May 21, 2023

1228 Ponderosa Drive

Moscow, Idaho 83843

Objection Reviewing Officer

USDA Forest Service

Northern Region

26 Fort Missoula Road

Missoula, Montana 59804

Subject: Dead Laundry Objection

Dear Sir,

The following paragraphs detail my objection to the Dead Laundry project on the Nez Perce – Clearwater National Forests.

**Objection 1 – Overstated Purpose and Need for Action**

The purpose and need for the project in the Final Environmental Assessment and Draft Decision Notice do not agree. In the Environmental Assessment the Nez Perce Clearwater National Forest suggests that the primary purpose and need for the project is to “reduce hazardous fuel loading within the project area to provide protection for the wildland urban interface areas associated with private inholdings within the project area., harvest wood products to sustain local and regional economies, and improve forest health and resiliency in concurrence with desired conditions and objectives identified in the Forest Plan.” In the Draft Decision Notice the purpose and need for the project is to “reduce hazardous fuel loadings adjacent to private inholdings, to harvest wood products and to improve forest health, to change forest species and construct 12-miles of permanent road.”

The Environmental Assessment suggests “large fires that occurred in 1910 and 1919 and the introduction of white pine blister rust have created a homogeneous age class and species composition which has become highly susceptible to insect and disease change agents” (EA Page 5). This characterization is highly inaccurate and does not reflect the actual history of the project area.

At least half of the project area was previously owned by a private timber company and was exchanged to the Forest Service in the mid-1990s. Most of the currently roaded area was extensively harvested by both Diamond International and the Forest Service in the 1960’s and 1970’s and it is not the homogenous age class described in the Environmental Assessment.

The existing road density is very high on most lands previously owned by Diamond International, and most of the proposed treatments are concentrated in areas that experienced past timber harvest and road development. The effects of 1910 and 1919 wildfires are generally concentrated in surrounding roadless areas, and the description that the area has large build-ups of fuel due to the lack of recent wildfire is highly inaccurate. The cedar habitat types which are found in the project area often go long intervals (150-300 years) without stand replacement wildfire. Most of the areas that the Nez Perce - Clearwater Forest plans to regenerate occur in older leave strips that are adjacent to the younger stands created by previous logging.

The Nez Perce Clearwater NF also overstates concerns regarding private inholdings which only amount to a few hundred acres of old historical mining claims and associated mining cabins. The cabins are largely used by miners with mineral claims in the Moose Creek drainage during the summer and in the fall as hunting cabins. There are no roads maintained during the winter and all winter access is by snowmobile over several miles of difficult terrain. It is hardly an area where one would set up a permanent residence or a location that should be considered as a Wildland Urban Interface. There are much more appropriate and higher risk areas for the expenditure fuel treatment dollars than this location.

The Environmental Assessment has also significantly misrepresented the Forest Plan Direction outlined in the current Clearwater Forest Plan and I believe this is also influencing the large amount of proposed timber harvest. The 440-million board feet figure and other numbers cited in the Revised EA (Page 4 are projections of what could possibly happen if current Forest Plan direction were to be continued for fifty years. A scenario “that is not likely to occur” according to information presented on Page II-18 of the Forest Plan. This number is based a long-term sustained yield that was calculated based on the highly questionable FORPLAN model that did not accurately consider other resource values across the entire Forest.

The actual annual allowable sale quantity listed in the Clearwater Forest Plan is 173 million board feet, with 100 million projected to come from the existing roaded areas and 73 million to come from the roadless areas (Forest Plan Page II-6). These numbers reflect all of the components that were incorporated into the Forest Plan such as wilderness, roadless protection, old growth and aquatic habitat protection. Many critics of the 1987 Forest Plan felt even these numbers were too high, and filed a lawsuit that resulted in the 1993 Settlement Agreement between the Wilderness Society, Nez Perce Tribe and other environment groups. The current annual allowable sale quantity is 80-million board feet based on the results of that lawsuit.

Although species conversion and new road construction are implied in the Environmental Assessment, the Decision Notice formally adds the idea of a need for tree species conversion to the purpose and need as well as the construction of 12-miles of new specified road. Construction of a specific number of miles of new road is not an appropriate purpose and need. Roads can facilitate achieving the purpose and need, but their mere existence serves no real purpose and need.

The idea that fuels have been building up for decades since the 1910 fires and that the species composition is not appropriate for the existing habitat types is questionable. While some stands on the edge of the project area are the result of the 1910 and 1934 wildfires, most of the stands in the roaded portion of the project area are the result of more recent timber management. Stands that are dominated by grand fir, Douglas fir and western red cedar occur largely because of the moist habitat types found in the project area and the impact of white pine blister rust. Fire suppression over the last 50 years, has only had minor impacts on species composition and most stands are largely the result of competition between the trees that established themselves following the 1910 and 1934 fires or are a result of planting and other activities associated with timber harvest.

Most of the project area is composed of moist western red cedar habitat types and grand fir habitat types on drier southerly aspects (Cooper et al. 1991). Western red cedar habitat types are generally the most productive in Northern Idaho and support a mosaic of tree species including western white pine. Drier grand fir habitat types generally have higher proportion of Douglas fir and ponderosa pine.

According to Cooper et al. (1991), the major seral species in the cedar/queencup beadlily habitat type are Douglas fir, grand fir and western larch. They also indicate that white pine and ponderosa pine will do well in this habitat and that western red cedar is the climax species. In the grand fir/queencup beadlily habitat type Cooper et al. (1991) indicate that grand fir “in addition to being the climax dominant, is a major and most consistent dominate of seral stages, even following clearcutting or severe wildfire.” While I agree there would have likely been more white pine without blister rust, having stands with a high proportion of grand fir, Douglas-fir and western red cedar is the normal condition for project area habitat types.

Forests in cedar habitat types 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 1919. Green et al. (1992) report that the oldest trees, in the habitat group most appropriate for the project area (Type 4B), averaged 210 years with a range from 160 to 264 years. They report that “western red cedar may reach an age of 400-700 years”.

The contention that stands in the project area are much denser than what occurred historically is also very questionable. 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 “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.” 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’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.

In summary, I don’t agree that there is a pressing need for this project based on the existing vegetation condition. The risk of a catastrophic wildfire and the potential for negative impacts to private land have been significantly overstated and will depend more on future weather patterns rather than age class diversity. A large percentage of the project area has already been harvested within past projects and the need for more harvest and new road construction is not readily apparent.

**Objection 2 - Regeneration Harvest and the Size of Proposed Harvest Units**

The Final Environmental Assessment suggests that 3,838-acres will be harvested with regeneration harvest prescriptions, but the Draft Decision Notice suggests that the amount of regeneration harvest has been reduced to 2,057 acres. Originally there were 27-openings greater than 40-acres, but now there are 14-openings greater than 40-acres in size. While I appreciate this change, I am still concerned that of several units are still very large. Four of the remaining units exceed 100-acres, and incredibly one of these (Unit 30) is listed at 432-acres. Similar practices have been documented on other projects by the Friends of the Clearwater across Region 1 (Friends of the Clearwater – 2021).

PACFISH buffers are all that separate several of the proposed regeneration units. Numerous wildlife species such as the fisher and pine marten and known to avoid large openings. Most big game species generally avoid open areas that are greater than 500-feet from forest cover that is at least 800-feet wide (Servheen et al. 1997). PACFISH buffers generally do not provide sufficient cover for most big game species

Please have the Nez Perce – Clearwater NF modify their proposal to assure that all harvest areas are bordered by adequate amounts of forest cover. Harvest unit sizes, particularly those over 100-acres, need to be reduced and the Region should not be “rubber-stamping” similar requests across the Region.

**Objection 3 – Inordinate Amount of Prescribed Burning**

The Nez Perce Clearwater intends to treat 1,350-acres with prescribed burning with this project. Much of the proposed burning appears to be planned in the south-western portion of the project area within the Moose Mountain roadless area. These units are immediately adjacent to other burn units that were recently conducted under are the East Saddle project. There are also adjacent burn treatment units in the North Fork Ponderosa Pine Restoration Project on the western edge of the project area and the Long Creek Fuels project just to the north of the project.

Is more roadless burning really necessary on the district, given all of the treatments currently accomplished or planned on East Saddle (4,000-acres), North Fork Ponderosa Pine Restoration (2,185-acres), Long Creek Fuels (14,564-acres), Smith Ridge (498-acres), North Fork Aspen Regeneration (150-acres), North Fork Aspen Two (324-acres), Lost Toboggan (16,500-28,000- acres) and Black Skull (28,000-42,000- acres)? The Nez Perce Clearwater should be evaluating the cumulative impact of all of this prescribed burning and other activity. They should be paying particular attention to adjacent projects such as East Saddle, North Fork Ponderosa Pine Restoration and Long Creek Fuels.

Management prescriptions need to consider that many of the areas being considered for prescribed burning are very steep and have shallow rocky soils. Past experience with burning on these areas has not given desirable results for big game browse production and has increased the risk of landslides. It should also be remembered that the recent burning on the East Saddle project is just over the hill from the proposed burning on this project. The south facings slopes above Kelly Creek that are part of the East Saddle Project are already very open and it is highly debatable how successful these burning operations are going to be. Some of the project area prescribed burn locations have more northerly aspects and support higher densities of forest, but much of the area still has steep topography and thin shallow soiled areas that don’t support much forest growth. Prescribed burning is unlikely to stimulate the expected browse response in these areas.

**Objection 4 - Unnecessary Expenditure of Scare Fuel Treatment Funds on Non-Commercial Mechanical Treatment**

The Draft Decision notice has suggested that 700-acres of stands previously designated for regeneration harvest in the Environmental Analysis will now be treated with non-commercial mechanical hand treatment. If these units are not going to be harvested as suggested in the Draft Decision Notice, they should just be dropped entirely from the proposal. The work is both expensive and unnecessary in stands that are likely composed of mature forests.

In addition, 640-acres of hand and mechanical treatment originally proposed around private lands in Independence Creek and near Deception Saddle will continue. Presumably, most of this treatment is occurring to decrease fire risk around the private inholdings found in that area. It is likely that a significant expenditure will be required for this work since most of these treatments are being accomplished non-commercially. Given the high risks that exist to residential property in other areas like California and Arizona, are these expenditures really the highest priority?

The current situation has existed for several decades and most of the area around the existing inholdings has been extensively logged in the past. There no permanent residences and the area is completely inaccessible in the winter except by snowmobile over several miles of primitive road. Most structures are mining cabins or out buildings that are only used during the summer and fall hunting season. The area is not a wildland/urban interface by any stretch of imagination.

**Objection 5 -Fisheries and Water Quality**

In my previous comments I noted my concern about water quality and fisheries habitat with this large project. I noted that several streams in the area currently do not meet Forest Plan standards and that I was concerned about water yield, high road densities, sedimentation and cobble embeddedness. I noted that most steams that are currently not meeting Forest Plan standards occur in and around the area acquired by the Forest Service in the 1990 land exchange. The amount of past timber harvest, road construction and mining activity has been excessive in that area, and includes the Osier, China and Laundry Creek drainages. This is the exact same area targeted by the project proposal.

I noted in my comments that Forest Service should be using Forest Plan drainages for their analysis of watershed conditions. Using the larger HUC 12 watersheds (Figure 1) as the Nez Perce -Clearwater Forest has the Forest Service has continued to do in their updated analysis will tend to dilute the impact of proposed activities on drainages identified in the Forest Plan. There is also a problem that the Elizabeth Creek – North Fork HUC 12 watershed and the Deadwood Creek Moose Creek HUC 12 watershed are not true watersheds. Upstream tributaries have not been included in the analysis of impacts. For example, to predict the impact of the project on Lower Moose Creek, all upstream activities like those in Osier Creek, Laundry, China and Sugar Creek would need to be considered.

The project area contains 15 watersheds (Figure 2 and Table 1) identified in the Forest Plan. In a 1997 report, Jones and Murphy suggested that eight project area fisheries streams were not meeting Forest Objectives for cobble embeddedness (Table 1). The Nez Perce – Clearwater NF has not updated that report in the last 26-years, but did sample five streams in 2019 as part of this project. Resampling confirmed that conditions in Osier, China Creek and Moose Creek above Deadwood Creek have not changed significantly. China and Osier still remain well below objectives for cobble embeddedness, and Moose Creek above Deadwood Creek remains with relatively low levels of cobble embeddedness (Table 1). Moose Creek above Deadwood Creek is an unroaded drainage, as are most other streams in the project area meeting Forest Plan standards for cobble embeddedness.

Only Sugar Creek has improved significantly, but that drainage is still slightly above standard. Jones and Murphy did not report cobble embeddedness values for Deception Gulch, but sampling in 2019 suggested levels of cobble embeddedness where within objectives (Table 1). No additional instream sampling has occurred since 2019, and nothing new has been reported in watershed or fisheries reports in regard to the current instream condition.

Proposed projects in streams currently not meeting Forest Plan objectives for sedimentation are required to result in no measurable increase in stream sedimentation according to the Clearwater Forest Plan Lawsuit Settlement Agreement. The Nez Perce - Clearwater claims in both the watershed and fisheries reports that this will be the case due to PACFISH buffers and newer road construction practices. Modeling efforts assume that buffers and road management practices will be infallible in stopping any sedimentation from reaching streams. Modeling efforts also do not account for mass wasting events that are bound to occur with the amount of road construction and proposed logging. Any sedimentation that is predicted from modeling efforts is then applied to the large HUC-12 watersheds instead of to the Forest Plan drainages where the logging will actually occur. The Nez-Perce Clearwater then makes an assumption that sedimentation will not be measurable at the larger HUC-12 scale. The same thing has been done in the calculation of road density and water yield.

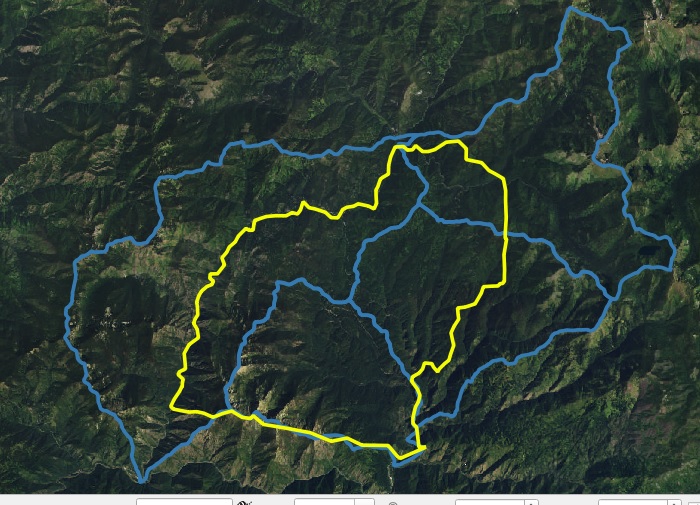
For example, in the Elizabeth - North Fork Clearwater HUC-12 watershed there 38,556-acres and most of that acreage is located outside of the project area and currently roadless (Figure 2). Within the project area, there are only two small drainages with any fisheries standards (Comet Creek and Deception Gulch). All other drainages in the project area are steep face drainages that drain directly into the North Fork of the Clearwater River. No logging is planned Comet Creek or in the steep face drainages in the southern portion of the project area. Slopes are steep and rocky in these face drainages. There are two planned prescribed burns located within the southern face drainages.

Several timber harvest and fuel treatment units are located in the Deception Gulch watershed and the face drainages to the north near the Cedars Campground (Figure 3). These northern face drainages contain deeper soils and are more forested than their counterparts to the south. Sediment values are not presented for any of the watersheds identified in the Forest Plan or the face drainages to the north. All values are reported for the much larger HUC-12 watershed. Thus, most of the sediment is being produced in Deception Gulch or the face drainages to the north, but sediment production is being applied to the larger HUC-12 watershed which is mostly roadless and located outside of the project area. Road density and water yield have been calculated similarly.

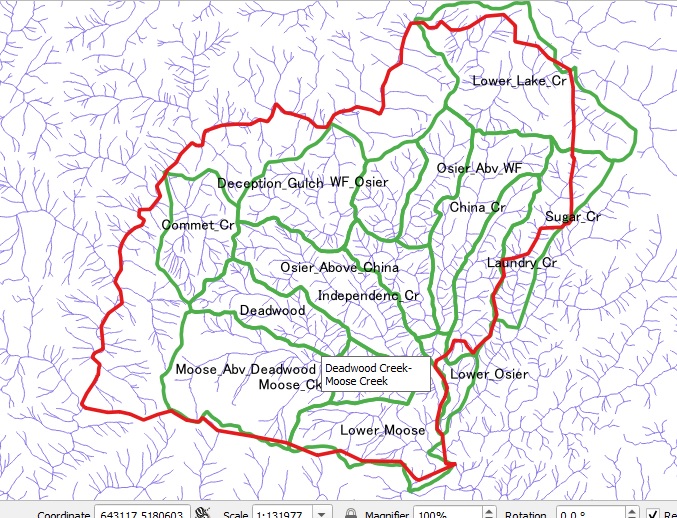
All four of the HUC-12 watersheds used in the watershed report have large unroaded areas, and three of the HUC-12 watersheds contain large areas outside of the project area. The only HUC-12 watershed that occurs entirely in the project area is Deadwood/Moose and that watershed is mostly roadless (Figure 2). Harvest units in this HUC-12 drainage are generally located within or near the Independence drainage, which has had a great deal of active mining and past harvest. Independence Creek is immediately adjacent to Osier Creek where most other project activities are occurring. There are several prescribed burning units located in the roadless portion of this HUC-12 watershed, but no logging or road construction in that portion of the Deadwood/Moose HUC-12 watershed.

The watershed analysis needs to be redone to display potential impacts to the drainages listed in Appendix K of the Forest Plan. Realistic expectations need to be made regarding the likelihood of mass wasting events and some level of risk assessment needs to be made regarding the implementation of best management practices. Time and time again the Forest Service has projected that their activities will produce no measurable amounts of sediment and that best management practices will protect water quality only to have those practices not live up to expectations in actual practice. Monitoring efforts by Friends of the Clearwater and others have documented many instances where best management practices have failed to achieve Forest Service claims.

**Figure 1 – HUC-12 drainages used in both the Watershed Analysis**



**Figure 2- Forest Plan Appendix K Waterheds**

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**Table 1 - Forest Plan Drainages with Fisheries Standards**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Stream Name | Acres | Forest Plan Objective (CE) | Jones & Murphy (1997) | Reach Survey Year | Cobble Embeddedness (%) – Fisheries Report |
| Deception Gulch | 2859 | 40-45 | N/D | 2019 | 32.7 |
| Comet Cr | 2202 | 25-30 | 33 | 1995 | 37.3 |
| Lake Cr | 5411 | 30-35 | 22 | 1990 | 22.9 |
| Moose Cr (Lower) | 2999 | 30-35 | 28 |  |  |
| Osier Cr (Lower) | 690 | 30-35 | 48 | 2019 | 58 |
| Osier Ck (Above China) | 1511 | 25-30 | 56 |  |  |
| WF Osier | 1372 | 30-35 | 77 |  |  |
| Osier abv WF | 1594 | 35-40 | 84 |  |  |
| China Cr | 2764 | 25-30 | 57 | 2019 | 49.8 |
| Laundry Cr | 1953 | 25-30 | 56 | 1994 | 53.2 |
| Sugar Cr | 2360 | 30-35 | 64 | 2019 | 35.9 |
| Independence | 3534 | 40=45 | 34 |  |  |
| Moose (abv Independence) | 1138 | 30-35 | 26 |  |  |
| Deadwood Cr | 2033 | 30-35 | 25 | 2003 | 32.2 |
| Moose (abv Deadwood) | 4604 | 30-35 | 14 | 2019 | 17.5 |

**Streams highlighted in yellow have cobble embeddedness levels that exceed Forest Plan Objectives**

**Objection 6 – Misguided Enthusiasm for “Improving” Old-Growth**

The Nez Perce - Clearwater NF has dropped commercial logging in old growth, but still proposes to treat 56-acres of old growth forest with hand/mechanical non-commercial methods. While it is certainly an improvement that commercial logging has been dropped from the project, I still do not believe it is desirable to remove understory grand fir and Douglas fir from old-growth cedar groves with large diameter trees over 36 + inches. Such treatments are unnecessary and propose great risk to this important resource. The last thing that is needed in these stands is activity that will remove snags and downed logs, harvest small diameter trees, and destroy understory vegetation that likely includes sensitive plant populations. Understory trees are a normal component of late successional old-growth stands (Green et al. 1992, Cooper et al. 1991 and the Clearwater Forest Plan) and don’t need to be removed to reduce the exaggerated fire risk that Nez Perce – Clearwater NF claims in its environmental assessment. Please review the document

Management of Old Growth in the U.S. Northern Rocky Mountains (Juel 2021) for an extensive review of old growth management in the Northern Region and reasons why understory removal to improve old growth is such a terrible idea.

**Objection 7 – Old Growth Inventory**

The Vegetation Report claims that six old growth units will be impacted by the project. It also claims that these units will all retain 5% old growth or stepdown old growth (stands that will be old growth in 20-years). The concept of stepdown old growth was first identified in 2006 when an inventory of old growth using FIA (Forest Inventory and Analysis) data (Bush 2006) suggested that the Clearwater NF had only 9.4% old growth. In response the Forest Supervisor placed a moratorium (USDA 2006) on cutting of both old growth (stands over 150-years) and stepdown old growth (generally stands between 130-150 years of age).

There are no maps of these old growth units nor are there any maps of either old growth or stepdown old growth stands. There is also no information on how old growth and stepdown old growth stands were identified and field verified. The only reference is that old growth stands were “Derived from Old Growth GIS data managed by the Regional Office”.

According to the Vegetation Report, stands over 20+ inches DBH will be reduced from 7% to 6% percent in the Warm Moist habitat group (278 acres), from 11% to 10% in the Warm Dry habitat group (22-acres), and from 2% to 1.9% in the Cool Moist habitat group (10-acres). Why aren’t any of these stands considered old growth or stepdown old growth?

How were stands in the regional data base identified and what field verification has been accomplished in the project area to assure that no old growth or stepdown old growth is being harvested? Recent analysis of old growth inventory on the Hungry Ridge project does little to booster confidence in current old growth inventory practices on the Nez Perce – Clearwater NF. On that project, the Forest Service was able to find 2,635-acres of additional old growth meeting the Forest Plan definition of old growth after they were directed by the court to redo their old growth analysis. On that project, several of these stands still remain in proposed harvest units.

**Objection 8 - Road construction and reopening of previously decommission roads**

The Nez Perce Clearwater NF is proposing to build a considerable amount of temporary (30-miles) and system road (12-miles) with this proposal. According to the Transportation Report, they also plan to reconstruct 99-miles of existing road and maintain another 51-miles. The Forest Service claims all of this work can be accomplished without any measurable increase in stream sediment as required in the Forest Plan lawsuit settlement in streams currently not meeting Forest Plan standards. Despite Nez Perce -Clearwater modeling efforts, this claim seems very unlikely given the past history of landslides within the project area. Modeling efforts generally do not include the impact landslides. For example, both the Deception Creek Road (255) and the Black Canyon Road (250) were only recently reopened after landslides occurred on both of these roads (USDA Forest Service 2021). These are the main access roads to the project area.

Beyond Roads 250 and 255, many of the other proposed roads and harvest units appear to occur on steep slopes and high-risk landtypes. The Forest should consider not building roads and harvesting timber in these high-risk areas. The new system and temporary road in into unit 30 appears very risky as does the proposed harvest treatment of 432-acres in the unit itself. There are also several new temporary roads that appear to be very closely spaced to existing road templates. Forty-two miles of system and temporary road construction seems pretty excessive given all the existing roads in the project area and the amount of timber to be removed.

The Nez Perce Clearwater also appears to be planning to open roads that were previously decommissioned and allowing them to be converted to system roads? Shouldn’t the decision if these roads were needed as part of the transportation system have been made prior to their decommissioning?

I know many of the existing roads are grown over and untravellable. It is still unclear how many of the roads that the Forest Service plans to reconstruct or reopen as a temporary or system road are currently grown over or decommissioned? It is also unclear if newly opened roads will remain open to all forms of motorized traffic or if they will be closed with gates, earthern barriers of some other closure device during and following logging. Newly opened roads need to closed to motorized use during both project implementation and once the project is completed. Requirements to close gates during non-haul times should be included in the timber sale contract and more substantial closure devices should be planned once the project is completed.

**Objection 9 - Timber Harvest Adjacent to the Existing Hoodoo Roadless Area**

The Hoodoo Roadless area is one of three areas recommended for wilderness protection in the current Clearwater Forest Plan, and its integrity needs to be maintained until Congress moves forward with any wilderness proposal. The final environmental assessment estimates that 59-acres of unroaded land adjacent to the existing Hoodoo Roadless area will be logged as a result of the project? Some of these units were dropped because they were considered old growth in the Draft Decision Notice, but several other units still remain in the project proposal.

These unroaded areas were likely not included in the Hoodoo Roadless area due to the fact that these acres were in private ownership when roadless inventory was completed. Once the land exchange was finalized, boundary adjustments should have been completed to appropriately identify the boundary of the Hoodoo roadless area.

While I had great difficulty in reading the provided project area maps and may have incorrectly identified some unit numbers, I believe units such as 33C, 33E, 34A, 34B, 35, 43, 44. 45, 58, 63 and 81 are all adjacent or near the Hoodoo Roadless area. Several of the units will require a considerable amount of road reconstruction and new temporary road. Please instruct the Nez Perce Clearwater Forest to drop all areas that would currently qualify as existing roadless if the Hoodoo Roadless were to be appropriately remapped. Further compromising the Hoodoo Roadless area with new roads and regeneration timber harvest is not appropriate.

**Objection 10 – Burning in Riparian Areas or Landslide Prone**

Burning should not be permitted in riparian areas or landslide prone locations, and all ignitions should occur outside of these areas. Burning prescriptions should be designed to have minimal impact and no areas within the riparian zone or landslide prone areas should be allowed to burn at high intensities. The focus of the prescriptions should be maintaining all riparian vegetation and not just mature trees.

**Objection 11 – Detrimental Soil Disturbance Exceeding Regional Standards**

The soils report suggests that there are currently no harvest units with Detrimental Soil Disturbance (DSD) over the regional standard of 15%, but that several harvest units will be allowed to exceed the regional standard during project implementation. According to the soils report, there are at least seven harvest units that will exceed the 15% Detrimental Soil Disturbance during project implementation and three other units that would move to 15%.

It is very unclear why the Nez Perce – Clearwater is permitting this level of Detrimental Soil Disturbance in these 10-harvest units. The Regional standard is designed to prevent such disturbance before it occurs and/or to correct situations that have occurred prior to the adoption of the regional standard. Please advise the Nez Perce – Clearwater to drop or redesign all harvest units exceeding the regional standard.

**Objection 12 – General concern with the wildlife analysis and failure to set meaningful thresholds of habitat loss (Schultz 2010) for most wildlife species using the project area.**

My overall impression is that the Dead Laundry project will have negative consequences to most wildlife species using the area. Species that utilize older forests such as the fisher, goshawk, pileated woodpecker and the pine marten are likely to be most at risk. The multitude of new roads will also likely cause negative consequences for species like elk, gray wolves and others that are sensitive to high open road densities.

According to the Draft Decision Notice the preferred alternative will harvest 2,057-acres with regeneration harvest prescriptions. In addition, there are 1,350-acres of prescribed burning and 1,340-acres of non-commercial mechanical/hand treatment of understory fuels. Old growth enhancement is planned on 56-acres and will also utilize non-commercial mechanical/hand treatment methods. There are 14 openings over 40-acres and four of these exceed 100-acres in size. Incredibly, one regeneration harvest unit is 432-acres. Harvest treatments and fuel treatments will remove snags, downed wood, shrubs, understory plants and important hiding cover.

The proposal will construct 12-miles of system road and 30-miles of temporary road. There could also be as high as 99-miles of road reconstruction and 51-miles of road maintenance. Road reconstruction and road maintenance mileage are not discussed in the Draft Decision Notice. It is known that many roads scheduled for reconstruction are currently grown over and naturally closed due to landslides and slumps. Road reconstruction will essentially create a new road on these old templates.

Even with decommissioning after use, temporary roads will provide travel corridors that may be accessed as user-created routes. This has been observed on many past projects, and it may be difficult to maintain effective closures on these roads due to the lack of funding and inadequate law enforcement. Many “temporary” roads have been observed to be still open in other areas of the Forest long after the timber sale that was supposed to close them was completed. Recreationists often find these new templates very attractive and open them on their own as an unauthorized user-created trails.

The wildlife analysis makes several erroneous conclusions that are not supported by the best available science and fails to answer the “so what” question of what habitat losses associated with the project mean. In many instances the analysis underestimates potential habitat and in turn potential impacts to those species. Much of the analysis is based on Vmap database queries and there is a general lack of monitoring data to confirm any of the conclusions of the analysis. Spatial requirements of territorial species have not been considered and no thresholds of management activity have been set for most species. With the exception of summer habitat use by elk, the impact of high levels of motorized use has not been considered for any species.

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

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

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

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

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

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

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

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

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

**Objection 13 - Misapplication of the Sauder and Rachlow (2014) publication for the evaluation of fisher habitat**

The fisher analysis has been updated to include five home ranges that approximate the home range size of a female fisher which is 12,200-acres according to Sauder and Rachlow (2014). I appreciate this change, but am still concerned about the amount of habitat that will be lost as a result of the project. According to the wildlife report as much as 1,259-acres of mature forest in suitable fisher habitat could be removed by regeneration harvest. However, this is still unclear, since the wildlife analysis does not agree with the Draft Decision Notice. The Draft Decision Notice suggests there will be a total of 2,057-acres of regeneration harvest, instead of 3,639-acres of regeneration harvest analyzed in the wildlife report. How much of this reduced harvest level occurs in mature and suitable fisher habitat is not reported.

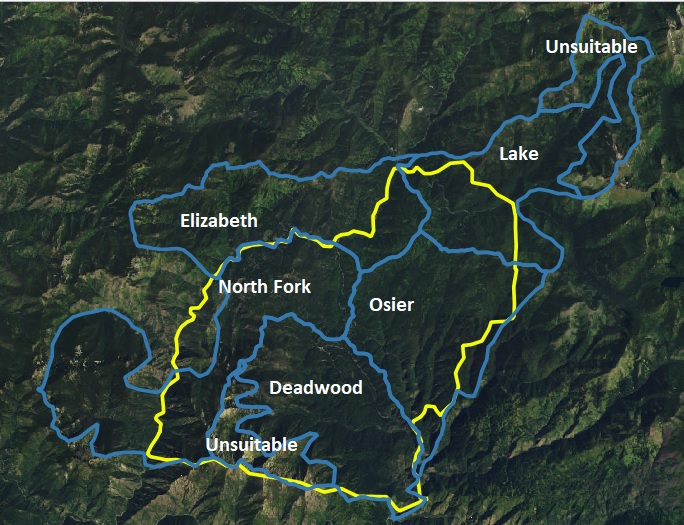
Sauder and Rachlow (2014) found that “fishers selected landscapes for home ranges with larger, more contiguous patches of mature forest and reduced amounts of open areas. Landscapes that had >50% mature forest arranged in connected, complex shapes with few isolated patches and open areas comprising <5% of the landscape characterized a forest pattern selected by fishers in our study.”. They suggest that an “increase of open area from 5% to 10% reduces the probability of occupation by fishers by 39%” and that home ranges with more than 25% open habitat will likely not be utilized. Sauder and Rachlow (2014) reported that the median amount of open area within radio-monitored fisher home ranges was 5.4%.

The revised Wildlife Report suggests that the five potential home ranges are centered on HUC-14 drainages and include: Deadwood (14,312-acres - Deadwood Creek, Independence Creek, Lower Moose Creek, Ruby Creek, Upper Moose Creek), Elizabeth -(11,354-acres - Coyote Creek, North Fork Clearwater River -Hidden Creek), Lake (13,366-acres - Lower Lake Creek, Goose Creek), North Fork (11,816-acres - Comet Creek, Deception Gulch Creek, Pete Ott Creek), and Osier (12,196 - China Creek, Laundry Creek, Osier Creek, Sugar Creek),

I could not find any maps displaying the actual boundaries of these analysis areas on the Forest Service website. In order to increase my understanding of the analysis, I made a map based on the narrative descriptions in the Wildlife Report (Figure 3). Boundaries were most difficult to determine in the North Fork and Elizabeth potential analysis area, and the North Fork analysis area displayed on my map was considerably larger than the numbers reported by the Forest Service.

The Forest Service has suggested that there is a large amount of unsuitable habitat in at least three of these home ranges (Table 2), but has not provided any maps of probable habitat. It appears that a Region wide analysis (Sauder 2014) has been used to identify probable fisher habitat. The (Sauder 2014) analysis is a broad-brush approach using remotely sensed data that is trying to identify probable habitat availability at a scale of several million acres. The Sauder (2014) analysis does not consider the impact of habitat fragmentation which is a critical component of habitat use at the home range scale.

**Figure 3 – Project Boundary (Yellow) and Approximate Boundaries of the Fisher Analysis Areas (Blue) Utilized by the Forest Service (Boundaries are based on Narrative Descriptions in the Wildlife Report)**



Both the fisher and pine marten are known to avoid highly fragmented landscapes despite the fact that some older forests may still be present. Any natural open area or recent timber harvest area that is included in the regional coverages will not be displayed as probable habitat in the computer-based queries that generate these maps. Younger stands that have the potential to develop into suitable habitat, may also be considered unsuitable based on the Sauder 2014 analysis. Such maps do not accurately reflect the on the ground dilemmas that fishers face when using their selected home range. While they can avoid large open areas like the open slopes along the North Fork of the Clearwater River or the upper elevations of Lake Creek (Displayed as Unsuitable in Figure 3), they cannot fly from one habitat patch to another in their selected home range.

The project biologist appears to have excluded interspersed open areas and immature stands from the landscape prior to her analysis and then made all calculations of habitat conditions such as the amount of mature forest and open area based on the reduced acreage of probable habitat. Probable habitat should have included the entire landscape where fishers were likely to be found. Displaying probable habitat as a series of disconnected patches and eliminating interspersed open stands or younger forests from the analysis upfront, as was apparently done by the Forest Service biologist is not using the appropriate recommendations from the (Sauder and Rachlow 2014) publication. The analysis does not reflect how fishers must actually utilize the landscape. Interspersed openings are the openings that Sauder and Rachlow (2014) discuss in their publication and I have no idea why the Forest Service biologist has eliminated these areas from her analysis.

Based on the Forest Service analysis, at least three of the five of the analyzed home ranges would be incapable of supporting a female fisher. According to the Forest Service analysis (Table 2), the Deadwood Analysis area would have 8,731-acres of suitable habitat, the Lake analysis are would have 7,074-acres of suitable habitat and the North Fork would have 5,094 acres of suitable habitat. These acreages are well below the habitat requirements of a female fisher.

**Table 2 - Forest Service Fisher Analysis (Existing Condition)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Fisher Potential Home Range | Acres | Mature Forest (Ac) | Mature (%) | Suitable | Open (Ac) | Open (%) | Unsuitable |
| Deadwood | 14,312 | 3,149 | 22.0% | 5,567 | 159 | 1.1% | 5581 |
| Elizabeth | 11,354 | 2,493 | 22.0% | 7,402 | 581 | 5.1% | 878 |
| Lake | 13,366 | 1,550 | 11.6% | 5,473 | 51 | 0.4% | 6,292 |
| North Fork | 11,816 | 1,123 | 9.5% | 3,550 | 431 | 3.7% | 6,722 |
| Osier | 12,196 | 3,389 | 27.8% | 8,515 | 224 | 1.8% | 68 |
|  |  |  |  |  |  |  |  |
| Total | 63,044 | 11,704 | 18.6% | 30,507 | 1,446 | 2.3% | 19,541 |

I have found that the project area is generally a productive landscape that is surrounded by existing roadless areas and steep canyon breaklands along the North Fork of the Clearwater River. Most of the project area supports abundant tree growth and moist habitats which are preferred habitat by the fisher. The area targeted by the Forest Service for timber harvest generally consists of stands located on gentler slopes and at lower elevations (Figure 4). A considerable amount of area targeted for timber harvest has been previously harvested and the area is currently part of what has been called the “roaded front”. The “roaded front” includes some of the most productive lands on the Nez Perce-Clearwater NF and these areas generally coincide the habitats preferred by the fisher.

It is likely that much of the area considered unsuitable by the Forest Service occurs in open areas along the Clearwater River or other open areas that occur in higher elevations outside of the project area. I agree that it is unlikely that fishers will utilize these large expanses of open habitat (Figure 3). However, I found these areas to be smaller in size than the acreage of unsuitable habitat reported by the Forest Service. In the Deadwood analysis area, I found there were approximately 2,930-acres associated with the Clearwater River breaklands and in the Lake Creek analysis area I found there were approximately 4,650-acres associated with openings in higher elevation areas. The Forest Service reported 5,581-acres of unsuitable habitat in the Deadwood Analysis area and 6,292-acres in the Lake Analysis area. What I don’t understand is how the Forest Service treated interspersed openings and young forest in their analysis. Interspersed small openings should be considered as part of the calculations of habitat condition as outlined by Sauder and Rachlow (2014).

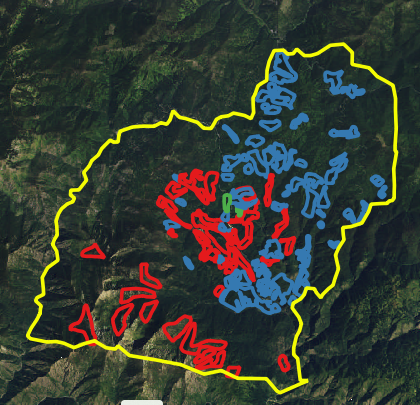
The wildlife report accurately suggests risks to the fisher are likely most pronounced in the Osier and Deadwood fisher analysis areas and the small portion of the project area concurrent to Deadwood and Osier Creek. Proposed timber harvest is concentrated in this area (Figure 4) and fishers are likely to avoid the area once timber is harvested. None of the existing analysis areas (Table 2) have the suggested amount of mature forest (50%) and the proposed action would reduce the overall amount of mature forest substantially.

Likewise, the amount of opening would increase significantly with Osier Creek going from 1.8% to 14.6% opening (Table 3). This would reduce potential occupancy to approximately 28% of potential according to Sauder and Rachlow (2014). Depending on how the Forest Service treated small interspersed open areas in their calculations, potential occupancy could be even lower.

**Table 3 - Forest Service Fisher Analysis (After Implementation of Alternative 2)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Fisher Potential Home Range | Acres | Mature Forest (Ac) | Mature (%) | Suitable  (Ac) | Open (Ac) | Open (%) | Unsuitable  (Ac) |
| Deadwood | 14,312 | 2,778  (-371) | 19.4% | 5,016  (-551) | 1,081  (+922) | 7.6% | 5,581 |
| Elizabeth | 11,354 | 2,298  (-195) | 20.2% | 7,182  (-220) | 996  (+415) | 8.8% | 878 |
| Lake | 13,366 | 1,472  (-78 ) | 11.0% | 5,373  (-100) | 229  (+178) | 1.7% | 6,292 |
| North Fork | 11,816 | 974  (-149) | 8.2% | 3,145  (-405) | 985  (+554) | 8.3% | 6,722 |
| Osier | 12,196 | 2,923  (-466) | 24.0% | 7,421  (-1094) | 1,784  (+1560) | 14.6% | 68 |
|  |  |  |  |  |  |  |  |
| Total | 63,044 | 10,445  (-1259) | 18.6% | 28,137  (-2,370) | 5,075  (+3,629) | 8.1% | 19,541 |

**Figure 4 – Approximate Location of the proposed Dead Laundry Harvest and Fuel Treatments (Forest Service GIS coverages were unavailable to me)**

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**Yellow – Project Area Boundary, Blue=Timber Harvest Units, Green=Old Growth Treatments, Red=Burn/Fuel Treatments**

In summary, the proposed Laundry Ridge project is concentrated in the best fisher habitat in the Dead Laundry landscape. This area has a lot of previous timber harvest and while many past regeneration harvest units have now grow up to sapling and pole size classes there is a general lack of mature forest which is an important component of fisher habitat. The proposed action will remove a significant amount of the existing mature forest and create several new openings in a concentrated area around Osier Creek, Lower Deadwood Creek and Deception Gulch. This will likely displace fishers from this area and remove the potential for fisher occupancy in one or two home ranges.

Areas outside of the project area are largely roadless and have significantly more open habitat than what is found within the project area. Sauder and Rachlow (2014) report that “in our study area, composition and configuration of roadless areas differed significantly from occupied fisher home ranges, suggesting that roadless areas might not be preferred fisher habitat in this region. The abundance of open areas was significantly higher and the proximity of mature forest patches was significantly reduced in roadless landscapes relative to occupied fisher home ranges.” Counting on these areas for fisher habitat is likely to put the species at risk especially since the Nez Perce – Clearwater NF is targeting the “roaded front” with numerous other timber sales.

Other projects that are being implemented or planned in the roaded front on the Nez Perce Clearwater NF include: Hungry Ridge, Twenty-mile, End of the World, Green Horse, Limber Elk, Red Siegel, Center Johnson, Clear Creek, Crane Point, Dead Laundry, Dixie-Comstock Community, East Saddle, French Larch, Gold Hill, Histloc Fuels, Johnson Bar, Little Boulder, Lolo Creek, Lowell WUI, Lower Orogrande, Newsome Fuels, Northside Powell,, Parachute Fuel, Pete King, Red Moose Divide, Section 16, Smith Ridge, Stray Creek, Tinker Bugs, White Pine, Windy Shingle and Longleaf.

Most of these proposed projects occur in low elevation areas preferred by the fisher and they will harvest and fragment thousands of acres of mature forest in an area that has been termed the roaded front. Examination of several of these projects suggests that many potential home ranges will be reduced well below the recommendations of Sauder and Rachlow (2014). These are the most productive areas on the Nez Perce-Clearwater National Forest and the best habitat for the fisher because of the productive forest types that are found there. A more comprehensive analysis of the impact of all of this activity on fishers needs to be conducted.

**Objection 14 - The goshawk analysis generally dismisses impacts to the species by suggesting sufficient habitat is available across the Forest. No thresholds of concern have been identified and the impact of cumulative effects has largely been ignored.**

The goshawk analysis relies strictly on data base queries and makes no assessment of meaningful thresholds of habitat loss that would affect the goshawk. The analysis does a very poor job of first identifying suitable habitat and then of addressing the impacts of the project on the species. According to the Wildlife Report, there are 3,255 acres of nesting habitat (Average DBH 15+ inches) and 22,969-acres of foraging habitat (Average DBH 10+ inches). Nesting habitat is also considered foraging habitat.

According to the Vegetation Analysis (Summarized in Table 4) there are at least 2,375-acres of the project area consisting of stands with average DBH > 20 inches and 12,037-acres of the project area consisting of stands with an average DBH = 15.0-19.9 inches. It is unclear why there is such a large difference between the Vegetation Report and the Wildlife Report given that stands exceeding 15+ inches DBH are considered nesting habitat in the wildlife analysis.

Table 4 – Summary of Vegetation Condition from the Vegetation Analysis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Forest Type | Percent | Acres | DBH 15-19.9” (Percent) | DBH 15-19.9” (Acres) | DBH 20+  (Percent) | DBH 20+ (Acres) |
| Warm\_Dry | 5.4 | 2,191 | 20 | 438 | 11 | 241 |
| Warm\_Moist | 68.6 | 27,828 | 32 | 8905 | 7 | 1948 |
| Cool\_Moist | 22.9 | 9,289 | 29 | 2694 | 2 | 186 |
| Cold | 1.1 | 446 |  |  |  |  |
| Other | 2.0 | 811 |  |  |  |  |
|  |  |  |  |  |  |  |
| Total | 100.0 | 40,565 |  | 12,037 |  | 2,375 |

There is limited recognition in the wildlife analysis that the goshawk is a territorial species and there is no attempt to address how the proposal might impact potential post-fledgling areas (PFAs) or theoretical territories. For example, it is stated in the wildlife report that “Since goshawk nest sites are not known, specific PFA areas are not identified within the project area.” and “While the project is theoretically large enough to include 7 home ranges, nesting habitat is patchy and distributed such that no more than 4 territories would be reasonable.” The uncertainty of known nesting sites is not a good reason for the lack of analysis of potential home ranges, potential nesting habitat and/or potential post-fledgling areas. Potential home ranges, potential nesting habitat and potential PFAs could all have been identified based on current habitat conditions.

Previous work (Reynolds et al. 1992) should have been utilized for the goshawk analysis, and this approach would have identified more meaningful results than just running a set of stand exam queries, reporting the results and making the conclusion that “while the project may impact individuals or habitat, it is not likely to result in a loss of viability in the planning area, nor cause a trend toward federal listing or loss of Northern goshawk viability range wide.” Without meaningful thresholds of habitat loss, projects will continue to degrade goshawk habitat across the Nez Perce/Clearwater over time (Schultz 2010, Schultz 2012).

I agree that the project area could support seven potential territories, but do not agree that the existing condition or the potential home ranges needs to be dismissed upfront with no analysis. If three of the possible seven territories in the project area are already unsuitable as the Wildlife Report suggests, then it is critical to understand how the remaining four territories will be impacted and what is the existing condition of the three unsuitable territories.

Reynolds et al. (1992) suggest that at least 180 acres of suitable nesting habitat be maintained in each goshawk home range. This nesting habitat be maintained in uncut blocks of at least 30 acres in size and that at least three suitable nesting areas be maintained in each home range. Regional direction based on Clough (2000) suggests the amount of nesting habitat should be increased to at least 240-acres and uncut nesting areas be increased to 40-acres.

When possible, Reynolds et al. (1992) recommend three additional replacement nesting areas. This recommendation fits well with the findings of Moser and Garton (2009) who found that alternate nest sites will be used within the home range if the previous year’s nest site is lost for some reason.

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

I suggest dividing the project area into seven non-overlapping theoretical home ranges based on topographical features. This approach would be similar to procedures used to identify the elk analysis areas and it is important that the theoretical home ranges not be overlapping to avoid double counting of potential habitat. Each existing home range should then be classified into potential goshawk nesting habitat based on the guidance of the Hayward and Escano (1998). An analysis should be completed to assure that sufficient old forest is maintained within each of the three potential nest stands to meet the Reynolds et al. (1992) nesting and post-fledging requirements. Thus, each home range should have at least three suitable post-fledging areas at least 420 acres in size with at least 60% old forest surrounding the potential nest stands. Foraging habitat should maintain the diversity of conditions that Reynolds et al. (1992) discuss in their management guidelines. This will likely mean a sufficient component of older forest stands along with some stands in younger age classes.

Thus, the Reynolds et al. (1992) guidelines actually require maintaining more than 180 or 240 acres of mature forest in each goshawk home range. The exact amount of mature forest to be maintained is dependent on the configuration of the existing nesting habitat and the composition of the surrounding post-fledgling areas. This needs to be determined prior to timber harvest based on the location of identified nesting habitat. Doing otherwise, and making no provisions for the protection of post-fledgling habitat (as is being done on the Laundry Ridge project and several other projects across the Forest) and allowing post-fledging areas to be extensively harvested after the active nesting season (Aug 15th) will likely assure that the nesting area will be abandoned in the following year. This approach provides little assurance of long-term protection of goshawk habitat on the Nez Perce/Clearwater National Forest. Nesting habitat should not be harvested in theoretical home ranges that do not have sufficient mature forest to meet the Reynolds et al. (1992) guidelines.

The goshawk analysis needs to be updated to assure both nesting habitat and the surrounding post-fledgling habitat is being maintained. According to the silviculture report, timber harvest since 1950 has treated 14,895-acres or 36.7% of the project area. Most of these stands are not suitable for gohawk nesting due to their relatively young age. New harvest on this project includes 2,057-acres of regeneration harvest. Coupled with past harvest, this would bring the harvested acreage up to 16,952-acres or approximately 41.8.% of the project area.

There have also been 1,955-acres of burning in this same timeframe and the project proposal includes 1,350-acres of landscape burning and 1,340-acres of non-commercial understory mechanical and hand fuel treatment. Fifty-six acres of existing old growth would also be treated with non-commercial understory mechanical and hand fuel treatment

This level of timber harvest, burning and understory fuel treatment is bound to have a significant impact on goshawks. Most of the regeneration harvest is being proposed in mature forest stands that are likely important to the goshawk for nesting and use during the post-fledgling period. Understory fuel treatments also target mature stands and with remove understory plants, downed logs and snags which are important habitat for goshawk prey species.

The analysis uses the outdated and questionable Samson (2006b) short-term viability analysis and the Bush and Lundberg 2008 habitat estimates to justify cumulative impacts at the Forest level. This Samson (2008) analysis suggests that a viable population of goshawks would need only 30,147-acres of habitat to remain viable across the region. At most, 30,147-acres would support six pairs of goshawks and six pairs of goshawks would hardly be a viable population. Even if the 30,147 acres were all nesting habitat and this were to be scattered across the Region, it is doubtful that this small amount of habitat would support a viable population for the long-term.

The wildlife analysis suggests that Bush and Lundberg (2008) found an abundance of goshawk habitat on the Clearwater NF. The Bush and Lundberg (2008) analysis suggests  
Forest currently has 366,744 acres of modeled goshawk nesting habitat and 653,186 acres of modeled foraging habitat. This analysis is now over twenty-five years old considering the 10-year-old data originally utilized in the FIA habitat queries.

Since the time the analysis was completed there have been a multitude of new projects and wildfires on the Nez Perce – Clearwater NF, but no adjustments have been made to the data. Sales like Hungry Ridge, Twenty-mile, End of the World, Green Horse, Limber Elk, Red Siegel, Center Johnson, Clear Creek, Crane Point, Dead Laundry, Dixie-Comstock Community, East Saddle, French Larch, Gold Hill, Histloc Fuels, Johnson Bar, Little Boulder, Lolo Creek, Lowell WUI, Lower Orogrande, Newsome Fuels, Northside Powell,, Parachute Fuel, Pete King, Red Moose Divide, Section 16, Smith Ridge, Stray Creek, Tinker Bugs, White Pine, Windy Shingle and Longleaf all continue to chip away at the amount of mature forest on the Nez Perce – Clearwater NF but the acreage of existing habitat always remains the same on project after project where the Bush and Lundberg (2008) analysis is cited.

**Objection 15 - The pileated woodpecker analysis generally dismisses impacts to the species by suggesting sufficient habitat is available in other locations. No thresholds of concern have been identified and the impact of cumulative effects has largely been ignored.**

The revised wildlife report suggests there are only 960-acres of pileated nesting habitat in the project area. This number is based on a habitat query that identifies stands with an average DBH over 20 inches and an average crown closure greater than 60%. This number appears low, given that the vegetation analysis suggests there are 2,375 acres of forest with an average DBH over 20+ inches and 12,037-acres of forest with an average DBH between 15-19.9 inches within the project area. Some stands with an average DBH between 15-19.9 inches likely include individual snags/trees that exceed the 20-inch diameter size category usually reported as the minimum size for nesting by this species (Bull and Holthausen 1993, McClelland and McClelland 1999). Stand exam information should be utilized to better identify potential nesting habitat before it is lost to timber harvest.

The analysis suggests there are 23,283-acres of foraging habitat which is based on a habitat query of stands with an average DBH of 10-inches and an average crown closure of 25%. Nest stands are also considered suitable for foraging. Presumably, stands with an average DBH of less than 10-inches occur in previously harvested areas that are now in sapling and pole size classes. These stands could eventually provide suitable foraging or nesting habitat as they mature. Natural openings generally are not considered suitable habitat for this species.

Regardless of the amount of available nesting habitat I object to the reliance on stand exam queries to complete the analysis. The analysis is not spatially explicit and if there is really only 960-acres of nesting habitat, then the distribution of potential nesting habitat is critical to this territorial species. If there is actually more nesting habitat, then the potential loss of nesting habitat is much more significant than the numbers reported in the wildlife report. More importantly what does the regeneration harvest of over 2,057-acres of mature forest, burning of 1,350-acres, and fuel treatment of 1,356-acres including 56-acres of existing old growth really mean to the pileated woodpeckers that utilize the project area. How many territories will be rendered unsuitable by this activity and what is the habitat threshold that begins to cause some concern (Schultz 2010).

It is known that regeneration harvest is going to totally eliminate the potential for nesting for over 150-years. Broadcast burning may increase snag levels, but it will also remove downed logs and possibly mature stands that may currently provide suitable nesting habitat. Non-commercial fuel treatments likely will remove downed logs and small trees and snags that are important foraging areas for pileated woodpeckers. These treatments, especially those in old growth, are also likely to reduce forage quality for pileated woodpeckers which feed on carpenter ants and other insects that are generally found in dead and dying trees or downed logs. As mentioned in the wildlife report, “Pileated woodpeckers rely on dead and dying trees for foraging and nesting, which is not compatible with management emphases on forest health.”

Again, I believe a more spatially explicit analysis of pileated woodpecker habitat is required. The revised analysis should start by identifying theoretical pileated woodpecker home ranges within the project area. Pileated woodpeckers are reported to have home range sizes of approximately 1005 acres (Bull et al. 1992). Thus, the project area could potentially support approximately 30-35 nesting pairs of pileated woodpeckers if unsuitable habitat (open south facing slopes and upper elevation areas) is removed. To identify project level impacts, I suggest use of habitat management guidelines developed by Bull and Holthausen (1993). These guidelines have been field tested and home range use in the areas where the guidelines were developed have been tracked for over 30 years (Bull et al 2007).

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

It is ironic that the wildlife report uses the Samson (2006b) short-term viability analysis and the Bush and Lundberg 2008 habitat estimates as a way to show that pileated woodpeckers are being maintained at the Forest level and that the Dead Laundry project will not contribute to cumulative impacts. This simplistic query of FIA data is not spatially explicit and relies on meaningless definition of pileated woodpecker habitat that is not supported by the available literature (Bull and Holthausen 1993, McClelland and McClelland 1999, Mellen et al.1992). Nesting habitat is simply defined as a stand with one dead tree per acre over 15 inches DBH and foraging habitat is defined as a stand with one dead tree per acres over 9 inches DBH. This is not a defensible description of pileated woodpecker habitat and makes the analysis pretty much meaningless. There is no requirement for the snags to be part of a mature stand and 15-inch DBH snags are not suitable for nesting by this species.

Clearly, the best available science does not support the contention that pileated woodpeckers will be unaffected by the Dead Laundry proposal. Long-term studies (Bull et al. 2007) suggest that the pileated woodpecker is highly sensitive to regeneration harvest which will be conducted over large areas of the project area. At 432-acres, Unit 30 could totally eliminate a pileated woodpecker home range. As previously discussed, the myriad of other proposals being pursued on the Nez Perce-Clearwater NF poses a real risk to the species like the pileated woodpecker that depend on mature forests and large snags over 20-inches DBH.

Using the Bull publications would have given the Nez Perce/Clearwater National Forest a way of evaluating habitat potential and setting cumulative habitat thresholds where habitat loss becomes significant (Schultz 2010). Such an analysis would have been based on the latest scientific information and would display some concern for maintaining management indicator species within the project area. The fact that the Forest Plan includes no guidance on cumulative thresholds for terrestrial wildlife species, does not exclude the Forest Service’s responsibility to “provide for a diversity of plant and animal communities based on the suitability and capability of the specific land area” or negate the Forest’s obligation to utilize the best available science.

**Objection 16 - Failure to set any meaningful thresholds of habitat loss and consider the effect of habitat fragmentation on the American Pine Marten**

The pine marten analysis relies strictly on data base queries and suggests there are 16,502 acres of suitable habitat. For the pine marten, suitable habitat is identified in the wildlife as stands that: include Douglas fir, grand fir, western red cedar, subalpine fir, Engelmann spruce or lodgepole pine forest types, have an average DBH exceeding 10-inches, a crown closure exceeding 40% and elevations between 3,300 and 5,900-feet. I could not find a map of suitable marten habitat on the Nez Perce – Clearwater website.

The Wildlife Report indicates that 2103-acres or 13% of the suitable habitat will be harvested with regeneration harvest, but the analysis has not been updated to reflect the reduced harvest that is proposed in the Draft Decision Notice. No assessment has been made regarding the amount of potential habitat that has been already impacted by past harvest and no meaningful thresholds of habitat loss that would affect the pine marten are considered. Without meaningful thresholds projects will continue to degrade pine marten habitat across the Nez Perce/Clearwater over time (Schultz 2010, Schultz 2012).

The analysis is not spatially explicit and fails to recognize the concentrated activity area in Deadwood Creek and Osier Creek. Numerous studies have found that the species is particularly vulnerable to habitat fragmentation (Webb and Boyce 2009, Hargis et al. 1999, Moriarty et al. 2011, Potvin et al. 2000, Wasserman et al. 2012). For example, Hargis et al. (1999) reported that “Martens were nearly absent from landscapes having >25% non-forest cover, even though forest connectivity was still present.” Avoidance of openings is well documented in the literature (Potvin et al. 2000, Koehler and Hornocker 1977, Chapin et al. 1998 and Wasserman et al. 2012). The area of concentrated timber harvest in Osier and Deadwood Creeks is likely to create a landscape that will have >25% non-forest cover in that area.

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

As I have suggested for several other species, theoretical home ranges should be delineated within the suitable habitat and that fragmentation effects examined. Home range estimates are highly variable for marten (Buskirk and McDonald 1989, Powell 1994) and no good estimates are available for Idaho in the literature. I suggest using the findings of Bull and Heater (2001) who found that female home ranges averaged 3,500 acres in nearby Northeastern Oregon. They report that home ranges do not overlap significantly in the same sex, but larger male home ranges (6,700 acres) often overlap female home ranges. The number of theoretical home ranges that the project area can support will be dependent on the amount of suitable habitat. Most of the project area is between 3,300 and 5,900-feet elevation and should support the pine marten. Similar to the habitat conditions discussed for the fisher, Pine marten will likely avoid open slopes in Upper Deadwood Creek and steep slopes above the North Fork of the Clearwater River.

If these areas are excluded there could still be 30,000 to 35,000 acres of marten habitat in the project area. This would provide habitat for 9-10 females and 4-5 males. Timber harvest should be then limited to actions that do not create extensive open areas in these home ranges. For example, Wasserman et al. (2012) report the probability of marten detection drops from 0.5 to 0.4 when the landscape is composed of 15% non-stocked clearcuts. Hargis et al. (1999) report little use of home ranges (landscapes) that have greater than 25% open habitat. Such an analysis would give a much more scientifically based projection of the impact of the proposed project on marten habitat and more appropriately deal with fragmentation and habitat arrangement impacts that have been ignored in the current analysis.

Wasserman et al. (2012) point out four main management implications of their work that have implications for marten habitat in the project area. First, is “that marten select habitat at multiple spatial scales, selecting home ranges within unfragmented landscapes with high canopy closure and low road density…” Second is “the importance of low fragmentation, middle elevation forests” and third is that timber harvest in northern Idaho National Forest System lands was disproportionately concentrated in high-productivity and highly valuable middle-elevation mesic forest types”. These stands are the exact target of actions on the Dead Laundry project. Fourth, “is that marten are highly sensitive to road density and patch density” and that “abandoned and decommissioned roads that do not appear on current travel plan maps still have substantial impact on marten habitat.

The proposed project will construct 12 miles of system road and 30 miles of temporary road. It will also reconstruct as much as 99-miles of existing road and maintain another 51-miles

When coupled with activities on the adjacent East Saddle Project, North Fork Ponderosa Pine and Long Creek Fuels and the myriad of other proposals being pursued on the Nez Perce – Clearwater NF the risk to the species is much greater than suggested in the wildlife analysis.

Sincerely,

Harry R. Jageman

**Literature Cited**

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

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

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

Chicago Press, Chicago, Illinois, USA.

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

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

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

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

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

Bush, R, 2006. Detailed Estimates of Old Growth on the Clearwater National Forest. Report -USFS Northern Region.

Bush R., and Lundberg R. 2008. Wildlife habitat estimate updates for the Region One Conservation Assessment: Region One Vegetation Classification, Mapping, Inventory and Analysis Report 08-04 v1.0

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

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

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

Friends of the Clearwater. 2021. Supersized-Clearcut Report.

https://www.friendsoftheclearwater.org/supersized-clearcut-report/

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

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

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

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

Jones, R.M., and P.L Murphy. 1997. Watershed condition: Clearwater National Forest.

Juel, J. 2021. Management of Old Growth in the U.S. Northern Rocky Mountains. Friends of the Clearwater Staff Report. https://www.friendsoftheclearwater.org/wp-content/uploads/2021/11/Juel\_2021-Old-Growth.pdf

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

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

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

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

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

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

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

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

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

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

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

Samson, F. B. 2006a. A Conservation assessment of the northern goshawk, blacked-backed woodpecker, flammulated owl, and pileated woodpecker in the Northern Region, USDA Forest Service. Unpublished report on file, Northern Region, Missoula, Montana, USA.

Samson, F. B. 2006b. Habitat estimates for maintaining viable populations of the northern goshawk, black-backed woodpecker, flammulated owl, pileated woodpecker, American marten and fisher. Unpublished report on file, Northern Region, Missoula, Montana, USA.

Sauder, J. D. 2014. Landscape ecology of fishers (Pekania pennant) in North-Central Idaho. PhD Dissertation, June 2014.

Sauder, J.D, and J.L. Rachlow. 2014. Both forest composition and configuration influence landscape scale habitat selection by fishers (*Pekania pennanti*) in mixed coniferous forests of the

Northern Rocky Mountains. Forest Ecology and Management. 314:75‐84.

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

Schultz, C. A. 2012. The U.S. Forest Service’s analysis of cumulative effects to wildlife: a study of legal standards, current practice, and ongoing challenges on a National Forest. Environmental Impact Assessment Review 32:74–81.

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

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

USDA Forest Service. 2006 Tom Reily Memo to Staff Officers, Rangers. December 7, 2006. Clearwater National Forest. Orofino, ID

USDA Forest Service 2021. Road closures on the North Fork District. https://www.fs.usda.gov/detail/nezperceclearwater/news-events/?cid=FSEPRD953452

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

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