, FW-DC-FOR-11 and FW-DC-FOR-12 address this issue, but none of these Desired Conditions is a measurable standard that assures the public of adequate retention of old growth. With over 10,000-acres of proposed logging and 50,000-acres of prescribed burning per year, there is a real risk that a significant amount of existing old growth will be lost. Measurable standards for the retention of old growth are needed.

The existing Forest Plans had a requirement that at least 10% of the Forest and 5% of each 10,000-acre watershed should be retained as old growth. The new plan is silent on any similar requirements. In the existing plans, retention of old growth was considered an important component for maintaining viable populations of all native species and I believe this is still relevant. Given climate change and the loss of fish and wildlife habitat across the globe, I believe a more robust standard that goes beyond the 10% minimum is even more important today than it was 30-years ago. My recommendation would be to maintain all existing old growth to assure high quality habitat for species that utilize older forests and prevent further impacts to climate change. Commercial logging and non-commercial activities as described in this existing plan that target certain tree species (Douglas fir, grand fir, etc.) and understory components should not be permitted in existing old growth.

Retention of all old growth on National Forests is also a recent recommendation of the Secretary of Agriculture that is to be incorporated into all existing Forest Plans. However, it is still unclear how this new policy might be implemented. I have grave concerns that exceptions may be granted to accommodate local special interests and that logging in old growth may be permitted under the guise of fire protection and maintaining stand resiliency. These arguments are likely to very similar to current rationalizations in the Proposed Nez Perce - Clearwater Forest Plan.

#### Objection 8 = Standards and Guidelines that Permit Logging and Road Construction in Old Growth (MA3-STD-FOR-01, MA2 and MA3-GDL-FOR-02, MA2 and MA3-GDL-FOR-03 and MA2 and MA3-GDL-FOR-04) and the

The above standard and associated guidelines permit logging in old growth to the point that the existing stand meets the minimum old growth screening criteria in the Green et al. 1992 publication. On several past projects the Forest Service has interpreted this to mean that they can log smaller trees in existing old growth stands as long as they leave the minimum number of trees over 21-inches DBH (generally 10 trees per acre). The standard and guidelines do not appear to restrict complete removal of old growth or road construction in grand fir, sub alpine fir, Englemann spruce, mountain hemlock and lodgepole cover types. The standard and guidelines should be modified to protect old growth in all forest cover types and logging should not be permitted in existing old growth in all locations. Road construction should be avoided in all existing old growth types.

The Green et al. (1992) publication is very good document that provides excellent guidance for the maintenance of old growth on the National Forests of the Northern Region. However, the tables in the report were never intended to be used as a definition of old growth or as a substitute for field inventory and evaluation as is the current practice on the Nez Perce-Clearwater National Forest. Consider the following statement from the

guidelines: [ldquo]Because of the great variation in old growth stand structures, no set of numbers can be relied upon to correctly classify every stand. In addition, the uncertainties of sampling and statistics introduce another need for caution in using stand data. 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[rdquo] (Green et al. 1992).

Past use of the Green et al. (1992) guidelines on the Nez Perce-Clearwater Forest has largely been centered on the minimum size and number criteria (TPA/DBH) from Table 1 [ndash] Northern Idaho Zone Old Growth Type Characteristics (2/05 errata edit). The two Forests have generally not used the associated characteristics listed in Table 1 or information described in the publication text to identify old growth. Text of the Green et al. (1992 document) suggests that [ldquo]The basic concept is that old growth should represent the late stages of stand development[hellip]distinguished by old trees and related structural attributes[rdquo].

Instead of field examination by qualified ecologists and wildlife biologists, the two Forests have done exactly what the guidelines suggest not to do. For example, even though it has been over 36-years since the current Forest Plans were approved there is still no comprehensive inventory of old growth on the two Forests. Instead, the Forests have relied on a statistical analysis of 712 plots from the Forest Inventory and Analysis (FIA) on the two Forests to assure the current forest-wide standard of maintaining 10% old growth is to be achieved. This analysis has relied strictly on minimum criteria (TPA/DBHs) reported in the Green et al. 1992 screening criteria. No examination of associated characteristics has occurred and the location of the old growth identified by this method cannot be determined.

Project planning has included some field verification, but that has been dependent on Ranger District and the make-up of various IDT teams. There has been less and less field verification and more emphasis in regard to logging within old growth stands as time has progressed and staffs have gotten smaller. In many recent projects, old-growth is declared largely by results of stand examination data and little field verification has been occurring. Stands without stand examinations are merely declared [ldquo]unverified[rdquo] or [ldquo]replacement[rdquo] and then counted towards old growth totals. Strict reliance on data base queries from the timber stand database has been shown to give unreliable results in past court cases (Iron Honey Timber Sale, Idaho Panhandle National Forest [ndash] 9th U.S. Circuit Court of Appeals in San Francisco, 2004) and is no substitute for field investigation by qualified professionals.

More recent projects on the Nez Perce [ndash] Clearwater have been calling for more logging within existing old growth stands. In most cases, the focus of this logging has been the removal of understory grand fir and Douglas-fir from old growth Ponderosa Pine stands. The Green et al. (1992) guidelines are generally quoted in these proposals with similar language to what has been proposed in this standard and these associated guidelines. More recently, the Nez Perce [ndash] Clearwater has been targeting moister old growth forest types such as western red cedar and grand fir. Again, emphasis is being placed on the removal of understory grand fir and Douglas fir.

Environmental documents usually say something like the logging with maintain old growth conditions as outlined in the Green et al. (1992) guidelines. What is usually meant by these statements are that the numbers of large trees identified in the Green et al. 1992 guidelines will be maintained, but there is little emphasis on maintaining other associated characteristics. Removal of snags, small trees, downed wood and understory vegetation is generally acceptable in order to conduct the logging operation.

In summary, I do not support the adoption of the Green et al. (1992) guidelines as the definition of old growth if they are going to be utilized as they have been in the past on the Nez Perce-Clearwater National Forest. If these guidelines are to be adopted as the Forest standard, it must be recognized that the guidelines are to be used as they were intended. Minimum criteria need to be used as screening criteria for identification of potential old growth stands and qualified ecologists or wildlife biologists should make the final determination of stand suitability for old growth. This determination must use the associated characteristics and the text identified within the Green et al. (1992) publication.

The Forest Plan must establish a threshold for the retention of old growth and stands must be identified so that they can be retained as site specific projects are implemented. Old growth inventory data based on FIA plots is not acceptable for Forest level inventories since actual old growth stands cannot be identified with this method.

I am also opposed to the idea of [ldquo]vegetation treatments[rdquo] within existing old growth stands. As explained in the Green et al. 1992 publication [ldquo]old growth is the late stage of stand development[rdquo] and I believe observations of perceived problems requiring human intervention by the Nez Perce [ndash] Clearwater National Forest are overstated.

Green et al. (1992) describes three broad old growth stand structures that explain most of the unfounded concerns of the Nez Perce [ndash] Clearwater National Forests. First, they describe late seral, single story stands that they say have developed from tree species [ldquo]that first captured the site after a stand replacing disturbance[rdquo]. Such stands have a single layer of large over-mature trees and relatively little understory growth. They state [ldquo]This stage may have moderate amounts of tree decay, but little mortality, and few snags or pieces of down woody material[rdquo].

Stage 2 is late seral, multi-story - In this stage [ldquo]the initial seral trees and canopy layer have lost control of the site. Disturbance or natural mortality of age has produced holes in the upper canopy; shade tolerant understory vegetation and trees are increasing in crown volume.[rdquo] I believe these are the old growth stands that the Nez Perce-Clearwater is targeting with the idea of human intervention. These stands need time to develop into near climax stands that Green et al. (1992) also describe.

Near climax stands (Stage 3) may be multi-storied if shade tolerant species are short lived like subalpine fir or moderately long lived like grand fir and these stands generally have significant numbers of snags and downed woody debris. Long-lived tolerant species like cedar may have only one canopy layer and few snags and little downed wood.

Objection 9 [ndash] Counting of standing trees as large coarse woody debris and no requirements for the retention of large downed logs (MA2 and MA3-GDL-FOR-01)

This guideline deals with leaving large coarse woody debris in harvest units. I generally agree with this guideline, but disagree with the idea that standing trees and snags can be counted toward the recommendations of Graham et al. 1994. Minimum standing leave tree and snag numbers need to be independent of downed woody debris requirements. If sufficient woody debris is not available, I believe that existing snags that will be otherwise felled for safety considerations be felled and retained within the unit to meet the recommendations of Graham et al. (1994) and ICBEMP DEIS Appendix 12. If no such snags are available, I suggest that live trees could be felled in substitution.

I also suggest there be an additional requirement to retain large downed woody debris (21+ inches at rates listed in the ICBEMP Supplemental Draft EIS [ndash] Appendix 12 for wildlife habitat (Table 2). Downed logs for wildlife should have a minimum small end diameter of 15 inches and length of 32-feet. If snags or trees are felled for safety, downed woody debris requirements or wildlife purposes, they generally should not be bucked into shorter lengths. The intent of this recommendation is to get fuel managers to consider the importance of large diameter logs (trees) in their fuel management prescriptions. Downed trees and logs are an important habitat component for a variety of wildlife and aquatic species.

Objection 10 - MA2 and MA3-GDL-FOR-05 and MA3-GDL-FOR-06 (Low Recommended Snag Retention Levels)

These guidelines (Table 3) deal with retaining of snags or live trees within the project area in management areas two and three. The guidelines refer to snags per 100-acres across the entire project area. The guidelines are designed to be mitigation measures for the loss of snags and live trees in harvest units, but no minimum snag numbers are required within individual harvest and prescribed burn units. In harvested areas most existing snags are expected to be felled due to safety concerns. Live trees can be substituted for snags if existing snags are not present or if snags must be felled for safety. In management area three, there is an additional requirement to maintain at least 3 live trees per acre >15 inches DBH within harvest units for long term snag recruitment. Live trees can be scattered across the harvest unit and do not have to be present on every acre. There is no similar requirement in MA-2 for leaving live trees.

Under this guideline it is going to be very difficult to meet the desired condition of retaining large numbers of snags and legacy trees within future stands. Several statements of desired condition (FW-DC-FOR-04, FW-DC-FOR-05, FW-DC-FOR-07, FW-DC-FOR-08, FW-DC-FOR-11, MA3-DC-FOR-07, etc.) call for the maintenance of large numbers of legacy trees and snags on the landscape, but offer no requirements in regard to the desired size and minimum numbers of either snags or legacy trees. Snags and legacy trees are important for a wide

variety of cavity nesting species and other animals like the fisher and pine marten who use forest structure for denning, cover and seeking their prey which are also attracted to snags and downed woody material.

Two to six snags or live trees per acre (dependent on potential vegetation type) cannot be expected to make a significant contribution to the numbers of snags and legacy trees as compared to historical conditions (Table 4). Most snags in timber harvest units will be lost to harvest operations and snag numbers will be increasingly dependent on unharvested areas within the project area to achieve the numbers in Table 3. The three live trees left in harvest units in MA-3 may provide some additional snags as some trees are killed during prescribed burning operations. While it is desirable to create snags and downed dead logs, it is expected that most snags created by burning operations will only last 10-20 years (Harris 1999). Although, some persistent species (such as ponderosa pine, western larch and, western redcedar) in larger size classes (21+ inches) may persist for longer time periods (Harris 1999).

Live trees killed in the initial slash disposal operations will never contribute to the number of legacy trees in harvested areas. Legacy trees are important as sources of large diameter snags and downed logs, until the new stand becomes old enough to actually start contributing these components on its own. This may take 90-100 years in most forest types found on the Nez Perce-Clearwater NF. This is just about the time when the stands will meet culmination of mean annual increment and when the Nez Perce-Clearwater plans to re-harvest them (Revised Forest Plan - Table 24). Maintaining three live trees per acre as recommend in MA3-GDL-FOR-06 is insufficient for maintaining snag recruitment and legacy trees during this period of stand development.

In old growth type 4, Green et al. 1992 report that the number of dead standing trees 9-inches or more DBH is 14 with a range of 0 to 35. Green et al (1992) report there are an average of 27 trees per acre 21 inches DBH or more and that the range of across forest types for large trees that exceed 21 inches DBH is 12 to 53 trees per acre. Species like the pileated woodpecker, pine marten and fisher evolved to take advantage of these conditions. In order, to meet the timber management goals of the Revised Forest Plan it is unlikely that stands within MA-3 will ever achieve old growth status and so the trees left in the initial harvest unit are very important to the maintenance of within stand structure within this management area.

Historically, wildfire would have produced large numbers of snags in burnt areas and many live legacy trees would have been retained in unburnt areas of the wildfire. Species like the black-backed woodpecker evolved to take advantage of this situation and the abundance of food (insects) that would have been created. Leaving three trees per acre in harvested units that are expected to be harvested again in 70-90 years, does not mimic the historical conditions for species like the black-backed woodpecker.

In order to maintain within stand structure within harvest units, I believe it would be desirable to leave a higher number of live trees within proposed harvest units. I recognize that there are safety issues with leaving individual dead snags and am supportive of leaving live trees, untreated clumps and downed logs. To actually maintain snag levels and recruitment trees at the necessary levels, I believe that the recommendations of the ICBEMP project should be utilized.

The Interior Columbia Basin Ecosystem Management Project (ICBEMP) Supplemental Draft Environmental Impact Statement Appendix 12 states that the historical range of variation of snags in moist forests of the Upper Columbia Salmon-Clearwater Basin for large snags exceeding 21 inches DBH is between 3.8 and 7.0 trees per acre for stands experiencing high intensity stand replacing fire regimes (Table 4). In cool/cold forests they found the historical range of variation of large snags (21+ inches) was 5.7 to 10.5 trees per acre in stands experiencing high intensity stand replacing fire regimes. Dry forests with low-intensity intermittent fire regimes had a historical range of variation of large snags between 0.4 and 0.7 snags per acre.

Bollenbacher et al. (2009) examined the existing condition of snag numbers in Northern Idaho using FIA data. He found that when he excluded lodgepole pine stands, that moist forests outside of roadless and wilderness areas had an 90% confidence level of between 2.0 to 2.4 trees per acre for large snags exceeding 20 inches DBH and 90% confidence level of between 4.2 to 5.7 trees for large snags exceeding 15 inches DBH (Table 4). In cool forests he found areas outside of roadless and wilderness areas had an 90% confidence level of between 1.0 to 1.6 trees per acre for large snags exceeding 20 inches DBH and 90% confidence level of between 3.0 to 4.2 trees for large snags exceeding 15 inches DBH. In dry forests he found areas outside of roadless and wilderness areas had an 90% confidence level of between 1.6 to 2.3 trees per acre for large snags exceeding 20 inches DBH and 90% confidence level of between 4.5 to 6.1 trees for large snags exceeding 15 inches DBH.

In the moist and cool PVT groupings the existing level of large snags (20+ inches DBH) snags found by Bollenbacher et al. (2009) falls well below the historical range of the ICBEMP historical range of variation for large snags. In the dry forest PVT, the existing condition exceeds the values of the ICBEMP historical range of variation of forests with low-intensity fire regimes and is just below the historical range of variation for the high-intensity fire regimes.

Under the recommendations of the Preferred Alternative, very few snags are going to be retained in harvest units and most harvested stands will be harvested again when they reach culmination of mean annual increment. Live tree retention within harvest units under the Revised Forest Plan does not even come close to the Historical Range of Variation of large snags identified in the ICBEMP Supplemental DEIS - Appendix 12, let alone retain a sufficient number of legacy trees to provide for long-term snag recruitment. Even the Bollenbacher et al. (2009) report which is claimed to be the basis of the snag evaluation in the FEIS, shows higher snag numbers than recommended in the Proposed Forest Plan. For example, Bollenbacher et al. (2009) reported approximately 2 snags per acre over 20+ inches and 5-6 snags per acre over 15+ inches DBH in the Dry Forest PVT, but the Forest Plan sets the minimum numbers at 1 snag per acre over 20+ inches and 2 snags over 15+ inches in the Warm Dry Forest PVT.

I don't think it would be unreasonable to utilize the recommendations of the ICBEMP of 2-4 snags per acre over 20+ inches in the Warm Dry PVT, 5-7 snags per acre over 20+ inches in the warm moist PVT and 6-10 trees per acre over 20+ inches Cool/Cold PFT (Table 5). Bollenbacher's (2019) numbers for existing condition (upper bound) could be utilized for snags between 15 and 19.9-inches since numbers in this size class are not reported in the ICBEMP and we don't have an estimate of the historical range of variation for these smaller size classes. Minimum tree size should be 15-inches and leave tree selection should be geared to retaining the largest trees in the existing stand. Guideline MA3-GDL-FOR-06 should also be extended to MA-2 and increased to at least 10-15 trees per acre over 15+ inches DBH. More leave trees are necessary in harvest units if the snag

and snag recruitment objectives are to be achieved.

#### Objection 11 - Climate Change and Carbon storage

The best way the Nez Perce - Clearwater Forest could fight climate change and provide for carbon storage would be to retain existing old growth and mature forests (Harmon et al. 1990, Moomaw et al. 2019) rather than cutting them down with an annual timber harvest of 190-210 MMBF (10,000-acres) or burning them up with over 50,000-acres of burning per year. In 100-years that would mean almost all of the lands suitable for timber production (1,042,519-acres) would need to be harvested and burning would have to occur at least twice on most of the remaining 2,896,537-acres of the Forest. With this level of treatment there will be little opportunity for stand development into old growth or even mature forest, especially in Management Area 3. To achieve harvest goals and vegetative structural goals across the Nez Perce Clearwater, it is likely that more timber harvest will be required in Management Area 2 (existing roadless areas). The aggressive logging and burning objectives will also release significant levels of smoke and carbon dioxide into the atmosphere.

#### Objection 12 - Allowing heavy equipment on slopes exceeding 35% should not be permitted

MA2 and MA3-GDL-SOIL-01. All ground-based equipment should be limited to slopes less than 35% regardless if treatments are for logging or other types of vegetative treatment. Limiting logging to 35% slopes and then allowing heavy equipment to pile slash or do other activity on slopes up to 45% makes absolutely no sense.

#### Objection 13 [ndash] Lack of Measurable Standards to Protect Aquatic Ecosystems

The standards and guidelines included in the Preferred Alternative for the protection of water quality are fairly nondescript and have generalized conclusions about the need to protect water quality and aquatic ecosystems. These standards are generally short on detail and while they do describe the need to protect water quality there is little emphasis on metrics that might be measured to ensure that water quality and aquatic resources are being maintained. This is sharp contrast to the existing Forest Plans that include several measurable standards and guidelines as related to the protection of water quality and aquatic resources.

FW-DC-WTR-04. This desired condition deals with instream habitat conditions and suggests that streams should meet the metrics established in the PACFISH INFISH Biological Opinion (PIBO). The Forest Plan needs to have a requirement to collect, display and analyze this data during project level analysis for all drainages that might be impacted by the proposal. The PIBO data is currently only collected on a few of the larger rivers such as the Lochsa and the South Fork of the Clearwater and is inadequate for project planning and impact to local watersheds.

FW-DC-WTR-06. This desired condition deals with sediment delivery to streams and suggests that [ldquo]The sediment regime in water bodies is not chronically affected by management activities to the extent that the availability of functioning spawning areas and interstitial spaces are reduced.[rdquo] In the existing Forest Plans stream condition in regard to sedimentation was largely determined by the collection of instream cobble

embeddedness and % fines. Collection of this data should not be an optional requirement of project level planning. Without statistically reliable data which is repeated at appropriate intervals it is impossible to know if sediment levels are currently meeting objectives or if conditions are deteriorating or improving over time.

Sediment modeling is also an important part of predicting the impact of proposed projects and it should be a mandatory requirement of project level planning. It is appropriate to use the latest scientifically applicable models as suggested in FW-MSA-WTR-03, but these models should be mandatory requirements of project level planning. Without appropriate modeling it is impossible to predict the impact of future activities on the watershed.

In summary, it should be mandatory that all new projects in fully functioning watersheds maintain cobble embeddedness and % fines at the fully functioning level. Appropriate modeling tools should be utilized to predict sedimentation amounts and use of these tools should be a mandatory requirement of project planning. Streams currently functioning at risk or functioning at unacceptable risk should be elevated to the status of priority watersheds and actions taken to correct existing problems.

FW-DC-WTR-07 - This desired condition deals with maintaining appropriate instream flows. In forested landscapes, water yield and peak flow have often been evaluated by the use of equivalent clear-cut acres (ECAs). This methodology is discussed in Proposed Forest Plan Appendix 4 and is considered optional requirement of the watershed analysis. Recent literature has converged upon a 20% change in forest canopy as commonly producing a detectable change in peak flows and/or average annual water yield (MacDonald and Stednick 2003; Grant et al. 2008, Troendle et al. 2010).[Idquo] The 20% value is also supported by the National Marine Fisheries Service (1998) who suggest an ECA in a 6th Code HUC watersheds of less than 15% is generally indicative of good or high-quality stream condition, 15-20% is considered indicative of moderate quality stream condition and ECA of greater than 20% is indicative of low or poor-quality.

I believe ECA analysis should be a mandatory requirement of project level planning in the Forest Plan and that ECAs should be held below the 20% threshold as identified by MacDonald and Stednick 2003; Grant et al. 2008, Troendle et al. 2010 and the National Marine Fisheries Service (1998).

FW-DC-WTR-11. This desired condition talks about water cooling, but does not identify instream temperatures that are important for the various species of concern such as bull trout. The Forest Plan needs to identify appropriate stream temperatures for the aquatic species of concern such as the bull trout. If there are differences from those already identified by the Idaho Department of Environmental Quality, these differences need to be resolved in favor of the species of aquatic concern.

FW-STD-WTR-02 - This standard discusses the importance of BMPs in protecting water quality. While, I agree that BMPs are important, they should not be the only (principle) means of protecting water quality. Harvest scheduling, watershed improvement and road management including removal of high-risk roads and stream crossings may actually be more important considerations in maintaining and improving water quality.

FW-GDL-WTR-03 [ndash] Instream activities that might impact spawning fish should not be permitted on National Forest lands, regardless if those activities are permissible under guidance of the State of Idaho instream work guidelines.

Objection 14 [ndash] The concept of a Conservation Watershed Network at the HUC-12 scale has significantly

reduced the number drainages with water quality standards on the two Forests. HUC-12 watersheds are often not true drainages and conducting a [ldquo]watershed[rddquo] analysis on these areas makes little sense from a fishery or drainage perspective.

The streams identified in the Conservation Watershed Network have been significantly reduced over those identified in the current Clearwater Forest Plan - Appendix K and the current Nez Perce Forest Plan [ndash] Appendix A. Reviewing project impacts at the larger HUC-12 scale with tend to dilute impacts and decrease the significance of impacts to both water quality and fish. Also, many HUC-12 [ldquo]watersheds[rddquo] as currently designated are not true watersheds and doing a water quality analysis on them makes little sense. Some small drainages may be completely disconnected from other drainages in the HUC-12 analysis area. An analysis of stream condition based on a HUC-12 analysis areas, especially those in lower portions of larger drainages, often do include the impacts of activities in upstream areas.

Please use the previously designated Forest Plan watersheds in your analysis. This is another case of trying to fix something that isn[rsquo]t broke. Considerable work went into identifying streams on the two Forests that were important fisheries. Fish species of concern were identified in each of these drainages and various habitat objectives were identified based on factors such as stream size, species present and current habitat condition.

FW-STD-CWN-01 [ndash] This standard identifies HUC-12 watersheds as the standard for watershed evaluation. I do not support this change, and think this standard should apply to the existing Forest Plan watersheds as currently identified in the existing Forest Plans. Significant resource damage could occur to water quality and fish habitat by the time impacts are apparent at the larger HUC-12 scale. Many HUC-12 [ldquo]analysis areas[rddquo] are not true watersheds and doing an analysis on these [ldquo]pseudo drainages[rddquo] with methods like sediment modeling, equivalent clearcut acres or road density makes little sense.

Objection 15 [ndash] Elimination of PACFISH and INFISH guidance

The following objectives, standards and guidelines would eliminate current direction as outlined in PACFISH and INFISH. I strongly object to this change from the current Forest Plans.

FW-OBJ-RMZ-02 [ndash] This objective suggests using 10% of the trees harvested within the outer portions of the riparian zone for aquatic stream restoration. Commercial timber harvest is not appropriate under PACFISH and INFISH and should not be planned in outer portions of the riparian zone.

FW-STD-RMZ-01 - This standard eliminates PACFISH and INFISH guidance and would allow commercial logging within 150-feet of fisheries streams and 100-feet of streams in other categories. Non-mechanical treatments would be permitted in the entire riparian zone. I believe the Forest should maintain standards as outlined in PACFISH and INFISH. Retention of PACFISH and INFISH buffers have been utilized by the Forest Service to justify the protection of watershed condition on many past projects. I see no real reason to abandon

current PACFISH and INFISH guidance.

FW-STD-RMZ-02 - Any management practices within the riparian management zone needs to be conducted under the supervision of a trained hydrologist and/or fisheries biologist not the Timber Sale Contracting officer.

FW-STD-RMZ-04. Fuelwood cutting should not be authorized in the riparian management zone.

FW-STD-RMZ-05. This standard deals with safety during commercial timber harvest and non-commercial fuel treatments. With the exception of hazard trees within existing campgrounds, it would largely be unnecessary if commercial harvest and non-commercial harvest were not being planned in riparian zones.

FW-STD-RMZ-06. Prescribed fire ignitions should not be permitted in the entire width of the riparian management zone, unless it can be demonstrated that such practices will improve riparian management objectives.

#### Objection 16- Lack of Measurable Standards for the Protection of Wildlife Habitat

The FEIS and Proposed Forest Plan claim that most wildlife species will be protected by proposed Forest Plan objectives for the management of vegetation and other more general management measures that are not specific to an individual fish or wildlife species. Examples, of these general measures might be the inclusion of riparian buffers or general recommendations for the retention of snags and downed wood.

This supposition is very questionable and goes back to practices of the 1960s, that were generally the impetus for the passage of the National Forest Management Act in 1976. In those days, it became abundantly clear that forest management practices were not adequately protecting fish and wildlife habitat and if these other resources were to be protected that a plan for the protection of native and desirable non-native species would be needed. This led to the development of the current Forest Plans and the development of measurable standards and guidelines that offered protection to important fish and wildlife species.

The preferred alternative does away with most measurable standards related to individual fish and wildlife species and replaces them with more general subjective criteria that are supposed to protect all species. The proposed plan only identifies a five species of conservation concern (Bighorn Sheep (*Ovis canadensis*), Fisher (*Pekania pennant*), Mountain Quail (*Oreortyx pictus*), White-headed Woodpecker (*Picoides albolarvatus*) and Harlequin Duck (*Histrionicus histrionicus*)), but places little or no constraint on management activity that specifically addresses the needs of each individual species. I could find no recommendations for the protection

or enhancement of habitats for the white-headed woodpecker or harlequin duck in the Proposed Forest Plan.

Three of the species (bighorn sheep, white headed woodpecker and mountain quail) are very limited in their habitat distribution on the Nez Perce - Clearwater NF and primarily occur in drier habitats along the lower Salmon River. This area has been identified as a Geographic Area of special concern in the preferred alternative. The area also has several endemic snail species and other habitat characteristics that suggest that this area should be a separate management area (See previous discussion). There is a desired condition in the Geographic Area GA-DC-SR-03 that some habitat be available for terrestrial snails, but this habitat is only briefly described in Appendix 4 of the plan. Snail habitat is not spatially identified or quantified and specific measures for enhancement or protection of snail habitat are not included in the Forest Plan. There is also a Geographic Area objective GA-OBJ-SR-01 for the restoration 100-acres of mountain quail habitat every five years. There is no description or identification of this habitat nor any mention of exactly what needs to be restored.

The preferred alternative does discuss big horn sheep habitat in general terms (FW-DC-WL-05) and suggests [ldquo]Bighorn sheep habitat reflects its historic distribution and connectivity and is comprised of native, high protein grass and forbs near rugged escape cover.[rdquo] Allotments are not supposed to be located within 16-miles of core home ranges (FW-STD-WL-02) and goat packers are required to follow BMPs to avoid transmission of disease to bighorn sheep (FW-STD-WL-03). Other than occurring in the Lower Salmon Geographic Area, the location of core home ranges is not disclosed. Likewise, there is no description of bighorn habitat and no standards and guidelines that either enhance or protect existing habitat. Readers of the plan are left to their own interpretation of historic distribution and connectivity since it is not discussed in the plan. No direction is given regarding motorized access on big horn sheep summer or winter range?

The only specific species criteria for the protection of wildlife habitat are measures outlined in the Northern Rockies Lynx Management Direction and an inadequate measure to protect tall forests for the fisher. Otherwise, the general provisions of the plan are assumed to protect all fish and wildlife species. I strongly disagree with this approach and the conclusions of the analysis, especially in a plan that calls for significant logging (10,000-acres per year) and burning (50,000-acres) per year.

Finally, I am disappointed that no provisions have been considered for the protection of recently listed wolverine and the grizzly bear. Retention of the existing 1.5 million acres of roadless habitat on the two Forests is a very important consideration for these two species. Wolverines are already known to inhabit these areas and there have been recent sightings of grizzly bears starting to explore the Nez Perce-Clearwater NF. The roadless areas of the Bitterroot Recovery Zone are an important link between grizzly bear populations of the Northern Continental Divide and Yellowstone.

The Bitterroot Recovery Zone is the largest intact roadless area in the lower 48 states and deserves a much higher level of protection than has been offered in the preferred alternative. The proposal to open the recommended Great Burn wilderness area to snowmobiles and bicycles will have serious consequences for the wolverine since this is some of the best deep snow habitat on the two Forests. The Idaho/Montana Divide is likely an important travel corridor for many wildlife species including the grizzly bear and wolverine. Please

evaluate the Citizen Alternative that has been proposed by the Friends of the Clearwater and numerous other individuals for the protection of this unique area.

#### Objection 17 - Fisher Desired Condition (FW-DC-WL-04) is Inadequate to Protect Habitat for this Species

The desired condition of leaving 50% of the landscape in tall forests (82-feet and higher) is inadequate to protect fisher habitat and leaves the species largely unprotected on the Nez Perce [ndash] Clearwater NF. Sauder and Rachlow (2014) found that [ldquo]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.[rdquo]. They suggest that an [ldquo]increase of open area from 5% to 10% reduces the probability of occupation by fishers by 39%[rdquo] and that home ranges with more than 25% open habitat have a low potential for occupancy. Sauder and Rachlow (2014) reported that the median amount of open area within radio-monitored fisher home ranges was 5.4%. According to Sauder and Rachlow (2014), the approximate the home range size of a female fisher is 12,200-acres.

The Desired Condition makes no mention of an evaluation at the home range scale, nor is there any reference to the amount or distribution open habitat. The desired condition takes a passive approach to maintaining fisher habitat with the assumption that fishers will be OK, if the [ldquo]desired range[rdquo] of vegetative conditions is maintained in the Warm Moist habitat group (Proposed Nez Perce [ndash] Clearwater Forest Plan Table 6). These questionable desired conditions allow for 5-20% seral grass and shrub and 10-25% in young stands 0-4.9 inches DBH in Management area 1 and 2. In Management Area 3, desired conditions allow for 1-5% seral grass and shrub and 5-25% in young stands 0-4.9 inches DBH. Mature forest over 15-inches DBH can drop as low as 30% in MA-1, 25% in MA-2 and 35% in MA-3. With the large amounts of proposed timber harvest (10,000-acres per year) and prescribed burning (50,000-acres per year) it is highly likely that the amount of existing open area will be well over 5% in much of the Warm Moist habitat group and the amount of mature forest will be less than 50%. Especially, since the Warm Moist group is where the grand fir stands that are being targeted for conversion to white pine and other species are located.

#### Objection 18 [ndash] Multiple Use Wildlife

With the exception of elk, all management indicator species have been eliminated in the Proposed Forest Plan. Management indicator species are important for monitoring the impact of forest management and recreational use on a host of other species which utilize similar habitats. At risk species are generally those associated with older forests, snags and downed wood since these are removed with timber management. Wide ranging predators are also at high risk due to human activity and reductions in available habitat. Roads, trails and recreational activity along with changes in habitat can influence these species due to their large home range size and relatively low population densities compared to the prey species on which they rely.

For these reasons, I do not support the fragmentation of existing roadless areas with new motorized trails regardless of how much adjacent unroaded habitat is available (MA2-STD-WL-01). Other species such as grizzly bears, wolverines, lynx, marten and fishers have much larger home ranges than elk and need roadless areas much larger than 5,000-acres to support their life cycles.

In the existing Forest Plans, white-tailed deer and moose were also considered important big game management indicator species in addition to elk. The pileated woodpecker and the goshawk were chosen as management indicator species that require older forests for nesting. The pileated woodpecker is a cavity nesting species that requires large snags for nesting. Goshawks do not utilize nesting cavities, but older forests are important for this species. The pine marten and fisher were also selected as management indicator species in the existing Forest Plans. Both are wide-ranging predators that also utilize older forests. The two species generally separate by elevation, with fishers utilizing lower elevations in the warm moist PVT and martens being found in higher elevations in the cool moist PVT.

Currently, you are only considering five species of conservation concern and the lynx as species that you will monitor. Three of these species (white-headed woodpecker, mountain quail and bighorn sheep) have a very limited distribution on the Forest and are unlikely to be influenced by most proposed activity on the Nez Perce - Clearwater NF. These species are not good management indicators due to their limited distribution. The harlequin duck has a little wider distribution, but it is generally limited to riparian areas along a few of the larger rivers that are found in the Nez Perce [ndash] Clearwater NF. This species is likely important for monitoring impacts of recreational activity along the major rivers of the Forest, but timber management activities are unlikely to create significant impact on the harlequin duck as long as stream integrity is maintained as required in the current Forest Plans under PACFISH and INFISH. Your new proposal for logging, burning and fuel treatments within riparian areas poses an increased risk to harlequin ducks.

As wide-ranging predators, the lynx and the fisher are both species that are found across the Forest. Both can be negatively influenced by timber management and human activity, and I believe both species serve as good management indicator species. However, I don[rsquo]t think that these two species alone are sufficient to represent the other 358 terrestrial species that are known to occur on the Nez Perce [ndash] Clearwater NF (DEIS wildlife report -Abundance and Diversity of Wildlife [ndash] Table 1).

I believe additional management indicator species are necessary to ensure that the goal of maintaining plant and animal species diversity as outlined in the National Forest Management Act of 1976 is achieved. I see no reason to drop the goshawk, pileated woodpecker and the pine marten as management indicator species unless better representative species can be identified. These species have wide distributions across the forest and are likely to be influenced by management activity. As a cavity nester, the pileated woodpecker represents an important guild of species that are likely to be negatively impacted by management activities.

According to the DEIS wildlife report -Abundance and Diversity of Wildlife [ndash] Page 3.2.3.2-40

[ldquo]A total of 88 species use downed wood as a key requirement, 53 species use snags, and 15 species use both snags and downed wood. Combined, 141 wildlife species rely upon either snags or downed wood, or both, which accounts for about 38.8 percent of the wildlife species diversity within the plan area. Snags, decayed trees, or hollow trees are used by 44 bird species, 19 mammal species, and 3 reptiles.[rdquo] The pine marten is a species that also makes use of downed wood and older forests in upper elevation areas. It is a species that is very sensitive to habitat fragmentation and its use of upper elevations generally complements the fisher as a

management indicator species, due to the fact that the fisher is generally uses similar habitats at lower elevations. The goshawk is also an important species because of its association with old forests and a variety of prey species. If goshawks are present, the prey species that support them are also likely to be present.

Management Indicator Species need not be at risk species or rare species, and in fact more common species are likely to be better management indicators because of their wider distribution and the fact that populations can be expected to respond both positively and negatively to management actions. Considerable research has already occurred on the goshawk, pileated woodpecker and the pine marten and the risks of forest management on these species is well documented. Please retain these species as management indicator species along with elk, lynx and the fisher. You should also consider monitoring of primary excavators (woodpeckers) as a management guild. Cavity nesting forest owls are likely species that will be negatively influenced and evaluation as a management guild should also be considered.

I am less concerned about retaining moose and white-tailed deer as management indicator species, but do believe that there are differences from elk that need to be recognized. Moose generally winter at higher elevations and their use of old forests with yew understories is a very important consideration on the Nez Perce NF. White-tailed deer may be more common than elk in certain portions of the Forest such as the Palouse Ranger District and lower elevations on the western edge of the Nez Perce Clearwater NF. Forest cover can be particularly important for wintering white-tailed deer and wintering conditions suitable for elk may not support wintering white-tailed deer. Moose and deer are also more dependent on forest browse than elk who are considered grazers that are more dependent on forbs and grasses.

Objection 19 [ndash] Elk Management Recommendations have too much emphasis on forage production and little emphasis on security habitat and the interspersion of cover and forage,

The Preferred Alternative measures for multiple uses wildlife largely focus on providing forage for elk. The measures generally avoid discussions about the importance of habitat security and the interspersion of cover and forage. While, there is some reference to maintaining acres of 5,000-acres in size for elk security and a reference for avoiding disturbance on winter range there is no identification of these areas.

The lack of emphasis on maintaining elk security and increasing emphasis on allowing more motorized access across the Forest is not going to be beneficial to elk. According to Unsworth et al. (1998) who worked extensively with elk research on the Nez Perce [ndash] Clearwater NF, [ldquo]Concern over forage production on summer range should be secondary to reducing disturbance and providing secure habitat during fall hunting seasons.[rdquo]

The existing Forest plans assure adequate security habitat and the retention of forest cover on summer range cover by using of the North Idaho Elk habitat guidelines (Servheen 1997). These guidelines have been abandoned in the proposed Forest Plan for questionable standards that do not provide any real security or protection of hiding and thermal cover. Large cuts (up to 207-acres) and prescribed burns are planned across the Forest and no guidance is provided on open road density for elk or any other species. Open road density is

an important component of elk vulnerability and impacts a wide variety of other species like the wolverine, fisher, pine marten and grizzly bear. The Forest Plan needs to incorporate standards for the management of open road density.

Displacement from preferred habitats by both motorized and non-motorized recreation (Wisdom et al. 2018) and hunting near roads (Ranglack 2017) continues to be a major problem for elk. Open roads can place elk at risk due to increasing elk vulnerability during the hunting season (Leptich and Zager 1991, Hayes et al. 2002, Unsworth 1993). All three authors worked in Northern Idaho and found that the major cause of mortality in adult elk was hunting. Mortality for elk using roaded landscapes was generally higher in areas with more roads. For example, Leptich and Zager (1991) reported that bull mortality was 61.7% in highly roaded areas and 31.3% in areas with few roads. In areas where access was managed with road closures the mortality rate was intermediate (44.7%). Unsworth et al. (1993) reported that both steep topography and open road density played a role in hunter success. Surviving elk in their study generally used steeper topography and areas with fewer roads.

In the existing Forest Plans, winter range is identified as a separate management area where appropriate measures can be taken to protect wintering big game. The new Forest Plan is silent on the location of winter range and no special measures are considered for its enhancement or protection. Wintering big game need an abundance of forest cover for snow interception along with good interspersion of cover and forage. Protection from disturbance is also important. Without any identification of winter range or guidance on the size of openings and interspersion of cover how can the Nez Perce [ndash] Clearwater expect to protect wintering big game. Large expansive burns and cutting units will not be utilized by wintering big game during deep snow periods.

MA2-STD-WL-01 and MA2-DC-WLMU-02. This standard and desired condition is very open ended and makes little sense. How many 5,000-acre areas without motorized use are proposed and how will these areas be distributed across the landscape? MA-2 currently consists of much larger roadless areas that are already greater than 5,000-acres in size. Proposed alternatives call for the creation of motorized loop trails into these unroaded areas and continued motorized use of existing trails within currently unroaded areas. More motorized access should not be planned into existing roadless areas under the cover of this standard and desired condition.

FW-DC-WLMU-03. You have eliminated management areas for winter range in the proposed forest plan including former winter range management areas for moose. Previous guidance called for uneven aged management in moose wintering areas and protection of old growth habitats with developed yew understories. Research had shown (Pierce and Peek 1984) that these areas are important wintering locations for moose on the Nez Perce National Forest. The revised Forest Plan has eliminated previous direction and only offers this generalized statement for the protection of moose habitat. Big game winter range needs to be a separate management area for all big game species. Management practices on winter range require different strategies for different big game species. White-tailed deer, for example, generally require more cover for snow interception that is required for moose and elk.

FW-DC-WLMU-07 and FW-GDL-WLMU-02. How will you protect winter range for ungulates when there are no management areas that identify these areas and no management emphasis on providing suitable winter habitat? What positive steps will you take to improve big game habitat? Currently, it appears that big game such as

white-tailed deer, elk and moose will largely be left to their own devices in landscapes that will primarily be managed timber production.

#### Desired Conditions Management Area 2

MA2-DC-WLMU-01.

It seems fairly excessive to have 10-20% of MA-2 in young age classes that support high levels of elk forage production. If these treatments only last 10-years as indicated in the text of the Proposed Forest Plan, this would mean that such treatments would be accomplished in 50-100 years across the entire acreage of MA-2. Given that many forest types on the Nez Perce-Clearwater NF commonly have life cycles of 150-250 years or even longer as in the case of western red cedar the amount of proposed treatment seems fairly excessive.

#### Desired Conditions Management Area 3

MA3-DC-WLMU-01.

This desired condition of 10-20% has the potential to conflict with desired habitat conditions for the fisher which is considered a species of conservation concern. This along with management recommendations for desired conditions of vegetation described in the Forestlands section suggest high risk for the fisher. The preferred alternative, would manage MA-3 on a very short timber rotation (around 104-years) and create even more open area than called for in this desired condition. Species of conservation concern should direct management actions, not elk.

Objection 20 - Increased emphasis on allowing more motorized recreation on the two Forests especially in existing roadless areas

FW-DC-REC-01. This desired condition deals with changes in the current recreational opportunity spectrum. The preferred alternative is expected to increase motorized recreation at the expense of non-motorized recreation (Tables 6 and 7). For example, semi-primitive motorized winter recreation is expected to go from the current level of 16%, to a level of 54.1. This increase can be expected to cause major concerns for wintering big game and a variety of other wildlife species such as the wolverine and lynx.

There are several summer recreational opportunity spectrum changes that generally support more motorized recreation. The preferred alternative allows motorized corridors through existing roadless areas and encourages loop trails. The Recreation Opportunity Spectrum for semi-primitive non-motorized recreation decreases from the existing level of 34%, to 16.2%. Semi-primitive motorized recreation increases from 22% to 24.6%, The rural

setting increases from existing condition of 0% to 3.1% and the roaded natural setting increases from the existing condition of 23% to 27.2%.

Overall, I am not supportive of an increased amount of motorized use on the Nez Perce [ndash] Clearwater NF, particularly in existing roadless areas. The idea of increasing motorized loop trails across the forest is bound to have negative consequences for fish and wildlife species and decrease opportunities for undisturbed non-motorized recreation. Proposed changes in winter motorized use are particularly concerning when there are no provisions in the Revised Forest Plan for the protection of winter big game habitat and other wildlife species such as the fisher, pine marten, grizzly bear and wolverine. The proposal to open the Great Burn Recommended Wilderness to snowmobile use and drop the area around Fish Lake from recommended wilderness suggest that similar access proposals could be planned for other existing roadless areas on the Forest. Under the preferred alternative many existing roadless areas have been assigned to the Semi-primitive motorized ROS.

FW-DC-REC-09. This desired condition deals with connecting motorized trail systems to local communities. I am concerned that placing emphasis on making these connections is going increase expectations for more motorized trails from local communities and place fish and wildlife habitats at risk. Is it really necessary to connect communities in northern Idaho, southern Idaho, Montana, Oregon and Washington with OHV trails?

FW-DC-REC-11. How will fish and wildlife habitat be protected along the Grand Exploration Motorized (GEM) trail?

#### Objection 21 - Excessive Levels of Timber Harvest

FW-DC-TBR-03. It should not be a desired condition to harvest dead and dying trees just because numbers exceed the very low levels you have identified in MA3-GDL-FOR-05. Dead trees provide very important ecosystem functions including wildlife habitat, fisheries habitat prevention of soil displacement, and soil development. Please remove this statement from plan alternatives.

FW-DC-TBR-05. [ndash] The Forest Service needs to re-evaluate its current Wildland Urban Interface designations in the Forest Plan. Current designations were applied very liberally and include large expanses of land that pose little risk to nearby communities. In many areas the existence of a few backcountry cabins has resulted in large expansions of the Wildland Urban Interface. Expensive fuel treatments are not justified in these areas and take away funds from locations where such treatments are truly required.

FW-OBJ-TBR-01 and FW-OBJ-TBR-02 [ndash] I cannot support the extensive amount of timber harvest proposed on the preferred alternative. As I have previously discussed, this alternative could harvest most of MA-3 in 104-years and is likely to have serious impacts on water quality and fish and wildlife habitat. To meet Proposed Forest Plan objectives, commercial timber harvest is likely to be needed in many more roadless areas than the indicated by the Forest Service. I do not support the significant amount of harvest that will be required in

existing roadless areas under this alternative.

FW-STD-TBR-04. The stocking levels outlined in Table 22 appear to be very low for reforestation efforts following regeneration harvest. Even the Idaho Forest Practices act requires a minimum of 170 trees per acre in the 0[rdquo]-2.9[rdquo] size class north of the Salmon River. Why are your numbers so low (60 trees per acre in ponderosa pine, 300 trees per acre in lodgepole pine and 125 trees per acre for all other species)?

FW-STD-TBR-06. - I am disappointed that the Nez Perce [ndash] Clearwater National Forest would propose a 207-acre limit on the size of regeneration harvest units and allow new cutting units immediately adjacent to existing openings on all ownerships. This size needs be reduced and new cutting units should not be permitted until adjacent harvest units recover to the point that they are of a size that will at least provide hiding cover for big game. When cutting adjacent to existing harvest units that have not achieved the height and density that would provide hiding cover, the entire acreage in both the existing and proposed cut need to be counted toward the opening size.

FW-STD-TBR-08. Size of salvage harvest units should not have a blanket exclusion for regeneration harvest unit size because of fire, insect and disease attack or windstorm. Current rules allow sufficient flexibility to create larger units if it can be show that a larger unit is necessary from an ecological standpoint.

FW-STD-TBR-09, FW-STD-TBR-10 and FW-STD-TBR-11. Tree species should not be the primary reason for regeneration harvest when the existing stand is composed of species commonly associated with the existing habitat type. For example, the presence of tolerant species should not be a sufficient reason for justifying regeneration harvest. The stand needs to have reached culmination of mean annual increment and have other characteristics that identify regeneration harvest as the optimum treatment.

FW-STD-TBR-12. - Timber harvest should not be allowed to exceed the sustained yield limit and decadal timber harvest should be limited to 10 times the projected Wood Sale Quantity (PWSQ) so that other resource objectives can be maintained. Regional office approval should be required to deviate from decadal PWSQ requirements in response to catastrophic events. Normal wildfire, disease, insect attack and windthrow events (as demonstrated by historical ranges and averages) should not be a sufficient reason to deviate from the decadal PWSQ.

FW-GDL-TBR-04. - The reasons for harvesting stands that have not met culmination of mean annual increment are concerning, particularly when the reason is to move the landscape vegetation to the desired landscape conditions you have outlined in the Proposed Forest Plan and your liberally defined WUI areas. Under these guidelines healthy young cedar, grand fir or Douglas fir dominated stands could be harvested merely because the species mix doesn[rsquo]t correspond to your preconceived notions or that the stand happens to occur in one of your liberally interpreted WUI areas. I also feel that the ages that displayed in Table 25 appear to be very low for the culmination of mean annual increment. Stands in the warm moist PVT generally don[rsquo]t reach

commercial size until 70 years and the idea that they are culminated by that age seems to represent a misrepresentation of facts.

#### Objection 22 - Livestock Grazing =

FW-GDL-GRZ-02. All inactive livestock grazing allotments need to be phased out and no new grazing allotments should be permitted on the Forest.

#### Objection 23 - Recommended Wilderness

The Nez Perce [ndash] Clearwater National Forest has really squandered the opportunity to protect the largest timbered roadless landscape in the Lower 48-States (an area larger than Yellowstone National Park). This area has the capacity to support a wide array of native species including the steelhead, chinook salmon, grey wolf, fisher, wolverine, lynx and grizzly bear. The area is also important in helping to fight climate change and is a source of inspiration for countless individuals. Not recognizing the importance of this landscape from a National perspective, the Forest Service elects to maintain a minimum amount (17%) of the existing roadless area for wilderness protection and allow logging and road construction in the remaining areas.

There are approximately 1,500,000- million acres of existing roadless areas on the Nez Perce [ndash] Clearwater National Forest that have the potential to qualify as recommended wilderness. The preferred alternative will take away opportunities for wilderness protection on over 1,236,600-acres and give no opportunity for future wilderness designation in areas that will have management activities like temporary road construction and timber harvest. The proposed plan will only designate three areas for recommended wilderness and two these areas were already recommended in the current Forest Plan. Previously recommended additions to the existing Selway Bitterroot Wilderness Area near Sneakfoot Meadows and the North Fork of Spruce Creek Acreage (19,330-acres) have been totally eliminated and the proposed Great Burn area has been reduced in size by 43,598-acres in order to accommodate snowmobiles, ATVs and bicycles.

A call for greater protection of existing roadless area was largely ignored by the Nez Perce [ndash] Clearwater National Forest, since there is only one new proposal for recommended wilderness in East Meadow Creek (72,795-acres). Wilderness protection is ignored in the remaining 142,700-acres of East Meadow Creek and the adjacent West Meadow Creek roadless area. Meadow Creek is the largest remaining roadless area on the Nez Perce National Forest. A proposed citizen alternative proposed by the Friends of the Clearwater would have included all existing roadless areas, but you haven[rsquo]t given any consideration to this possibility. This alternative was supported by several thousand commenters on your proposed action including myself.

In my DEIS comments I suggested that a new alternative could be developed that would combine all existing roadless areas considered in the various DEIS alternatives into one comprehensive alternative. This new alternative would have included all recommended wilderness areas in Alternative W (Bighorn Weitas, East

Meadow Creek, Hoodoo, Mallard Larkins, Meadow Creek- Upper North Fork, Moose Mountain, Portions of North Fork Spruce- White Sand, North Lochsa Slope, Rapid River, Portions of Sneakfoot Meadows, Elk Summit, Lakes, Storm Creek 856,932-acres) and other areas listed in Alternative Z (Pot Mountain (51,707-acres), Rawhide (5,681 acres), West Meadow Creek (95,800-acres)). The total acreage for this new alternative would have been 1,010,120-acres or approximately two-thirds of the existing roadless area.

I also suggested the new alternative could also incorporate some of the other roadless areas not being considered in either Alternative W or Z. For example, Hungry Creek and Indian Creek in the Gospel Hump Geographic Area (55,000-acres), Pilot Knob GA (21,000-acres), Lochsa Face (75,000-acres), Weir Creek (22,000-acres), Radcliff-Gedney (90,000-acres) and Cove Mallard (63,000-acres). Adding these additional areas would bring the total acreage to 1,314,120-acres.

Although I would still vote for maintaining all roadless areas, such a compromise would have been much more appropriate for the new Forest Plan rather than the minimal designation of 263,357-acres which is only 17.6% of the existing roadless area. With habitat for wide ranging species like the grizzly bear, wolf, wolverine already in decline, climate change and watershed conditions in roaded areas already significantly impacted for listed fish species, maintaining the last of our roadless areas needs to be a priority. There are no other forested roadless areas in the Lower 48 States that offer the potential found on the Nez Perce [ndash] Clearwater National Forest. For some reason, the managers of the Nez Perce [ndash] Clearwater have failed to recognize the importance of this roadless country from a national perspective and they continue to pander to local special interests.

MA2-DC-RWILD-04. This desired condition is supposed to protect the solitude of wilderness visitors which seems to be violated in the Great Brun Recommended Wilderness Area were snowmobiles and ATVs will be permitted in nearby areas which were previously recommended wilderness until removed by the preferred alternative.

MA2-SUIT-RWILD-02. Timber harvest to the extent allowed in the Idaho Roadless rule will preclude wilderness designation and should not be allowed in recommended wilderness.

MA2-SUIT-RWILD-04. Any construction of roads and even road construction to the extent allowed in the Idaho Roadless rule will preclude wilderness designation and should not be allowed in recommended wilderness.

MA2-SUIT-RWILD-05. With the possible exception of outfitter and guide stock (used only during the guiding operation) and other animals being used for recreational and administrative activities, livestock grazing should not be permitted in recommended wilderness. Outfitter and guides should not be allowed pasture animals in recommended wilderness when the animals are not being actively utilized in their guiding operation.

MA2-SUIT-RWILD-06. Minerals-Locatable, MA2-SUIT-RWILD-07. Minerals-Leasable, MA2-SUIT-RWILD-08. Minerals Materials-Saleable. [ndash] New mining claims should not be permitted in recommended wilderness.

MA2-SUIT-RWILD-10. Maintenance of existing buildings and structures should be permitted but the reconstruction of existing buildings should not be permitted in recommended wilderness.

MA2-SUIT-RWILD-17. Administrative use of mechanized and motorized equipment including chainsaws should not be permitted in recommended wilderness.

MA2-SUIT-RWILD-19 [ndash] Pesticides and biocontrol agents have no place in recommended wilderness.

MA2-SUIT-RWILD-20 - Administrative use of aircraft in recommended wilderness should be limited to emergency situations and the use of unmanned aircraft (drones) in recommended wilderness should be prohibited.

#### Objection 24 - Hoodoo Roadless Area/Great Burn Recommended Wilderness

The Nez Perce Clearwater has proposed substantive changes to original 1987 Forest Plan recommendation for proposed wilderness in the Hoodoo Roadless Area (commonly called the Great Burn). Several acres have been dropped from the original proposal including areas from Fish Lake north (Map 1) and areas to the south near Goat Lake and Williams Peak,

In completing their analysis, the Forest Service appears to be using an obsolete map of recommended wilderness from Volume I of the 1987 EIS (Page - II-57). This map was updated in the final 1987 EIS (Map 2). Instead of the Forest Service estimate of the difference between the original and revised recommended wilderness designations of 3,710-acres, I have estimated there is a difference of 43,598-acres.

The deleted acreages appear to be in response to public comments for more motorized access to Fish Lake and snowmobile access along the Idaho/Montana State line and the high elevation cirque basins near Williams Peak. The recommendation includes a 150-foot-wide corridor along the Idaho/Montana Stateline trail that will be excluded from recommended wilderness. This area will be open to mechanized use (bicycles) during the summer and over snow vehicles during the winter. Motorized use (ATVs and motorcycles) will be permitted on the Fish Lake trail.

These changes are really going to compromise wilderness recommendations for the Great Burn which spans two States. Excluding the State line trail from recommended wilderness will split the recommended wilderness into two parts and dropping the area from Fish Lake north will significantly reduce the size of the northern portion of the recommended wilderness. Dropping the Fish Lake acreage will cause the new recommended wilderness boundary to stop at the Montana State line and exclude a large portion of the Hoodoo Roadless Area from consideration as recommended wilderness. All of this because, the Nez Perce Clearwater wants to maintain a motorized trail to Fish Lake which is located within the original recommended wilderness boundary. The trail was recently closed due to a court order and lawsuit by the Friends of the Clearwater because permitting motorized access did not comply with the 1987 Forest Plan.

Snowmobile use along the Idaho/Montana State line and cirque basins near Williams Peak is a terrible idea. These high elevation areas represent some of the best habitat on the Nez Perce [ndash] Clearwater NF for the recently listed wolverine. Mountain goats also winter on steep windblown slopes in the area. Not only is this area important high elevation wolverine habitat, but it provides a high elevation corridor that connects populations to both the north and south. Turning the area into a snowmobile playground is not compatible with protection of wolverine habitat as outlined in the Endangered Species Act.

If anything, the recommended wilderness boundary of the Hoodoo roadless area should be expanded to the west. Because of previous land ownership patterns, straight line boundaries were utilized in the 1987 Forest Plan in some areas on the western edge of the Hoodoo roadless area (Map 2 [ndash] Checkerboard Pattern). Since these lands have been acquired by the Forest Service in the Beaver Creek land exchange the straight-line boundaries likely don[rsquo]t make sense anymore.

#### Objection 25 = Suitable Wild and Scenic Rivers

The preferred alternative only nominates 11 streams for designation as wild and scenic rivers (Table 8 and 9 [ndash] Yellow Highlights) and one other stream as eligible (Little North Fork of the Clearwater River). In contrast, the 1987 Forest Plans nominated 29 streams as eligible (Table 8). I believe all of the original streams identified in the 1987 Plans and the following additional streams (Table 9) should be nominated for wild and scenic designation:

MA1-SUIT-DWSR-05 [ndash] Livestock grazing should not be permitted within wild or scenic river corridors.

MA1-SUIT-DWSR-06, MA1-SUIT-DWSR-07 and MA1-SUIT-DWSR-08 [ndash] Mining should not be permitted within wild or scenic river corridors

MA1-SUIT-DWSR-09 [ndash] Construction of new buildings should not be permitted within wild or scenic river corridors

#### Objection 26 - Idaho Roadless Areas

The Idaho Roadless Rule was a broadscale look at roadless management across the entire State of Idaho. The Forest Plan should update that broadscale analysis with more site-specific information and management recommendations applicable to the Nez Perce [ndash] Clearwater National Forest. The Idaho Roadless Rule should be considered as a guideline in this process and updated appropriately to reflect the more detailed analysis of the Forest Plan.

Based on my observations, the Idaho Roadless primitive classification should be increased significantly on the two Forests and the amount of land included for back-country restoration theme where motorized access, logging

and temporary road construction are permitted should be significantly reduced.

MA2-DC-IRA-01. Roadless themes identified under the current Idaho Roadless Rule need to be updated to include a significant increase in the primitive designation theme over the back-country restoration theme. Lands in the primitive theme should be moved to MA-1 in the proposed plan.

The Idaho Roadless Rule themes were never truly debated as part of the adoption of the Idaho Roadless Rule. For example, my comments and many others at the time largely focused on maintaining the existing Clinton Roadless Rule and not on the site-specific classifications developed by the State of Idaho in their alternative. It would have been near impossible to comment on all of the specifics of the State's proposal at that time.

MA2-DC-IRA-02. Vegetation in areas recommended for wilderness or the Idaho Roadless Rule primitive theme should be managed for natural vegetative conditions. Timber harvest is not an appropriate tool in these locations. These areas need to be moved to MA-1 in the proposed plan.

MA2-DC-IRA-04. Motorized activity is inappropriate in recommended wilderness and the Idaho Roadless Rule primitive theme. These areas need to be moved to MA-1.

MA2-DC-IRA-05. Why are elk featured in this desired condition to improve habitat configuration, distribution, composition and provide ecological conditions to increase populations? Would it not be more desirable to improve habitat for federally listed threatened and endangered species or species of conservation concern?

MA2-STD-IRA-01. The Idaho Roadless Rule needs to be updated with the adoption of the Forest Plan, not cast in stone as suggested with this standard. The Idaho Roadless Rule allows way too much commercial logging in the name of restoration which is not needed or desirable in existing roadless areas. This so called "restoration" poses significant risks to listed and sensitive fish and wildlife species that was never adequately addressed when the Idaho Roadless Rule was adopted. Maintaining these existing roadless areas is also important in fighting climate change and meeting the President's 30% by 2030 goal. Neither of which were adequately considered when the Idaho Roadless Rule was adopted.

Objection 27 - Limited Protection of Geographic Areas.

I support the concept of Geographic Areas and agree that the Gospel Hump, Lower Salmon, Pilot Knob and the Lolo Trail National Historic areas deserve special management consideration. However, I suggest different management strategies other than those outlined in the proposed Forest Plan.

Gospel Hump

In the Gospel Hump Area, I believe all existing unroaded areas including Lower Johns Creek should be proposed for addition into the Gospel Hump Wilderness Area. In the remaining areas that have already been developed by timber management I support the concept of restoration for aquatic species, but don't believe that specific targets for timber harvest and other terrestrial management activities are necessary to achieve aquatic conservation goals. Goals need to be based on the needs of aquatic species and not on the amount of timber harvest, pre-commercial thinning, hazardous fuel treatment and removal of hazard trees along roads. It would seem activities like correcting known sediment sources, decommissioning existing roads or improving in channel and riparian habitats would be more appropriate needs for aquatic species.

#### Lower Salmon

The Lower Salmon area should be a special management area where the unique species found in this area take precedence over timber harvest, mining and recreational activities in project planning. The Forest Service should fund more research to determine both habitat requirements and management threats to the rare endemic snail species that are found here. Desired conditions need to be described more thoroughly rather than just stating some habitat is available. Likewise, objectives for improving mountain quail habitat need to be outlined in a more comprehensive manner.

#### Pilot Knob

I agree that all future development activities in the Pilot Knob area needs to be approved by the Nez Perce Tribal Executive Committee. I also agree that an alternate site needs to be found for the communication equipment currently in place in the area, but don't think it should take five years to initiate a study on a new location. Permittees need to be notified that communication site and facility leases are not going to be renewed.

#### Lolo Trail National Historical Area

The Lolo Trail National Historical Area needs to be managed to protect the important archeological and historic values of the area and involvement of the Nez Perce Tribe is a very important component of this management.

Sincerely,

Harry Jageman

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#### Tables:

Table 1 - Management Area Acreage [ndash] Summarized from Table 13 DEIS Appendix B [ndash] Vegetation and Timber Analysis

Preferred Alternative

MA-11,231,638

MA-21,467,167

Recommended Wilderness 263,537

MA-2 [ndash] Minus Recommended Wilderness 1,203,630

MA-31,240,251  
Suitable for Timber Production [ndash] MA-31,042,630  
Total3, 939,056

Table 2 - Large Downed Wood Pieces per Acre by Fire Regime and Potential Vegetation Type (ICBEMP [ndash] 2000)

PVTHR V 21+ - LWD [ndash] ICBEMP(High Intensity)1Current 21+ -LWD -ICBEMPHRV [ndash] 21+  
LWDICBEMP(Low Intensity)1Current - 21+ LWDICBEMP  
Dry2.7-5.14.30.5-0.95.0  
Moist5.5-10.210.10.7-1.410.1  
Cool/Cold7.1-13.210.16.8-12.710.0

Table 3 [ndash] Preferred Alternative Recommendations for Snag Retention within the project area

Snags/Live Trees >15[rdquo] DBH per 100-acresAdditional Snags/Live Trees >20[rdquo] DBH per 100  
acresTotal  
Lodgepole100100200  
Warm Dry200100300  
Warm Moist300300600  
Cool/Cold300100400

Table 4 - Historical Range of Variation and Existing Levels of Large Snags in Northern Idaho (Source ICBEMP Supplemental Draft EIS and Bollenbacher 2009)

PVTHR V 21+ DBH [ndash] ICBEMP(High Intensity)1Current 21+ DBH -ICBEMPHRV [ndash] 21+  
DBHICBEMP(Low Intensity)1Current - 21+ DBHICBEMPExisting 20+Bollenbacher et al. (2009)2Existing 15+  
Bollenbacher et al. (2009)3  
Lodgepole0.4-1.00.2-2.1  
Warm Dry2.3-4.31.60.6-0.83.01.6-2.34.5-6.1  
Warm Moist5.4-7.04.54.3-5.64.92.0-2.44.9-5.7  
Cool/Cold5.7-10.53.64.8-6.24.51.0-1.63.0-4.2

1 - Historical Range of Variation of large snags (21+ inches DBH) as reported for the Upper Columbia Clearwater and Salmon River Sub-basin (High Intensity and Low Intensity Fire Regimes)

2 [ndash] Existing level of large diameter snags (20+ inches) in Northern Idaho Forests excluding lodgepole pine stands (Bollenbacher et al. 2009)

3- Existing level of large diameter snags (15+ inches) in Northern Idaho Forests excluding lodgepole pine stands (Bollenbacher et al. 2009)

Table 5 [ndash] Suggested Forest Plan Recommendations for Snag Retention in the Project Area

Snags/Live Trees >15[rdquo] DBH per 100-acres	Additional Snags/Live Trees >20[rdquo] DBH per 100 acres	Total
Lodgepole	200*100*300	
Warm Dry	600*300**900	
Warm Moist	600*500**1100	
Cool/Cold	400*800**1200	

\* Upper Bound Bollenbacher (2019) \*\* Mid-Range High Intensity HRV (ICBEMP Appendix 12)

Table 6 [ndash] Summer Recreation Opportunity Spectrum

No Action	1	Preferred Alternative	2
Primitive	2	128.9	
Semi primitive non-motorized	3	416.2	
Semi-primitive motorized	2	224.6	
Roaded natural	2	327.2	
Rural	0	3.1	

Table 7 [ndash] Winter Recreation Opportunity Spectrum

No Action	1	Preferred Alternative	2
Primitive	2	528.9	
Semi primitive non-motorized	3	711	
Semi-primitive motorized	1	654.1	
Roaded natural	2	36	
Rural	0	0.1	

1. - Source Tables 15 and 17 (Draft EIS [ndash] Page 73) = FEIS does not report these figures and only

considers wilderness, recommended wilderness and a few other small areas as non-motorized. All other roadless areas were considered motorized in the FEIS making comparisons of the existing condition to the preferred alternative near impossible

2 - Source Table 322 and 323 (FEIS [ndash] Page 1403-1404)

Table 8 - Eligible Wild and Scenic Rivers (1987 Forest Plans)

Bargamin Creek  
Johns Creek  
Moose Creek Complex (Moose, East Fork Moose, North Fork Moose, West Moose, and Rhoda)  
South Fork Clearwater  
Bear Creek Complex [ndash] (Bear, Cub, Paradis, Brushy Fork, and Wahoo)  
Kelly Creek  
1 North Fork Clearwater  
Three Links Complex (Three Links and West Fork Three Links)  
Cayuse Creek  
Lake Creek  
Running Creek  
West Fork Gedney Creek  
Fish Creek  
Little North Fork Clearwater  
Salmon River  
White Bird Creek  
Hungry Creek  
Meadow Creek (Selway)  
Slate Creek  
White Sand Creek (renamed Colt Killed Creek)

1 = Yellow highlights represent the 11 streams designated in the Proposed Forest Plan for Wild and Scenic River Designation

Table 9 - Additional Streams Recommended for Wild and Scenic River Designation

Big Sand Creek  
Crooked Fork Creek  
North Fork Kelly Creek  
South Fork Storm Creek  
Bostonian Creek  
East Fork Meadow Creek (Selway)  
North Fork Storm Creek  
Storm Creek  
Boundary Creek  
Graves Creek  
Sabe Creek  
Upper Lochsa River  
Buck Lake Creek  
Meadow Creek (South Fork Clearwater River)  
Silver Creek  
Weitas Creek  
Caledonia Creek  
Middle Fork Kelly Creek  
South Fork Kelly Creek  
Wounded Doe Creek

Map 1 [ndash] Hoodoo Wilderness Recommendation (Preferred Alternative (purple) and Approximate 1987 Recommendation (yellow))

Map 2 - Hoodoo Recommended Wilderness [ndash] 1987 Plan