**3.2.3.4 Multiple Uses Wildlife - DEIS**

TABLE 1 – NO WILD BOAR IN IDAHO!!

TABLE 1 – BLACK BEAR – Important predator of elk calves.

Table 1 – **why no mention of bighorn sheep** – they are hunted – realize they are covered earlier.

**ELK SECTION**

Elk herd numbers are influenced by a combination of forage availability, habitat quality, predation, and hunter harvest. **Winter weather conditions very important, for example the1996-97 winter resulted in a significant elk die-off the Clearwater Region, one in which they have not recovered in 22 years.**

This existing condition section focuses on new publications since the 2014 Assessment was produced. This section recaps the population trends and describes the effects and need for change from management direction in the 1987 Plans.

Following a decline in early seral habitats, elk populations declined through the 1970s. Increased timber management in the 1970s and 1980s, along with changes in game regulations, once again led to an increase in elk populations during the 1980s through early 1990s. Decreases in timber harvest beginning in the late 1980s and early 1990s correspond to a decrease in elk populations since that time when herds again began to decline in response to increasing loss of early seral habitat. These declines started before wolves were introduced into the plan area in the 1990s. Elk herds have continued to decline or have remained lower since. THIS SECTION NEEDS A TOTAL RE-WRITE: FYI: Unbelievably, the elk mortality related to the winter conditions during 1996-97 was never mentioned in the DEIS, nor was it mentioned in the Cook report to the CBC. The following is a paragraph from the 2019 Elk Progress Report: “Winter 1996–1997 was marked by severe conditions, including extremely deep snow exceeding 200% of average snow-pack in some areas. These conditions apparently caused higher-than-normal winter mortality, leading to a dramatic decline in the GMU 10 population (-48%). In addition, a survey was conducted in GMU 12 during winter 1996–1997 and those results suggested a 30% decline at that time. This data, in combination with overwhelming anecdotal information, suggests that catastrophic winter losses occurred in GMUs 10 and 12.”

Survey data from the IDFG 2019 elk progress report.

**Zone** **Cow Objective**/**Last Survey** **Bull Objective/Last Survey**

**Palouse Zone, GMU’s 8,8A, 11A:** 1125-1725/1101\* 115-415/219

**Dworshak Zone, GMU 10A** 2900-4300/4280 600-900/315

**Lolo Zone, GMU’s 10, 12** 6100-9100/1137 1300-1900/425

**Elk City Zone, GMU’s 14,15,16** 3150-4650/2099\*\*675-1000/283\*\*

**Selway Zone, GMU’s 16A, 17, 19, 20**  4900-7300/3381 1050-1550/934

**Hells Canyon Zone, GMU’s 11,13,18** 2000-2900/2556 420-610/799

\*The cow harvest in the Palouse Zone is regulated by controlled hunts to address depredation issues.

\*\*IDFG and hunters have resigned themselves to the situation.

\*\*\*The issue in the Elk City Zone is quantity and quality of forage.

As you can see, the Elk City, Lolo and Selway Zones significantly below management objectives. In all three zones, predation and habitat are the major obstacles in achieving population goals.

During the 1960’s and through 1974, the hunting season, region wide, was 30 days for either sex elk. Also, during this time, the Forest Service timber machine was in high gear, accessing many unroaded areas, and creating lots of clearcuts. The IDFG was convinced the documented declines in the elk populations were the symptom of advancing plant succession, as the last major fire was the 1934 Pete King Creek fire.

All game management units (GMU) in the Clearwater Region were experiencing low calf survival, the average in most all units was 21 calves per 100 cows. In early spring, 1973, a calf survival study was initiated on Coolwater Ridge. In 1968 and 1969, cow elk were trapped n Coolwater Ridge and tested for abortion-causing disease; none were detected. Captured new-born calves were aged, weighted, measured, bled, etc. In addition, they were fitted with a small transmitter collar. The transmitter was motion sensitive; if the transmitter didn’t move during a four-hour period the pluses changed from 60-70/minute to 3-400. During the first three years of the study it became apparent predation, primary by black bear, was the major source of mortality. The calf weights, blood values, etc. were all normal or above. In addition, a high pregnancy rate in the cow elk was documented.

During the spring of 1976, instead of capturing calves, 75 black bears were live-trapped and relocated on USFS lands around the state. The calf:cow ratio in the study area (1973-76), averaged 21:100; in 1977 it was 61:100; in 1977 the ratio was 51:100. In response to the study, plus the declining elk populations, all elk hunting, statewide, except the Panhandle Region, was restricted to bulls only, plus they liberalized black bear and cougar hunting.

In both GMU’s 10 and 12, elk populations began to increase after the hunting bag limit was restricted to Bull-only hunting. In GMU 10, the trend counts: 1956, 3,785; 1976, 1,788; 1983, 4,525. The 1983 count is 20% and 71% above 1956 and 1983. In GMU 12 the trend counts: 1969, 2,447; 1975, 1,166; 1984. 2,867 represent 17% and 146% increases over 1969 and 1975.

When IDFG initiated the zone management concept, game management units 10 and 12 were combined for the Lolo Zone. Their combined populations continued to increase into the early 1990’s, at which time the population exceeded forage capacity. Much of this zone is outside the commercial timber base, thus much of the forage a result if the last major fire, the Pete King Creek fire of 1934, and subsequent smaller wildfires. Collectively, the population in the two management units topped at 18,000±, in the early 1990’s. Thus, it was apparent the elk population growth occurred in light of black bear and cougar predation. Since the winter die-off in 1996-97, the population has remained at ±2,000. At this low level, plus the addition of wolf predation and declining habitat, elk populations have not able to increase, however, seem to be somewhat stable. Hunter numbers dropped from a 1992-96 5-year average of 4,383 to 828 during 2015-19 period, and the harvest declined from 1,031 during the same time period 147.

I strongly recommend Kevin Labrum review the following IDFG progress reports: Lochsa Elk Herd, PR84 and NF Clearwater Big Game Ecology, PR4. These reports document winter elk distribution, by drainage, plus provide elevation distribution information.

Elk herd numbers are influenced by a combination of forage availability, habitat quality, predation, and hunter harvest. **On the Clearwater, winters have a significant impact on elk populations, for example, IDFG estimated 50-55% of the region’s elk population succumbed to the harsh winter. – see previous comment.**

Their distribution is influenced by disturbance from roads and hunting pressure. **A very misleading statement; perhaps true in heavily logged sections of the forest, by far, not the majority of the Forest.**

Following a decline in early seral habitats, elk populations declined through the 1970s. Increased timber management in the 1970s and 1980s, along with changes in game regulations, once again led to an increase in elk populations during the 1980s through early 1990s. Decreases in timber harvest beginning in the late 1980s and early 1990s correspond to a decrease in elk populations since that time when herds again began to decline in response to increasing loss of early seral habitat. These declines started before wolves were introduced into the plan area in the 1990s. Elk herds have continued to decline or have remained lower since. **See earlier comments re this situation.**

Figure 1 – **apparently there is no winter range in wilderness areas??**

The 1987 Plans from both forests used elk analysis units as the scale for which effects were analyzed. The plans also required that elk analysis units maintain a minimum amount of elk habitat effectiveness of 25 percent, 50 percent, 75 percent, or 100 percent. These correspond to roughly 4.2 miles per square mile for 25 percent, 1.8 miles per square mile for 50 percent, and 0.8 miles per square mile for 75 percent habitat effectiveness. An elk habitat effectiveness (EHE) model computed habitat effectiveness using the density of open roads quality; quantity and distribution of cover, forage, and security areas; and livestock use.

Table 5. Number and Acres of Elk Analysis Unit Habitat Effectiveness Objectives under the 1987 Plans **WHAT ARE THE 2020 EHE’S – given reforestation in logged areas there should be more cover and less forage**.

Elk populations in the Clearwater Basin have declined substantially across large areas of the eastern portion of the basin during the past three decades. Declines have coincided with a loss of early-seral habitat, increased human pressures, and increasing predator population (R. Cook, Cook, & Wisdom,2018). **The substantial decline was due to the 1996-97 winter, habitat changes are more subtle and don’t cause immediate declines. PLEASE DOCUMENT “INCREASED HUMAN PRESSURES” AS A CAUSE OF ELK DECLINES ON THE FOREST, ESPECIALLY IN THE HABITATS OF THE FORMALLY ICONIC POPULATIONS**.

The outcomes of management strategies in the 1987 Plans for elk have not been favorable for elk herds. Since 1987, when plans were signed, elk populations in game management zones with low quality or declining forage, high amounts of hiding cover, and low road densities, such as the Lolo Zone, the Selway Zone, and some game management units in the Elk City Zone, have declined. Meanwhile, those with high quality and quantity of forage, such as in the **Palouse, Dworshak, some portions of the Elk City, and Hells Canyon zones, have increased or remained at the Idaho Department of Fish and Game objective, despite having high road densities and high vulnerability.**

Lukacs et al (2018) studied elk population trends in 101 elk management units from 7 states in the western United States. They tested the effects of predator richness, forage productivity, and precipitation on elk population performance. Forage productivity on summer and winter ranges had the strongest effect on elk recruitment relative to other factors.

Without adequate summer and fall nutrition, females cannot successfully produce a healthy calf to weaning and a calf cannot enter the winter period in adequate condition to withstand prolonged periods of severe weather. A substantial number of elk winter within the Nez Perce-Clearwater. **Has this been documented as an issue on the forest? If so, please document.**

yearling pregnancy rates. **Not important in elk population dynamics!**

selenium. Preliminary results indicate elk limitations in animal condition are primarily associated with summer nutrition as opposed to winter. Body condition and pregnancy rates of elk in the Clearwater basin indicate that limitations in animal condition are primarily associated with summer nutrition as opposed to winter. Variation in body fat levels of female elk followed a northeast-to-southwest geographic gradient of study areas, with body fat highest on the North Fork Clearwater, lowest on Craig Mountain and the South Fork Clearwater, and intermediate in Dworshak Reservoir area. Elk populations and their distribution in the Clearwater Basin are highly variable. Populations and productivity of herds have declined during the past 20 to 30 years in eastern wildlife zones, which are largely associated with roadless and wilderness. **The entire region is selenium deficient. All 4 areas very different in habitats and mgmt. conditions**.

Elk populations and their productivity in the central and western parts of the basin have increased during the past two decades, sometimes substantially. Examples include the Palouse and Hells Canyon Zones, where elk numbers were low or nonexistent a few decades ago. **Should not be much of a surprise, as Hells Canyon has great grass ranges, whereas the Palouse has lots of private property, ag land, and lots of security from people and predators.**

the best model overall was Model 6, which was a modified expert opinion model of dietary digestible energy**. I have concern about an “opinion” model – will get what you want!**

Data also indicates that herds in the Clearwater basin have relatively low levels of autumn body fat, body size, and pregnancy rates. **Was this consistent across all study areas? How were pregnancy rates determined and by whom?**

Some winter ranges along the Lochsa have high nutrition potential. The plan does not emphasize treatments within winter ranges but it should be within the best nutrition potential sites when doing so. While still important, treating winter ranges does not appear to provide conditions that would improve elk vital rates based upon nutrition. **Unbelievable!! All eggs in one basket.**

When nutrition during the summer and autumn is poor, cow elk are likely to breed later than cows with good body condition or not at all. **Was this documented as a problem on the Forest?**

Cook et al (R. Cook et al., 2018) suggests substantial emphasis on summer range management is probably warranted. **Does warranted mean needed?**

Of the additional seven elk populations monitored in the Clearwater basin, all showed summer and fall nutritional limitations (Mary M. Rowland et al., 2018). **Did not see the Clearwater Basin elk data that supports this statement.**

Over 30 studies conducted during the past 40 years on public lands have shown consistently strong avoidance by elk of roads and motorized trails open to public (M. Wisdom & Rowland, 2018; M. J. Wisdom et al., 2018). Avoidance distances can occur at 0.5 to 1.5 miles from open roads, meaning that landscape use by an elk population can be substantially diminished within these distances from open roads and trails. Elk avoidance of all-terrain vehicles and dirt bikes on motorized trails has been shown to be similar to or greater than the species avoidance of forest roads open to public motorized access. Many studies are described and referenced in the Assessment (U. S. Department of Agriculture, 2014a) in relation to effects of roads. The primary effect of roads is that elk may be displaced from otherwise usable habitats and may be displaced from public lands onto private lands where they are not accessible to public uses. **Not all roads are equal – Lolo Motorway vs Newsome Creek for example.**

Instead, Rowland et al (2000) suggested that elk are responding to the spatial distribution patterns of roads as an important factor, which is not necessarily measured by road density or habitat effectiveness. Simulations of road spatial patterns suggested that evenly spaced roads had the greatest effect on habitat while randomly spaced roads and clumped patterns of roads allowed for less influence on habitat selection (M. M. Rowland et al., 2000). **Thus, distance from roads, or the spatial distribution of roads, is a more important measure for elk habitat selection than road density per se?**

Their results suggest that, during hunting seasons, female elk still seek out areas of high nutritional value even when they are near motorized routes. Ranglack et al (2017) cautioned that extrapolation of their results beyond the study area may or may not be appropriate as results generated in one area may perform extremely poorly when applied in areas that are geographically distant or dissimilar ecologically. **Conditions on the Nez Perce-Clearwater are substantially different than those in western Montana. THIS IS AN ISSUE WITH EXTRAPOLATING ANY STUDY RESULTS FROM OUTSIDE THE FOREST!**

The study demonstrated how habitat use can be improved through silviculture and how areas of enhanced nutrition may not be used by elk if distance effects of open roads encompass the areas of higher nutrition. They recommended four variables that determine elk habitat use: distance from roads, the amount of higher quality nutrition, forage to cover edges, and slope.

**MOOSE**

Schrempp et al (2019) evaluated moose population trends and forage condition trends across Idaho. They found that the quantity of forage shrubs was estimated to have declined over the past 30 years in about half of the population management units, with the greatest declines predicted for high-energy forage species. The population trend index was correlated with the percent change in availability of moderate-energy forage shrubs, indicating that the availability of forage shrubs and change in availability over time might be affecting population dynamics for moose in northern Idaho **IMO, on the Forest, wolf predation is the primary cause of moose decline. Steep ungulate population declines are more characteristic of a severe event rather than gradual habitat changes.**

This suggests that fire suppression, lack of disturbance, and forage quality and quantity are likely important threats to moose populations. **Habitats in GMU’s 16A, 17, 19, and 20 have a large amount of recent fire history, yet the moose populations are in the toilet!**

Factors identified by the Assessment (U. S. Department of Agriculture, 2014a) as causing declines in moose include roads, predators, climate change, parasites, and loss of yew. Multiple-use wildlife plan components were designed to provide for many big game species including moose. For example, FW-DC-WLMU-03 and FW-DC-WLMU-04 pertain to moose habitat conditions, including the desire to maintain pacific yew as a winter food.

**Mountain Goat**

A hunter is allowed only one opportunity to hunt for mountain goats in his lifetime. **Not true, if no harvest can re-apply in 3 yrs. Once in a life time upon harvest, can reapply after three years if unsuccessful.**

The mountain goat is recognized as a Species of Greatest Conservation Need (SGCN), priority Tier 3, in the Idaho State Wildlife Action Plan (Idaho Fish and Game, 2017).

Migration to wintering areas occurs along well-traveled corridors with the first heavy snowfall. Winter ranges are typically at lower-elevation cliff complexes with south and west aspects where snow is less abundant and persistent. However, some populations in the plan area winter and summer in the same areas. **Where on the Forest, have significant migrations been documented, when and by whom?**

Threats identified in the Draft Idaho Mountain Goat Plan include road building, timber harvest, mining, power or infrastructure, oil and gas extraction, wildfire and fire suppression, or changing climate, which may reduce the limited habitat that currently exists (Idaho Fish and Game, 2019a). **The only treatments for mtn goat habitat on the Forest are fire and fire suppression. Also, and IMO, mtn lion predation is a significant threat, especially when other ungulate populations are depressed.**

Mountain goats are susceptible to disturbance by recreational activities, both motorized and non-motorized, and may abandon preferred high-quality areas because of disturbance. Several modes of backcountry recreation, including snowmobiling and heli-skiing, have the potential to disturb goats. Helicopters generate the disturbance of greatest concern. Repeated disturbance by helicopters, snowmobiles, logging, or road building can cause displacement from habitat, group dissolution, nanny-kid separations, and injury. The extent to which these disturbance threats are in effect in the plan area depends upon whether these activities are allowed where the herds are currently located. Nearly all existing herds are observed within either Idaho Roadless Rule areas or designated wilderness. Since road building and logging are restricted in these two areas, these threats are greatly reduced. There is local concern for impacts of winter motorized recreation on mountain goat populations in the plan area. **BASED UPON WHAT DATA?**

Climate change modeling in both coastal Alaska and the Washington Cascades suggest that mountain goat ranges will shrink up to 86 percent under some scenarios, becoming more fragmented and isolated by the end of the century (Johnston et al, 2012; White et al, 2018). **What can the USFS or the IDFG do to compensate for climate change??**

Winter range is important to the long-term survival of mountain goats and should be identified and managed to reduce disturbance to mountain goats. **Kuck, IDFG, documented goats in the Salmon area select winter sites based on snow-shedding rather forage availability**.

The status of some of these smaller populations is in question recently but actual flight counts are lacking. The most acute decline is within the Blacklead population within the Hoodoo Recommended Wilderness Area, where the Idaho Department of Fish and Game has documented sharp declines in mountain goat numbers.

Most observations are those incidentally observed during elk surveys. **THUS, NOT A VALID SURVEY!**

The mountain goats between Snow Peak and Black Mountain reside in the Mallard-Larkins primitive area. The most recent survey, in 2017, counted 128 mountain goats in the Black Snow Population Management Unit; however, the eastern portion of the population management unit showed a substantial decline from the previous survey. There are concerns with increasing snowmobile and snow bike access to mountain goat habitat in both the west part of Game Management Unit 9 and the east portion of Game Management Unit 10 in the Black Snow Population Management Unit. **Is there motorized winter recreation where the decline occurred?**

**Lochsa-Selway Population Management Unit**

The Lochsa population varied from a high of 85 mountain goats in 1987 to 48 in 1996, the last year surveyed. Mountain goats are still observed through much of the area at low numbers and may still have similar population levels. **What is this information based upon, as IDFG mountain goat specific flights are not done on a regular basis?**

Timber encroachment on small islands of habitat due to fire suppression has likely impacted mountain goat distribution over the last 60 years. **What is this documentation for this statement and where has this occurred?**

The last full survey of the South Fork and South Main Salmon occurred in 2003 where observers counted only three mountain goats. Most of the habitat in this unit is remote and unroaded. The potential impacts of motorized and non-motorized recreation are minimal. **What is the speculated cause for declines? 42 to 36 between 1982 and 1990 and 3 in 2003, neither if these areas has much, if any, winter recreation?**

**Across the Forest**

Observations of mountain goats from 1956 to 2018 show that 49 percent of observations of mountain goats in the plan area have been documented in Idaho Roadless Rule areas, 46 percent have been observed in designated wilderness, and about 4.2 percent have been observed within the general forest portion, or Management Area 3, of the Nez Perce-Clearwater. **See earlier statement about winter recreation.**

**Included, for your records, is an overview of mountain goat hunting units and permit levels from the early 1972 to present:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **REGION 2 MOUNTAIN GOAT HUNT UNITS AND PERMIT LEVELS** | | | | | | | | |
|  |  |  |  |  |  |  |  |  |
| **YEAR** | **# ORIGINAL HUNT UNITS** | **# HUNT UNITS OPEN** | **# OF PERMITS** | **# HUNIT UNITS** **CLOSED** | **GMU** | **# HUNT UNITS 1971** | **# HUNT UNITS 1972** | **# HUNT UNITS 2019-2020** |
| 1972 | 38 | 26 | 50 | 9 | **9A** | 2 | 2 | 0 |
| 1976 | 38 | 24 | 64 | 13 | **10** | 10 | 3 | 2 |
| 1979 | 38 | 17 | 36 | 20 | **12** | 10 | 8 | 0 |
| 1985 | 38 | 4 | 11 | 33 | **16** | 1 | 1 | 0 |
| 1990 | 38 | 4 | 12 | 33 | **17** | 9 | 8 | 0 |
| 1991-97 | 38 | 3 | 7 | 35 | **19** | 1 | 1 | 0 |
| 1998-2006 | 38 | 2 | 4 | 36 | **20** | 5 | 3 | 0 |
| 2007-2010 | 38 | 1 | 2 | 37 |  | **38** | **26** | **2** |
| 2011-2014 | 38 | 2 | 4 | 36 |  |  |  |  |
| 2015-2018 | 38 | 3\* to 2 | 6\* to 4 | 35 |  |  |  |  |
| 2019-2020 | 38 | 2 | 3 | 36 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **\*2018 Hunt 610-3 dropped** | | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **GMU** | **HUNT UNITS** | **GMU** | **HUNT UNITS** | **GMU** | **HUNT UNITS** | **GMU** | **HUNT UNITS** |  |
| **9A** | 609A-1 | **12** | 612-1 | **17** | 617-1 | **19** | 619 |  |
| **9A** | 609A-2 | **12** | 612-2 | **17** | 617-2 |  |  |  |
|  |  | **12** | 612-3 | **17** | 617-3 | **20** | 620-1 |  |
| **10** | 610-1 | **12** | 612-4 | **17** | 617-4 | **20** | 620-2 |  |
| **10** | 610-2 | **12** | 612-5 | **17** | 617-5 | **20** | 620-3 |  |
| **10** | 610-3 | **12** | 612-6 | **17** | 617-6 | **20** | 620-4 |  |
| **10** | 610-4 | **12** | 612-7 | **17** | 617-7 | **20** | 620-5 |  |
| **10** | 610-5 | **12** | 612-8 | **17** | 617-8 |  |  |  |
| **10** | 610-6 | **12** | 612-9 | **17** | 617-9 |  |  |  |
| **10** | 610-7 | **12** | 612-10 | **17** | 617-10 |  |  |  |
|  |  | **12** | 612 |  |  |  |  |  |
|  |  | **12** | 12 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  | **16** | 616 |  |  |  |  |  |

**Mule Deer**

While whitetail deer are ubiquitous, mule deer in most areas of the Nez Perce-Clearwater occur in limited pockets of suitable habitats, which includes shrubland. Mule deer populations in the plan area are generally stable compared to those in other parts of the state, which exhibit a wide range of variability. Mule deer populations across the region, including in the plan area, appear to be increasing, partly in response to very conservative harvest management. **What data indicates MD are stable?**

Weather, fire, and plant succession have ultimately played a much larger role in mule deer populations than efforts of wildlife managers Liberal seasons played a large part in mule deer population levels.

**Whitetail Deer**

White-tailed deer hunting is economically important in Idaho. Deer hunting, including both white-tailed and mule deer, provided 840,000 hunter days and generated $109 million in retail sales in 2001 (IAFWA, 2002). Approximately 2,000 jobs were tied directly to deer hunting in 2001 and resulted in $1.3 million in state income tax. Forest Service lands in the plan area that are popular for deer hunting comprise substantial portions of Clearwater, Latah, and Idaho Counties. Based on Cooper et al (2002)), the combined economic impact of deer hunting in those three counties alone was in excess of $31 million in 2007.

Whitetail deer populations are generally healthy in most of the Nez Perce-Clearwater but may have declined in Game Management Units 16A, 17, 19, and 20 due to forest succession. In recent years there have been thousands of acres burned by wildfire. **Forest succession is a problem in units 15 and 16 and to some degree 14**.

**Gray Wolf**

Wolves are a factor in declines of elk herds in some parts of the planning area, particularly in the Lolo and Selway Elk Management Zones. **This is interesting, predation was hardly mentioned in the elk section, it was all summer habitat and nutrition.**

**Consequences of Plan Direction**

**Ecosystem Plan Components**

There are three guidelines included in plan direction for the management of multiple use wildlife species. FW-GDL-WLMU-01 recognizes the impact that unauthorized routes have on game species and seeks to minimize these impacts. FW-GDL-WLMU-02 is a guideline that requires new fence installation be designed to reduce impacts on wildlife movements. While the plan does not emphasize active management in winter range, FW-GDL-WLMU-03 is a guideline designed to reduce disturbance during critical time periods of the lifecycle of big game species. **Earlier sections and documentation state winter range is important!**

**Elk**

As elk received much interest from both government agencies and the public, they are emphasized in the plan as a key focus for improving their habitat conditions and populations in the plan area. While the focus was on elk, many of the other multiple use species will also benefit from habitat management for elk. The Nez Perce-Clearwater collaborated extensively on plan components for elk based upon the best available scientific information. **WINTER RANGE HAS TO BE INCLUDED! Focusing solely on summer habitat is very myopic!**

**Conceptual Basis for Management of Elk on the Nez Perce-Clearwater National Forest**

Improve the condition of elk habitats in the plan area base upon increased awareness about the factors that most importantly influence elk populations**. IS THIS A TRUE STATEMENT FOR THE MAJORITY OF ELK HABITAT OVER THE ENTIRE FOREST? ALSO, THIS AWARENESS HAS BEEN PREACHED BY IDFG SINCE THE MID-1960’S, TO NO AVAIL!**

Two concepts, nutrition and habitat use, provide the foundation for managing elk populations, encompassing both hunting and non-hunting periods on the Nez Perce-Clearwater under the proposed plan. Forest plan direction is most logically built on these two concepts incorporating best available science.

The desired condition FW-DC-ELK-01 emphasizes these two concepts as a management framework for elk. Nutrition is defined as the dietary nutrients needed by a lactating female elk to meet its maintenance needs during summer and fall, a period of nutritional stress in response to demands of a calf at heel. Adequate summer-fall nutrition of a lactating female ensures survival of her calf through winter and allows the female to be in sufficient condition after weaning to again produce and recruit a calf the following year, avoiding alternate-year calf production by a female. HAVE LOW PREGNANCY RATES AND ALTERNATE-YEAR CONCEPTIONS BEEN DOCUMENTED ON THE FOREST?

The Nez Perce-Clearwater selected HUC12 for the scale at which to apply these measures in the proposed plan because HUC12’s are commonly used as an unbiased sized area delineated by landscape features and are used by a variety of resource specialists in managing the forest and would be compatible for integration. HUC12’s also meet or exceed the size criteria to meet summer fall use. In comparison, HUC12’s are about twice the size of the elk analysis units used in the 1987 Plans. Rowland et al (2018) provided example applications of nutrition and habitat use evaluations for regional and local landscapes for elk management.

An additional consideration is the desired harvest and hunter opportunity during fall hunting seasons and associated effects on elk distribution and population performance. Past management has addressed this issue through the concept of elk security or habitat security, which has been defined and used in a wide variety of ways, many of which are contradictory and confusing. Importantly, past definitions do not recognize the important role of nutrition and habitat use as foundational to management of elk hunter harvest and hunter opportunity.

Current conditions in the plan area suggest the limiting factor is forage, rather than hiding cover, as cover is abundant in the plan area. **AGREE**

This is not intended to disparage the concept of elk security but its use needs to be updated to reflect contemporary concepts of producing and sustaining a productive and abundant elk population based on nutrition and habitat use. Furthermore, the research cited above suggests these concepts require updating to consider the spatial arrangement of roads, rather than a simplified density estimate without taking into account the interaction of nutrition and roads. The framework emphasizes the distance from roads rather than road density and integrates nutrition and other factors widely known to influence elk habitat use, such as slope and arrangement of seral conditions at a landscape scale, flexible enough to provide what elk need within watersheds.

Goals that underlie hunting management of elk habitat use and nutrition include a public land manger’s desire to:

1)Minimize distributional shifts to private lands.

2)Meet Tribal First Food objectives.

3)Meet hunter harvest objectives or avoid overharvest.

4)Meet hunter opportunity desires. **Currently down nearly 74 thousand hunter days and have been for the past 22 years!**

5)Minimize non-consumptive effects.

6)Meet fall nutritional needs of lactating females and associated habitat use objectives

Habitat use includes nutrition to ensure that there is an elk population to manage for hunting. Isn’t nutritional habitat the goal for all habitats??

Thus, in the plan components for Roadless Rule areas, emphasis is on higher nutrition at a landscape scale under MA2-DC-ELK-01 while maintaining the large areas without motorized access that could be impacted by development of new motorized trails. MA2-DC-ELK-02 and MA2-GDL-ELK-01 emphasize retaining areas of 5000 acres or larger without motorized vehicles consistent with Ranglack et al (2017).

Management Area 3 is the least restrictive management area for habitat alteration to improve elk habitats. Watersheds in Management Area 3 could benefit from increasing high quality nutrition to help alleviate the effects of roads.

FW-DC-ELK-01 and MA3-GDL-ELK-01 are intended to help managers move ecological conditions towards higher habitat use and increasing nutritional resources for elk.

High quality nutritional resources are defined as areas that produce vegetation with greater than or 2.6 kcal/g of dietary digestible energy. It is not likely sufficient to create early seral conditions in areas with a poor nutritional response if the expected outcome is to provide elk forage. Small percentage changes in the amount of high-quality nutritional resources at a landscape scale can have dramatic effects on predicted elk fat. **How is dietary digestible energy measured, who and how frequently is it measured? What happens when a habitat drops below the threshold?**

Preliminary results are very favorable and show that the amount of high-quality forage increases throughout the 50-year timeframe modeled under all alternatives. It takes its largest jump in the first decadal time step. The results suggest about a 26 percent increase in the area of forage that produces greater than 2.58kcal/g of dietary digestible energy over the 50-year timeframe compared to current conditions. This estimate is roughly similar under all alternatives.

Studies on elk from the Clearwater Basin Collaborative Elk Project suggest that an increase from 5 to 20percent of the landscape having more than 2.75 kcals/g of dietary digestible energy can increase percent body fat from about 8 up to 12 percent and increase pregnancy rates for female elk from approximately 40 percent to nearly 100 percent. **Where were 40% pregnancy rates documented?**

These changes in body fat should improve both calf and female elk survival during winter. The largest jump in elk nutritional resources is in Management Area 3, followed by Management Area 2, and then Management Area 1**. Have recent, significant winter mortality in calves and cows been documented?**

Current estimates of body fat measured on captured female elk suggest they are currently below 8percent on herds in the South Fork Clearwater samples, just below 10 percent on North Fork Clearwater elk, just above 9 percent on the Lochsa elk samples, and about 8 percent on the Riggins population samples. Pregnancy rates are between 70 to 95 percent in these herds. Increasing pregnancy rates among female elk would directly increase reproductive performance and elk populations. **ONLY IF NUTRITION IS THE PRIMARY ISSUE.**

According the nutritional response spatial layer, some of the poorest areas for predicted nutritional response are on winter ranges because of thinner soils and drier conditions. Therefore, while winter habitats are important to big game, the plan components do not emphasize treating winter habitats. Rather, the plan emphasizes reducing disturbance in plan component desired condition FW-DC-WLMU-03, which expresses a desire to provide for big game habitats year-round, including during winter. The intent of guideline FW-GDL-WLMU-03 is meant to reduce disturbance during winter.

Therefore, desired condition FW-DC-ELK-01 contains language that would direct management to operate within the framework of the terrestrial vegetation components. Objectives for elk management are nested within desired conditions for ecosystem plan components. Review FW-DC-ELK-10

**Objectives for managing elk habitat are nested within objectives for ecosystem plan components.**

Therefore, objectives for elk management are nested as a percent of treatments to restore the natural range of variability to be directed towards the areas with the highest nutritional responses. Alternative X is the most aggressive in terms of the amount and rate at which desired conditions are achieved, followed by Alternative W then Y. Alternative Z is the least aggressive towards restoration. Therefore, the most aggressive actions towards improving elk forage are in that order as well. **See Section 2.3.2 for specific plan components pertaining to elk.**

**Moose** use forested habitats in the winter and particularly rely upon Pacific yew as winter forage. FW-DC-WLMU-04 emphasizes Pacific yew as a winter food for moose. **WHERE OUTSIDE THE SO FK IS YEW THE PREFERRED WINTER FORAGE**?

**Mountain Goats**

Few plan components are directed towards mountain goats, as most habitats are inaccessible to anthropogenic threats. FW-DC-WLMU-05 and FW-DC-WL-03 would help to increase connectivity for mountain goats. Lack of connectivity from current populations to unoccupied suitable habitats has caused mountain goat habitats to remain unoccupied and is thought to be caused by fire suppression, which creates conditions unfavorable to mountain goat travel at high elevations.

Mountain goats are sensitive to disturbance and tend to leave suitable habitats if disturbed. **PLEASE DOCUMENT THIS IS AND/OR HAS OCCURRED ON THE FOREST** – with best science documentation.

Alternatives for recommended wilderness in the Hoodoo area, the Mallard-Larkin area, Moose Mountain, and Bighorn Weitas would include several mountain goat herds, including some of the largest herds in the plan area. Allowing these areas to be open to motorized over snow travel **could potentia**l**ly** expose mountain goats to this disturbance.

To understand snowmobile use in the plan area, landscape characteristics selected by snowmobilers were modeled spatially to evaluate the overlap of mountain goat habitats and other wildlife habitats with modeled snowmobile preferences (Olson et al., 2017). Modeling was conducted by Lucretia Olson and used parameters similar to those she used in Olson et al (2017). The model was validated by user data and Forest Service recreation staff who have expert knowledge of the use in the plan area. The snowmobile model is a function of terrain, access, canopy cover, and snow depth, which are features that may contribute to the ease of which snowmobilers can use an area.

Preliminary model results suggest low amounts of overlap between snowmobile use and known mountain goat population areas. This makes sense because most mountain goat habitat is too steep for comfortable snowmobile use. However, some areas predicted to have high probability values in the snowmobile model are in proximity to known mountain goat herds, particularly the herd on Blacklead Mountain, **which may** leave them susceptible to access by highly skilled snowmobilers. The model only predicts snowmobiler preferences and does not predict snow bike use, which may have different use patterns than snowmobiles.

**Bighorn Sheep** The bighorn sheep in the plan are provided through plan components for ungulates. FW-DC-WLMU-03 emphasizes that the habitats in the plan area provide for ungulate species that meets their life history requirements in both summer and winter. FW-GDL-WLMU-03 restricts disturbing activities on winter ranges, which will serve to protect these species during this challenging time. Agree and support direction in the plan for management of bighorn sheep habitat and allotments.

**No Action Alternative**

Several species of wildlife used by the public would continue to experience declining habitat conditions due to forest succession and fire suppression. Emphasis for elk would continue to be on treating winter range and providing elk security addressing road density while not directly responding to the best available scientific information indicating that providing adequate summer nutrition usable by elk would increase elk vital rates.

Preliminary modeling results suggest that, under all alternatives, the amount of high-quality forage greater than about 2.6kcal/g of dietary digestible energy would increase by about 26 percent. **When do you expect ‘final’ results?? Again, how is this measured, where, how frequently, etc.?**

In the No Action Alternative, over snow motorized travel is not allowed in recommended wilderness – **IS THIS STATEMENT REALLY NEEDED?**

Mountain goat populations in the Hoodoo recommended wilderness area would not be subject to motorized over snow travel, as it is currently not allowed. In other alternatives, over snow travel would be allowed.

Use of game carts, chainsaws, mechanized travel such as bicycles, and aircraft would continue to be prohibited in recommended wilderness.

**Cumulative Effects**

**Alternative W**

Alternative W reaches desired vegetation conditions faster than the No Action Alternative and slightly slower than Alternative X. Thus, it has a relatively more aggressive schedule for restoring the system back to the desired conditions, which are based upon the natural range of variation. For ungulates, this quicker paced schedule would improve forage resources quicker than the No Action Alternative.

The desired conditions for vegetation do not vary by alternative. However, vegetation management would contribute substantially to forage as well, especially within Management Areas 2 and 3. Under Alternative W, forest conditions would trend towards increased nutrition to meet the needs of many multiple use species. Proactive management through prescribed fire and managed wildland fire would occur more proactively under Alternative W in Idaho Roadless Rule areas, especially within backcountry restoration themed areas.

The amount of recommended wilderness would increase the most under Alternative W. In addition to the Hoodoo, the Mallard-Larkin, and the Selway additions, this alternative would add Bighorn-Weitas, North Lochsa Slope, East Meadow Creek, Moose Mountain, Rapid River, North Fork Spruce-White Sands, Sneakfoot Meadows, Meadow Creek-Upper North Fork, and West Meadow Creek. This amount of recommended wilderness would be the most compared to the other alternatives.

The ability of the forest to pursue active management to achieve desired conditions would be most constrained in this alternative compared to the others because of the high amount of recommended wilderness, which would change many areas that are currently in the backcountry restoration theme into the backcountry recreation theme.

Under this alternative mechanized travel is prohibited in recommended wilderness, as well as game carts.

**Alternative X**

Alternative X reaches desired vegetation conditions the fastest out of all the alternatives and slightly faster than Alternative W. Thus, it has the most aggressive schedule for restoring the system back to the desired conditions, which are based upon the natural range of variation.

Preliminary modeling results suggest that, under this alternative, the amount of high-quality forage greater than about 2.6kcal/g of dietary digestible energy would increase throughout the plan area at the fastest rate. Vegetation management would contribute substantially to forage, especially within Management Areas 2 and 3.

As no areas would be identified as recommended wilderness, this alternative has the least constraints on improving habitat for big game. **I SUPPORT ALTERNATIVES THAT IMPROVE THE MOST WILDLIFE HABITAT, ESPECIALLY THOSE HABITATS THAT HAVE HISTORICALLY PROVIDED THE ICONIC ELK HERDS ON THE FOREST.**

The amount of recommended wilderness would be none under Alternative X, which would reduce the amount of recommended wilderness compared to the No Action Alternative.

The ability of the Nez Perce-Clearwater to pursue active management to achieve desired conditions would be most proactive under this alternative.

The ability of the Nez Perce-Clearwater to pursue active management to achieve desired conditions would be most proactive under this alternative.

**Alternative Y**

Alternative Y would reach desired vegetation conditions faster than Alternative Z and the No Action Alternative but slower than Alternatives W and X. For ungulates, this more moderate paced schedule would improve forage resources quicker than the No Action Alternative but slower than Alternatives W and X. While the pace may be quicker, at the end of five decades, the amount of high-quality forage is slightly less than in other alternatives. **Please quantify these terms.**

Proactive management through prescribed fire and managed wildland fire would be moderate under Alternative Y in Idaho Roadless Rule areas compared to Alternatives W and X. **What exactly does this mean?**

Under Alternative Y, one of the larger mountain goat meta-populations in the Nez Perce-Clearwater and one of two core mountain goat areas within the Blacksnow Population Management Unit would be excluded from recommended wilderness. Mountain goat populations in the Blacksnow Population Management Unit were used as a source of goats to transplant into other portions of the state for 40 years (Idaho Fish and Game, 2019a). This population appeared stable to increasing during times when the transplants were occurring. The Idaho Department of Fish and Game counted these populations in 2017 and found the mountain goat population in the eastern portion of the unit, which would be those in the Blacklead areas of the Hoodoo recommended wilderness area, showed a substantial decline from the previous survey (Idaho Fish and Game, 2019a). In the past, Idaho Department of Fish and Game surveys in this area occurred in the late winter or spring (Idaho Fish and Game, 2019a). There are concerns with increasing snowmobile and snow bike access to mountain goat habitat in the east portion of Game Management Unit 10 in the Black Snow Population Management Unit (Idaho Fish and Game, 2019a). Changing the boundary for these mountain goats could have adverse environmental consequences for this metapopulation of mountain goats.

**PLEASE EXPLAIN STATEMENT RE “CHANGING THE BOUNDARY”**

Under this alternative, mechanized travel is prohibited in recommended wilderness, as well as game carts. The prohibition of mechanized travel, such as bicycles, would have slight benefits to big game because mountain bikes have been documented to displace elk (M. J. Wisdom et al., 2018). Under this alternative, this activity would be prohibited.

NOTE TO SELF: THIS PLAN REMINDS ME OF GRADUATE THESIS’S IN DAYS GONE BY – THE THICKER THE BETTER

**Alternative Z**

Alternative Z would reach desired vegetation conditions at a similar rate to the No Action Alternative but slower than Alternatives W and X. Thus, it has a relatively more relaxed schedule for restoring the system back to the desired conditions, which are based upon the natural range of variation. For ungulates, this more moderate paced schedule would continue to impair forage resources and cause continued declines in elk, deer, and moose populations due to forest succession and lack of forage. **IMO, THIS STATEMENT WILL DEFINITELY LEAD MOST RESIDENTS IN THE CLEARWATER REGION AWAY FROM THIS ALTERNATIVE!**

“The less proactive schedule” **Please quantify**

Alternative Z is second highest alternative for the amount of recommended wilderness compared to the other alternatives. The change in the amount of recommended wilderness would have environmental consequences on mountain goats, furbearers, elk, and other ungulates and predatory big game as described below

Under Alternative Z, more mountain goat populations would be included in recommended wilderness than in all but Alternative W. However, the mountain goats in recommended wilderness under this alternative would still be subject to disturbance from motorized over snow travel.

Under this alternative, mechanized travel is allowed in recommended wilderness, as well as game carts.

**Livestock Grazing**

Direct interaction between livestock and game species are likely to occur. The extent of the effects depends upon the overlap of wildlife habitat and livestock allotments. Allotments are limited in the plan area. Only about 14.8 percent of the Nez Perce-Clearwater is grazed. Allotments occur in the Palouse district and along the western portion of the plan area from near Musselshell Meadows southward. Nearly all the allotment areas are habitat for a variety of multiple use species. For example, elk and whitetail deer occur almost forestwide, except in cliff areas. In contrast, mountain goats rarely occur within allotments. Most of the allotments are grazed by cattle and the plan only has one sheep allotment, which is vacant. Big game species are among those affected the most by grazing. **Recommend eliminating domestic sheep grazing on the forest as well as rules and regulations regarding the use of pack goats in and/or near bighorns sheep habitat.**

**Management Area Allocations.**

The framework of the proposed forest plan and alternatives is that the Nez Perce-Clearwater is managed within three management areas. Management Area 1 is designated areas, such as designated wilderness or designated wild and scenic rivers. Management Area 2 is largely composed of Idaho Roadless Rule areas and will also include research natural areas and suitable wild and scenic rivers. Management Area 3 is the front country and is meant to be managed as general forest.

Management is most restricted within Management Area 1 and the least restrictive under Management Area 3. Management Area 2 is intermediate between these two.

components will help ensure that uses allowed within Idaho Roadless Rule areas continue to provide for multiple use species, such as elk.

**Recreation and Access Management**

The recreation opportunity spectrum establishes the settings under which various recreational activities are permitted or disallowed, especially those that allow or disallow motorized recreation. **Does this include “mechanized”?**

The intention in some of our plan is to connect trails and provide more loop opportunities for motorize trail use in both Management Area 3 and Management Area 2. The plan components for elk habitat and access have struck a balance to allow for these opportunities while conserving the wildlife resources.

Winter recreation opportunity spectrum settings differ from those in summer. The rational being that effect of motorized use over the snow differ from those in the summer because winter recreation does physically alter the land in the form of a road or trail**. I DON’T UNDERSTAND HOW THE LAND IS ALTERED BY A SNOWMOBILE TRAIL!**

The winter recreation opportunity spectrum allows much more liberal use of snowmobiling than summer motorized travel. While the recreation opportunity spectrum technically allows snowmobile use, users tend to gravitate towards areas with fewer trees, smoother ground, less steep slopes, and are influenced by the placement of access points and roads. Motorized over snow travel within winter range for big game could be detrimental to winter survival.

An area may be suitable for motorized use but that does not mean motorized use is allowable everywhere in that setting. Motorized use by wheeled and/or over-snow vehicles is restricted to designated trails, roads, and areas, as shown on the motor vehicle use maps for the Nez Perce-Clearwater. Travel management decisions are separate, project-level decisions that determine the specific areas and routes for motorized recreation consistent with the desired recreation opportunity spectrum, as mapped.

Hiking, mechanized, and motorized recreation has been shown to displace elk from important habitats, sometimes to great distances (M. J. Wisdom et al., 2018). Some of these disturbances are more impactful than other. For example, motorized use by ATV’s evoked the largest distances while cycling was intermediate and hiking and horseback riding had the smallest distances of displacement. It is well established that elk are displaced from habitats by motorized traffic as dozens of studies have shown avoidance behavior and displacement. **There are many factors that determine how wildlife react to human encounters, be it on foot, etc. A ‘one size fits all’ mentality should not be mandated.**

FW-DC-REC-07 is a desired condition that recreation would be designed to minimize environmental impacts. Plan components in the elk section of the draft plan have measures to address motorized routes and are specific to in the management areas. They to apply appropriately to projects that seek to create new motorized trails in Management Area 2 and new motorized roads or trails in Management Area 3. These plan components are adequate to address concerns during projects conducted under the plans.