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**November 5, 2018**

**RE: The Lands Council's and Kettle Range Conservation Group; Joint Objections to the Colville National Forest Revised Land Management Plan**

Objection Reviewing Official,

The Lands Council (TLC) is a 501(c)(3) nonprofit organization dedicated to the preservation and protection of forests, water and wildlife in the Inland Northwest. Since 1984, The Lands Council (TLC) has been a community leader, promoting responsible recreation in wild places inherently valuable to the region.

We appreciate all the hard work and long hours that have gone into developing the 2018 Revised Land Management Plan for the Colville National Forest. It is not our intent to undermine that effort, but work through our objections collaboratively and seek solutions that result in a healthy resilient forest, healthy habitat for wildlife and shared space for human recreation.

Adaptive management of livestock grazing should strive to relocate livestock to historic low elevation meadows that offer rest rotation grazing and defensible space where non lethal predator deterrents can be effectively employed and livestock can be protected. Creating open spaces is better for livestock and better for wildlife. Open space allows livestock to instinctively bunch up, or herd, for defense against predation. Additionally, open meadows create defensible space where range riding and other human presence could be effective in deterring predators and protecting livestock.

## **LIVESTOCK GRAZING**

### **Impacts Caused by Livestock Grazing**

The impacts of livestock grazing on forest vegetation and riparian areas are well documented. Livestock grazing widens stream channels, reduces stream shade, destroys overhanging banks, elevates erosion and consequently increases sedimentation, compacts soils in ways that degrade riparian soil function and reduce

low flows, and exacerbates seasonal water temperature extremes in streams.<sup>1</sup> Livestock grazing has caused significant degradation of salmonid habitats, riparian areas, and water quality and quantity.<sup>2</sup> Suspension of riparian area grazing is the strategy most compatible with re-vegetation and recovery of water quality, riparian areas, and salmonid habitat recovery.<sup>3</sup> There is a very low likelihood that any grazing management system will result in consistent recovery in damaged riparian systems without some significant multi-year period of rest.<sup>4</sup> Most widely used grazing practices are incompatible with the protection and restoration of aquatic ecosystems. Grazing clearly retards recovery in degraded riparian systems.

In the era of the mega fires resulting from climate change and anthropogenic forest change, grazing should be limited or eliminated with the goal of restoring the Forest to historical resilient pre-grazing composition. Short-term livestock grazing can result in reduced fire frequency within an area by reducing herbaceous surface fuel loads and creating denuded areas that can act as firebreaks. However, scientific evidence exists suggesting long term grazing within many western forests contributes to unintended negative

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<sup>1</sup>Platts, W. S. 1991. Livestock grazing. Pages 389-423 in W. R. Meehan, editor. Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society, Special Publication 19, Bethesda, Maryland.

Rhodes, J.J., McCullough, D.A., and F.A. Espinosa. 1994. A coarse screening process for evaluation of the effects of land management activities on salmon spawning and rearing habitat in ESA consultations. Tech. Rep. 94-4. Portland, OR: Columbia River Intertribal Fish Commission. 127 p.

Lee, D., J. Sedell, B.E. Rieman, R. Thuro, and J. Williams. 1997. Broad-scale assessment of aquatic species and habitats. In: An assessment of ecosystem components in the interior Columbia basin and portions of the Klamath and Great Basins. Edited by T.M. Quigley and S.J. Arbelbide. General Technical Report PNW-GTR-405. USDA Forest Service, Pacific Northwest Research Station, Portland, OR. Vol III. p. 183-196.

Belsky, A.J., Matzke, A. & Uselman, S. (1999) survey of livestock influences on stream and riparian ecosystems in the western United States. *Journal of Soil and Water Conservation* 54, 419-431.

Kauffman, J. Boone. 2002. "Lifeblood of the West: Riparian Zones, Biodiversity, and Degradation by Livestock." Pages 175 – 176 in G. Wuerthner and M. Matteson, eds. *Welfare Ranching: The Subsidized Destruction of the American West*. Island Press, Washington, D.C.

<sup>2</sup>Henjum, M.G., Karr, J.R., Bottom, D.L., Perry, D.A., Bednarz, J.C., Wright, S.G., Beckwitt, S.A., and Beckwitt, 1994. Interim Protection for Late Successional Forests, Fisheries, and Watersheds: National Forests East of The Cascade Crest, Oregon and Washington. The Wildlife Soc., Bethesda, Md.

Lee, D., J. Sedell, B.E. Rieman, R. Thuro, and J. Williams. 1997. Broad-scale assessment of aquatic species and habitats. In: An assessment of ecosystem components in the interior Columbia basin and portions of the Klamath and Great Basins. Edited by T.M. Quigley and S.J. Arbelbide. General Technical Report PNW-GTR-405. USDA Forest Service, Pacific Northwest Research Station, Portland, OR. Vol III. p. 183-196.

<sup>3</sup> Platts, W. S. 1991. Livestock grazing. Pages 389-423 in W. R. Meehan, editor. Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society, Special Publication 19, Bethesda, Maryland.

Rhodes, J.J., McCullough, D.A., and F.A. Espinosa. 1994. A coarse screening process for evaluation of the effects of land management activities on salmon spawning and rearing habitat in ESA consultations. Tech. Rep. 94-4. Portland, OR: Columbia River Intertribal Fish Commission. 127 p.

<sup>4</sup>Platts, W. S. 1991. Livestock grazing. Pages 389-423 in W. R. Meehan, editor. Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society, Special Publication 19, Bethesda, Maryland.

Rhodes, J.J., McCullough, D.A., and F.A. Espinosa. 1994. A coarse screening process for evaluation of the effects of land management activities on salmon spawning and rearing habitat in ESA consultations. Tech. Rep. 94-4. Portland, OR: Columbia River Intertribal Fish Commission. 127 p.

Henjum, M.G., Karr, J.R., Bottom, D.L., Perry, D.A., Bednarz, J.C., Wright, S.G., Beckwitt, S.A., and Beckwitt, 1994. Interim Protection for Late Successional Forests, Fisheries, and Watersheds: National Forests East of The Cascade Crest, Oregon and Washington. The Wildlife Soc., Bethesda, Md.

consequences relative to fire and forest health.<sup>5</sup> The mixed conifer forests of Colville National Forest, have undergone substantial structural and compositional change following Euro-American settlement. These post pioneer changes have increased vulnerability to severe fire and susceptibility to insect and disease outbreaks. Historically, as we know, forests in Northeast Washington consisted of widely spaced, fire-tolerant tree species underlain by dense grass. As a result of grazing, these healthy forests have developed into dense stands of fire-sensitive and disease-susceptible species. Livestock consumption of grasses removes competition that would otherwise regulate the development of new tree seedlings. Livestock also remove the herbaceous understory, which historically would have provided fuel for frequent mild surface fires that would normally kill and thin out regenerating trees.<sup>6</sup>

Studies in the Columbia River basin have addressed the impacts and steps to riparian restoration in order to improve fisheries. These are applicable to the Colville National Forest as well:

Forage utilization standards are an ineffective approach to restoration and protection in degraded reaches, wet meadows, seeps, and travel corridors because habitat damage stems from trampling and chiseling of banks and vegetation by livestock as well as the browsing and grazing of vegetation. Elimination of riparian grazing in degraded reaches and watersheds is the most effective approach to restoring riparian systems and realizing rapid habitat improvement in these Forests. Forest management must incorporate objective, quantitative, measurable grazing standards in the Proposed Action, including provision for the suspension or elimination of grazing if existing grazing management is not allowing rapid restoration of riparian areas. Grazing should be suspended within 300 feet of streams in watersheds where daily maximum summer water temperatures in excess of 60° F exist in historically usable spawning and rearing habitat for salmon, until this temperature standard is met, or a statistically significant improving trend ( $p < 0.05$ ) over at least five years is documented through monitoring.<sup>7</sup> Grazing should be suspended within half a tree height from the edge of floodplains, or streams when floodplains are absent, in all reaches or watersheds where bank stability is less than 90%, until bank stability exceeds 90% or a statistically significant improving trend ( $p < 0.05$ ) over at least five years is documented through monitoring.<sup>8</sup> Where the foregoing water temperature and bank stability standards are met, riparian grazing should be tightly controlled and closely monitored. In many areas, riparian area grazing is difficult to control; in these areas it will be necessary to completely remove livestock from watersheds to prevent grazing within floodplains and riparian areas until recovery occurs or standards are met.

Livestock grazing in watersheds that do not meet substrate standards (<20% surface fines in spawning habitat) should also be suspended until the standards are met, or a statistically significant

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<sup>5</sup> Forests and Wildfires: Fixing the Future by Avoiding the Past. (n.d.). Retrieved from <http://www.fao.org/docrep/article/wfc/xii/0829-b3.html>

<sup>6</sup> Belsky, A. J., & Blumenthal, D. M. (1997). Effects of Livestock Grazing on Stand Dynamics and Soils in Upland Forests of the Interior West. Efectos del Pastoreo sobre la Dinamica de Arboles y Suelos en Bosques en el Altiplano del Occidente Interior. *Conservation Biology*, 11(2), 315-327. doi:10.1046/j.1523-1739.1997.95405.x

<sup>7</sup>Rhodes, J.J., McCullough, D.A., and F.A. Espinosa. 1994. A coarse screening process for evaluation of the effects of land management activities on salmon spawning and rearing habitat in ESA consultations. Tech. Rep. 94-4. Portland, OR: Columbia River Intertribal Fish Commission. 127 p.

<sup>8</sup> Ibid

( $p < 0.05$ ) improving trend over the course of five years is documented through monitoring and total sediment delivery is estimated to be less than 20% over natural levels.<sup>9</sup> Grazing should also be suspended in all areas where more than 10% of soils have been compacted where bulk density has been increased by more than 5%.

Livestock should be restricted from access to spawning reaches during and after the spawning season. Livestock can trample redds when they ford streams. If livestock access to these reaches cannot be prevented during the spawning and incubation periods, livestock should be removed from watersheds prior to the onset of the spawning season.

Grazing should be eliminated from, not expanded into environments where it is clearly incompatible with the protection of watersheds, soils, and aquatic resources. Livestock grazing in seasonally saturated meadows with fine-grained, non-cohesive soils and without woody bank vegetation is incompatible with aquatic resource protection and therefore, should be prohibited. Similar vulnerable environments should not be subjected to grazing unless completely fenced and all habitat standards are met.

Livestock grazing should not be allowed to continue until its ecological effects are fully analyzed.<sup>10</sup> Grazing should only be continued or re-initiated after degraded conditions have improved, and in areas where at least 10% of the riparian areas being grazed are fenced as monitoring exclosures. Livestock grazing should be tightly controlled, closely monitored, and only continued when condition and trend in grazed areas is as good as in exclosures. Monitoring is required in affected riparian areas that are grazed and in downstream habitat affected by upstream grazing.

Although lowered forage utilization rates do have some utility in reducing the impacts of livestock on aquatic habitats, they should not be relied upon solely to provide adequate levels of ecosystem protection. The control of forage utilization alone does not adequately address livestock impacts, including bank trampling, soil compaction, sedimentation and restoration of riparian plant assemblages and status.

Livestock exclusion has been shown to increase summer base-flow (Ponce and Lindquist, 1991, Reeves et al., 1991, Rhodes et al., 1994) and is one of the most promising means for increasing/restoring low flows in streams.<sup>11</sup> This will become even more critical because all available information indicates that on-going

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<sup>9</sup> Rhodes, J.J., McCullough, D.A., and F.A. Espinosa. 1994. A coarse screening process for evaluation of the effects of land management activities on salmon spawning and rearing habitat in ESA consultations. Tech. Rep. 94-4. Portland, OR: Columbia River Intertribal Fish Commission. 127 p.

<sup>10</sup> Henjum, M.G., Karr, J.R., Bottom, D.L., Perry, D.A., Bednarz, J.C., Wright, S.G., Beckwitt, S.A., and Beckwitt, 1994. Interim Protection for Late Successional Forests, Fisheries, and Watersheds: National Forests East of The Cascade Crest, Oregon and Washington. The Wildlife Soc., Bethesda, Md

<sup>11</sup> Rhodes, J.J., McCullough, D.A., and F.A. Espinosa. 1994. A coarse screening process for evaluation of the effects of land management activities on salmon spawning and rearing habitat in ESA consultations. Tech. Rep. 94-4. Portland, OR: Columbia River Intertribal Fish Commission. 127 p.

Ponce, V.M. and Lindquist, D.S., 1990. Management of baseflow augmentation: A review. Water Resour. Bull., 26: 259-268.

climate change will decrease low flows and increase their duration in the Northwest.<sup>12</sup> In a regional analysis of climate impacts on streamflows in the Pacific Northwest, Elsner and Hamlet (2009) noted "...warmer temperatures in all previous assessments have led to projections of reduced snowpack, and transformation of sensitive watersheds from being fed by a mix of rain and snow to predominantly rain. Other impacts common to previous studies of hydrological impacts of climate change in the Pacific Northwest include earlier spring peak flow and lower summer flows." Based on the analysis of many years of snowpack data, Mote et al. (2005) concluded, "It is therefore likely that the losses in snowpack observed to date will continue and even accelerate with faster losses in milder climates like the Cascades..." Lower flows are decreasing regionally (Luce and Holden, 2009). Mote et al. (2005) noted: "It is becoming ever clearer that these projected declines in SWE [snow water equivalent], which are already well underway, will have profound consequences for water use in a region already contending with the clash between rising demands and increasing allocations of water for endangered fish and wildlife." Lee et al (2009) noted, "Anticipated future temperature changes in the mountainous U.S. Pacific Northwest will cause reduced spring snow pack, earlier melt, earlier spring peak flow and lower summer flow in transient rain-snow and snowmelt dominant river basins." Clearly, the river basins on these Forests will have low flows reduced by climate change, because they are dominated by runoff from snowmelt.

Reducing livestock grazing will be likely be needed to protect low flows and beneficial uses in the face of climate change, because livestock grazing greatly and inevitably compacts soils in ways that reduce the streamflows (Kauffman et al., 2004). This compaction is inevitable because the pressure from the hoof of a 1,000 pound cow exerts more than five times pressure than a Caterpillar D-9 Tractor, according to the BLM (Cowley, 2002), resulting in significant soil compaction (Kauffman et al., 2004). As Kauffman et al. (2004) noted:

"The potential differences in soil water storage due to differences in soil pore space [caused by soil compaction by cattle] are not trivial. Based upon the results of this study we calculated that ... the surface 10 cm of a single hectare of ex-closed dry meadow would contain 61 000 L more water than an equivalent grazed hectare. ...a hectare of wet meadows with the pore space measured in the ex-closed communities of this study would contain 121 000 L more water than those with the pore space of the grazed wet-meadow communities. Based upon a GIS analysis ... the 30-km riparian zone sampled in this study, there were 145 ha of dry meadows and 64 ha of wet meadows (C. Heider and J. B. Kauffman, unpublished data). Our results suggest that if the entire area was excluded from livestock, the surface 10 cm of soil in the meadows alone (about 60 % of the riparian-zone cover) could potentially store 16.6 X 10<sup>6</sup> L more of water than if the area were grazed by cattle. And, this estimate does not include the entire soil profile. This increase

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<sup>12</sup>Mote, P.W., A.F. Hamlet, M.P. Clark, and D.P.Lettenmaier, 2005. Declining mountain snowpack in western North America. *Bull. Am. Meteorol. Soc.*, doi:10.1175/hb

Elsner, M.M. and A. Hamlet, 1999. Hydrologic climate change scenarios for the Pacific Northwest Columbia River Basin and coastal drainages. Center for Science of the Earth

Luce, C.H., and Z.A. Holden, 2007. Declining annual streamflow distributions in the Pacific Northwest United States, 1948–2006 *Geophys. Res. Letters*, doi:10.1029/2009GL039407, 2009

in soil water likely influences ecosystem productivity, soil temperature, biogeochemistry, and stream flows.”

This clearly demonstrates that grazing elimination, especially in wet meadows, can greatly increase low flows. If only 50% of the additional stored water in soils not compacted by livestock is released to streams over a 160-day low flow period, it equates to a mean increase in flows of more than 21 cfs per day over the period, which equates to *at least* a 20-30 % increase in low flows in the stream in the study.<sup>13</sup>

### **Grazing Suitability and Monitoring**

Grazing is allowed on 745,000 acres (68%) of lands administered by the CNF, consisting predominantly of forested communities. Much of the forested landscape consists of dense conifer stands with canopy covers greater than 60%, in fact 57% of the designated allotment area has canopy coverage greater than 60% providing little to no forage, another 25% of the allotment area has 40-60% canopy coverage.<sup>14</sup> The CNF Revised LMP documents 82% (57%+25%) of grazing allotment area as offering little to no forage for livestock grazing, 57% does not meet suitability criteria. Western hemlock forests account for 28% of allotment communities, these forests do not produce significant livestock forage.<sup>15</sup>

Range capability refers to the potential of an area of land to produce forage. “Range capability guidance suggests that lands incapable of producing 200 lbs./acre/year of forage be removed from consideration from grazing. Because much of the potential forage resource occurs on transitory range in holes in the forest canopy, the team believed that this standard was inappropriately high. In such situations, levels of forage production are unlikely to reach the specified level on an acreage basis because, due to dense tree cover, up to 75% of an acre may produce little forage. A threshold of 50 lbs./acre/year is used instead.” This alteration of threshold is arbitrary and capricious. The only way to deem acreage capable of producing suitable forage is to lower the standard. Much of the acreage deemed suitable for grazing is incapable of producing adequate forage.

Rangeland suitability begins with the total acres that have been found to be capable rangelands, through the process identified above. In assessing suitability, the first reduction in the capable land base involves removing areas with high percentage tree canopy coverage. Your model determining grazing allotments links areas that are capable and/or suitable with areas that not capable and/or not suitable. By your own admission, this determination is connecting areas with forage with rough densely forested terrain with little forage that leads to lost, injured and trapped livestock increasing the likelihood of wildlife predation.

All offered Alternatives provide similar guidance for livestock grazing and management, focusing on balancing livestock grazing with available forage and other needs, how is the balance determined in the

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<sup>13</sup> Kauffman, J.B., Thorpe, A.S., Brookshire, J. and Ellingson, L., 2004. Livestock exclusion and below ground ecosystem responses in riparian meadows of eastern Oregon. *Ecological Applications*: 1671-1679.

<sup>14</sup>United States Forest Service. Colville National Forest Land Management Plan: Final Programmatic Environmental Impact Statement; Volume II. 2018.. P 644.

<sup>15</sup> United States Forest Service. Colville National Forest Land Management Plan: Final Programmatic Environmental Impact Statement; Volume II. 2018.. P 644.

absence of monitoring data? Data needed to determine this balance is listed as either incomplete or unavailable information.<sup>16</sup>

Grasses offer less shading and are more easily affected by grazing, whereas mature trees are beyond the grazers reach and less impacted by grazing. The effects of grazing are more evident where herbaceous vegetation provides the only shade to stream. However, in riparian areas where woody vegetation of accessible height, shrubs, young trees, and woody vines, make up the majority of stream cover, grazing can impact overhanging cover. Vegetation needed for shading also depends on stream size. Grasses are sufficient for cover only on very small streams (1st and 2nd-order streams). Brush, such as willow, is required for larger streams (3rd through 5th-order streams).<sup>17</sup> Cattle often browse woody species when stubble height of palatable herbaceous species falls below approximately 4 inches or when herbaceous forage quality has diminished due to curing. Six to eight inches of herbaceous residual stubble height is needed to protect woody plants, especially during late season grazing. We support the six inch stubble height standard that was in the draft forest plan revision

### **Grazing Intensity**

The length of time grazing is allowed and number of livestock present are variables affecting the reduction of stream side vegetation. The most critical aspect in any grazing plan to protect riparian areas is the length of time cattle have access to a particular stream reach. There is an abundance of research showing the detrimental effects of heavy grazing on plant health, and other research that documents that light to moderate use maintains overall plant health.

### **The FEIS's Grazing Capability Analysis and Determination Are Inadequate**

Neither the FEIS nor the Management Plan discuss or disclose the Forest Service's methodology or rationale for determining the number of capable acres within the planning area for livestock grazing, nor do they provide the data to justify determination. Without detailed explanations of the agency's process for determining grazing capability, the FEIS and Plans do not satisfy NEPA and NFMA.

This factoring and modeling does not provide site specific information regarding suitable and non-suitable grazing lands. An example is Copper Butte, which has thin and mostly rocky soils on its eastern flank but cattle are allowed to use those lands. "Factoring" suitable and capable lands is *simple* math applied to *complex* and mountainous landforms. In other words, factoring is meaningless if livestock are allowed to gain access anywhere they can wander. Without standards and guidelines requiring annual monitoring of the variety of biological eco-zones where grazing DOES occur, there is no basis in your range model to guide allotment management.

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<sup>16</sup>United States Forest Service. Colville National Forest Land Management Plan: Final Programmatic Environmental Impact Statement; Volume II. 2018.. P 651

<sup>17</sup>Platts, W. S. 1991. Livestock grazing. Pages 389-423 in W. R. Meehan, editor. Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society, Special Publication 19, Bethesda, Maryland.

## The FEIS and Management Plan Fail to Address the Presence of Wolves

For Selected Alternative P, it is noted there is nothing in the alternative for wildlife that would affect livestock or allotment management.<sup>18</sup> We disagree. There have been numerous conflicts between wildlife and livestock that have significant impacts on livestock and subsequent significant impacts on wolves, that should alter how allotments are managed. The Forest wide standards & guidelines fail to address the wolf issue. There is no recognition of wolf presence and how it will continue to affect livestock grazing in the Forest. The revised plan fails to establish guidelines related to wolves, including; salt block placement, pasture assignment and emergency response addressing grazing activities on allotments that contain a known active wolf den or rendezvous site.

Wolf/livestock conflict has been abundant on allotments in the CNF, the result of current grazing practices that allow livestock on rugged densely forested terrain ill suited to the practice. Forest management practices should prioritize protection of wildlife over livestock grazing. Grazing should be limited in geographical scope and focused in areas that are open and defensible. Allotments with multiple years of wolf/livestock conflict should be closed to grazing and analyzed to determine if grazing should be a permissible practice in the future.

Management practices must be altered to prioritize wildlife and healthy habitat that supports wildlife on public lands. Unlike the Colville plan, the Final Environmental Impact Statement for the Malheur, Umatilla, and Wallowa-Whitman National Forests Land Management Plan, explicitly states activities within one mile of a known active (during same calendar year that use is documented) wolf den and rendezvous sites should implement appropriate seasonal restrictions based on site specific consideration and potential activity effects, to reduce disturbance to denning wolves and there will be no authorization of salt or other livestock attractants near known active (during same calendar year that use is documented) wolf dens or rendezvous sites to minimize livestock use of these sites. While it does not currently apply to the CNF, domestic sheep grazing shall not be authorized (during same calendar year that use is documented) in an allotment that contains a known active wolf den or rendezvous site unless a herder is with the sheep at all times and retrieves known strays within 24 hours.<sup>19</sup> Grazing management policy in the CNF should reflect these same management practices and incorporate these standards and guidelines. Wolf/livestock conflict has been abundant on allotments in the CNF due to current grazing practices that allow livestock to be grazed on rugged, densely forested terrain ill suited to the practice. Forest management practices should prioritize protection of wildlife over livestock grazing. Grazing should be limited in geographical scope and focused in areas that are open and defensible. Allotments with multiple years of wolf/livestock conflict should be closed to grazing and analyzed to determine if grazing should be a permissible practice in the future.

Under NEPA agencies must “consider ***every significant aspect of the environmental impact*** of a proposed action” in an EIS. *ONDA*, 625 F.3d at 1100 (citing *Vermont Yankee Nuclear Pwr. Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 553 (1978)). This includes studying ***the direct, indirect, and cumulative impacts of the action***, see 40 C.F.R. §§ 1508.7, 1508.8, as well as studying ***“significant new***

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<sup>18</sup> United States Forest Service. Colville National Forest Land Management Plan: Final Programmatic Environmental Impact Statement; Volume II. 2018. P. 664..

<sup>19</sup> USDA. (2018). Final Environmental Impact Statement for the Malheur, Umatilla, and Wallowa-Whitman National Forests Land Management Plans (Volume 4) pp.74-75, 87.

***circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.***” *Id.* § 1502.9(c)(1)(ii). Composition of the ecosystems in the CNF has changed over the years. Most notably, the gray wolf has recolonized the area and the grizzly bear is returning. The Kettle Range is a habitat concentration area and connection corridor for grizzly bear, wolverine, gray wolf, and Canada lynx, black bear, elk, and marten. Upper elevation forests associated with the Kettle Range may provide important stepping-stone habitats that could increase the permeability of the landscapes between the Rocky Mountains and North Cascades [that are] likely important to the long-term conservation of Canada.

Grazing livestock in the CNF has negative impacts on predator populations and is having a current negative effect on the wolf population, this factor is not mentioned in the CNF Revised Land Management Plan. In fact, the only mention of the gray wolf is as a forest inhabitant along with its ESA status. Livestock grazing and its direct, indirect, and cumulative effects on all wildlife in the CNF has not been analyzed. Livestock grazing is the number one contributor to WDFW wolf removal in the State of Washington. Livestock grazing, like the forest itself needs to be adaptively managed.

Maintaining vacant allotments as livestock forage reserves for use during times of drought or when wildfire renders an allotment unusable, displaces wildlife dependent on vacant allotment forage. Native species are likewise impacted by drought, fire, and other atypical environmental conditions, yet these species have few alternative habitats available when their typical habitats are impacted. By contrast, allotment permittees may secure alternative grazing on private lands, or may retain livestock on their base property and supply commercial feed. A permittee is not guaranteed forage in any given season, and the Forest Service is under no obligation to provide compensation when natural events render an allotment unusable. The provision of needed forage to wildlife during these times is necessary to maintain viable populations. Native species must be prioritized, and allotments made vacant for the protection or enhancement of wildlife populations must be permanently closed to grazing.

### **Standards and Guidelines are lacking for wildlife protection**

NFMA requires that the forest planning regulations specify guidelines which “provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.” 16 U.S.C. §1604(g)(3)(B). To meet this statutory requirement, the 1982 Forest Planning Rule requires the Forest Service to manage fish and wildlife habitat in order to maintain viable populations of species in the planning area 36 C.F.R. § 219.19 (1982).

In Chapters 2 & 3, standards and guidelines (S&G) are specified for Forest Direction, Management Area Direction and Plan Direction. In terms of livestock grazing, Wildlife Habitat (WL) is seriously lacking specificity, there is not a single S&G addressing grazing management and its obvious impacts on wildlife. Assignment of McGillivray’s warbler as a “Focal species” (p 59, LMP) to monitor the potential effects of livestock grazing is mentioned, but this bird is often found in dense undergrowth (National Geographic, Birds of North America) which in the western part of the CNF is likely found in inaccessible riparian areas (ie. blocked by logs and other impediments) and areas where livestock damage is less apparent, and rarely found in high elevation dry grass-sedge habitat where grazing impacts are more pronounced. How can habitat effectiveness be measured without specific metrics? Key benchmarks for protecting this warbler are

not provided in Chapter 2 and oddly, timelines for bird nest avoidance does not list this ground nesting warbler but does mention tree nesting species little affected by livestock grazing.

Upland range areas are the last used and often most impacted by livestock grazing, occurring mid-August through October during a time of great weather fluctuation. Evidence of soil displacement, loss of shrub layer and damage to trails is obscene, as is the destructiveness to the ecology of sub-alpine meadows. Where are the S&Gs to rectify the damage that has been done for decades? Where are the S&G to secure upland range areas where livestock concentration is the norm due to the constraints of slope, accessibility, water and vegetation? We are left to believe that the Annual Operating Instruction (AOI) will provide needed guidance guarding against ecological degradation? Allotment Management Plans and AOIs to date, have failed to achieve this resulting in serious degradation of ecological health.

The evidence is written on the ground; on terraced hillside, in denuded riparian areas, throughout shrub and grassland ecosystems disintegrated and disconnected. Grazing impacts are concentrated in areas close to the recreation trails that double as ingress/egress of cattle operations due to ease of accessibility by horses. The damage that results is easily predicted and prevented, yet there are no standards in recreation, range, wildlife or soils that even attempt to address this problem.

During late summer and in drought years, livestock feed primarily on shrubs and sedges, in some instances completely removing plants that provide essential snowshoe hare habitat. Standards and Guidelines in Chapter 2 related to wildlife are lacking substantive direction leaving the public in dark to how the Forest Service can possibly protect habitat that supports endangered Canada lynx. Allotment Management Plans specify herding livestock from one pasture to another – pastures that are often disconnected, blocked by thick and impassible obstructions like logs, boulder fields, steep and cliffy slopes and public highways.

## **Invasive Species**

### Chapter 2 FW-GDL-IS-01. Invasive Species Prevention

The method, timing, and intensity of land use activities should not promote the introduction, establishment, or spread of invasive species. Instruments such as grazing annual operating instructions, special use operating plans, contract clauses, and other specifications, should address site-specific invasive species prevention measures such as vehicle and equipment cleaning, sequencing of activities, and treatment requirements.

Reliance on demonstrably failed AOIs to prevent the spread of noxious weeds is lacking in substantive and quantifiable S&G. Noxious weed spread has increased during the 30 years that have passed since the 1988 Forest Plan was released and since the FEIS Managing Unwanted Vegetation was released. Cattle grazing and motor vehicle access are key vectors for moving noxious weed seed. The Revised LMP is promoting increased motorized access, particularly in some of the most pristine lands on the Forest including Twin Sisters, Jackknife, Owl Mountain, South Huckleberry and Timber Mountain.

Historic record of noxious weed spread, existing forest-wide livestock grazing and proposals to increase off-highway vehicle access into roadless areas is going to increase noxious weed spread.<sup>20</sup> Technologies are

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<sup>20</sup> *Invasive Plant Ecology and Management - MSU Extension Invasive Plants | Montana State University*, [msuinvasiveplants.org/documents/publications/extension\\_publications/Weed%20seed%20dispersal\\_MT201105AG.pdf](https://msuinvasiveplants.org/documents/publications/extension_publications/Weed%20seed%20dispersal_MT201105AG.pdf).

available for managing invasive plants, but acceptable long-term control will only be achieved when integrated weed-management programs are incorporated into rangeland management plans.<sup>21</sup>

## **Soils**

Soils need additional strengthened protections. The standards and guidelines in the new plan are no more likely to protect and restore soils than 1988 Plan, which has not protected soils.

The 1988 Plan states:

P. 4-26, Soil and Water Program: (2) monitoring the effect of the Forest Plan activities on the soil and water resources; (3) restoring damaged soil and water resources;

P 4-27 *“Soils will remain productive except where landings, roads, and skid trail are located. Erosion, compaction, and displacement would be minor due to commonly prescribed erosion control techniques.”*

The revised plan as a desired condition states: *“Erosion is occurring at natural levels or not evident and an adequate level of soil cover is maintained to prevent accelerated erosion.”*<sup>22</sup>

What are the standards and guidelines to attain this? Again, the revised LMP states:

FW-OBJ-SOIL-01. *“Soil Productivity and Function – Within 5 years of plan implementation, annually stabilize, rehabilitate, or restore natural processes that support soil productivity and function on 20 to 30 acres”.*

It took thousands of years for the landscape to develop, it should not take as long to restore it. At the pace of 20-30 acres over 5 years, it will take a century to restore 400-600 acres. The degree of soil erosion associated with livestock grazing is related to the condition of the soil and the accessibility of the soil to livestock, well-drained soils reduce the possibility of compaction.<sup>23</sup> Wet soil is more susceptible to compaction, because wet particles disintegrate more easily. Bare soil is more susceptible to erosion than well-vegetated soil. Intense grazing leads to significantly decreased infiltration rate and significantly increased sediment production on a site with a silty clay surface soil devoid of vegetation.

## **Socio-Economics**

The ROD expressed a basic misunderstanding of the economic contribution of livestock grazing on public lands compared to its costs. Cost which consistently exceeds its benefits. Livestock grazing in our National Forest is a net ecologic and economic loss, the direct monetary expense to the forest exceeds the income. Factoring in the damage to trails, loss of the habitat of wildlife, fish, native plants and spread noxious weeds, economic benefit of livestock grazing is far outweighed by the detriments to social justice and impacts to biological diversity. The FEIS and LMP offer no meaningful standards for livestock grazing. The draft ROD sums up the one-sided view of Colville National Forest allotment (grazing) management:

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<sup>21</sup> Vanelle F. Peterson, Joseph M. "Rangeland Invasive Plant Management." *Rangelands*, vol. 32, no. 1, 2010.

<sup>22</sup> *Colville National Forest Land Management Plan*. United States Department of Agriculture, Accessed Sept. 2018. P 31.

<sup>23</sup> Platts, W. S. 1991. Livestock grazing. Pages 389-423 in W. R. Meehan, editor. Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society, Special Publication 19, Bethesda, Maryland.

*“Livestock grazing is another important part of the economy in northeast Washington.”*

The evidence<sup>24</sup> proves otherwise:

Washington State generates Gross Business Revenues (GBR) of \$735.4 Billion. In 2015, Ranching generated \$1.04 Billion revenue in Washington. Cattle ranching was 0.14% of Washington’s GBR. That is \$1 of each \$707 of revenue.

- Wildlife-associated expenditures in Washington are \$4.7 Billion. Wildlife recreation is 0.64% of GBR, or \$1 of each \$156 of revenue.
- Washington has 215,000 firms that produce 3.1 Million jobs. The payroll is \$176.9 billion.
- Beef cattle ranching has 250 firms producing 628 jobs. Ranchers receive \$16.8 Million in wages. Beef cattle ranching provides 0.02% of jobs, or 1 out of 4,900 jobs, and 0.01% of the payroll, or \$1 of each \$10,530.
- Wildlife supports 85,000 jobs, with \$3 Billion in wages.(3) § Wildlife provides 2.7% of jobs, and 1.7% of the payroll.
- Washington collects \$12.7 Billion in Sales and B&O. (6) In the same line code categories. Beef cattle ranching provides \$1 of each \$117,400 taxable dollars.(5)
- Beef cattle ranching pays \$151,000 in Sales and B&O taxes.
- Cattle ranching pays \$1 of taxes for each \$84,000 paid in taxes by other businesses (0.0012%).
- Wildlife pays \$607.8 Million in state and local taxes, about 4.8% of the \$12.7 Billion.(3)
- Quad-counties (Ferry, Okanogan, Pend Oreille, Stevens)(13, 14) Animal Production wages are \$3.4 Million (0.3%)
- Animal Production has 131 jobs (0.4%).

Conclusion:

- Beef cattle ranching does not contribute significantly to Washington jobs, wages, or taxes, to benefit the general citizens.
- Beef cattle ranching is not a major part of the economy of northeastern counties.

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<sup>24</sup> McCoy, Robert. Is Beef Cattle Ranching a Significant Economic Driver in Washington State? Accessed Apr. 2017.

## **Grazing impacts on Recreation**

Livestock graze throughout the CNF but nowhere does their environmental impact affect public resources more than recreational fishing, hunting and non-motorized trail use. Allotments overlap with recreational trails used by hikers, backpackers, mountain bikers and motorized recreationists. The overlap is felt by all whose recreational pursuits take them into the CNF. Approximately 300 miles of the Pacific Northwest Scenic Trail (PNT) traverses the CNF, with some of the most picturesque scenery along the Kettle Crest Section of the trail. During the summer hikers on the PNT encounter livestock, feces, dust-choke from cattle churn to trails, contaminated water and confusing braided trails, resulting in hiker disorientation and frustration. Trail users accustomed to high quality air, water and recreation experiences do not return to use trails in this condition hurting the rural tourist economy. The FEIS, draft ROD and LMP fail to fairly discuss the most pressing public concerns about livestock grazing impacts to recreation users in violation of NFMA and NEPA.

The existing grazing permits in the Kettle Crest, particularly, Bracken, Jungle Hill, Copper-Mires, Lambert and St. Peter Creek seriously degrade recreation resources and have for decades despite public demands that action be taken by the Forest Service to mitigate degradation of trail treads, water sources and the wilderness characteristics of the Kettle Crest and the Pacific Northwest National Scenic Trail.

In the Boulder Complex allotment management plan NEPA, the CNF said it would address recreation resource damage, particularly braided trails caused by cattle grazing on an as-needed basis. This has not occurred and problems continue to persist resulting in cumulative degradation of ecological and recreation resources despite what *should have been* annual monitoring reporting identifying these as problem areas.

The Forest Service Handbook (FSH) 2209.13, part 16.24 and 40 CFR 1505.2(b) mandate an environmentally corrective action be taken including precluding livestock herding that drives livestock to the apex of the Kettle River Mountains – despite easily workable alternative husbandry strategies. The land area in question is small by comparison to the allotments themselves, but the damage is overwhelmingly more degrading to multiple resource values – particularly alpine meadow vegetation, springs and recreation infrastructure. . The environmentally preferable strategy should cause the least damage to the biological and physical environment and which best protects, preserves, and enhances historical, cultural and natural resources.

The FEIS/ROD/LMP fail to protect recreation infrastructure, sensitive plants and water resources from grazing abuses. The LMP sets weaker Desired Condition (DC) definitions for recreation. The absence of standards and objectives to achieve DCs are absent. The LMP is the guiding document governing all CNF project activities and it must establish standards, objectives and guideline for protecting and enhancing recreation resources. Current standards and guidelines are inadequate:

*MA-GDL-KCRA-01. Permitted Grazing*

*Braided trails resulting from permitted grazing that are located near National Forest System trails should be restored or blocked. Rock cairns or signs should be installed in areas with braided trails to reinforce the designated trail route.*

A rock cairn and sign guideline shifts responsibility from the permittee to the Forest Service for signage, and worse to the public land user that must find his way in a degraded trail system. Furthermore, it does little to mitigate the diminished experience caused by livestock.

*MA-DC-KCRA-04. Ecological Processes -- Native species and native plant communities are the desired dominant vegetation throughout the recreation area. Little evidence of human impacts on native vegetation exists outside of high use areas, such as campsites, within the semi-primitive non-motorized and semi-primitive motorized ROS classes.*

Grazing permits can be changed pursuant the Forest Service Handbook (FSH) 2209.13 part 16.24 which references Code of Federal Regulations (CFR) chapter 36, part 222.4(a)(1) and states “The Chief, Forest Service is authorized to cancel, modify, or suspend grazing and livestock use permits in whole or in part as follows: Cancel permits where lands grazed under the permit are to be devoted to another public purpose including disposal.”

In accordance with Forest Service policy (R6/FSH 2209.13 Ch. 10 Sec. 13.2, 16.1), the Agency can prioritize actions it takes and modify range allotments. Recreation is an economic driver for our community, yet is overlooked in the Revised LMP. The Pacific Northwest NST has the potential to far outpace economic activity in the Forest compared to income derived from livestock allotment management.

### **FEIS Fails to Analyze a No Grazing Alternative**

The Forest must consider a no-grazing alternative, as well as reduced grazing alternatives. The DEIS fails to do so, specifying under each alternative all allotments will continue to be available to grazing under the Revised Plan.

The No Action Alternative merely maintains the existing grazing program. The FEIS fails to acknowledge some Allotment Management Plans have not been updated in over 40 years. failing to address temporal change.

### **Requested Relief:**

- Return to range capability guidelines that remove lands incapable of producing 200 lbs./acre/year of forage from grazing.
- Return to the 6 inch stubble height forage management parameter in the Draft Forest Plan.
- Set an adhered to schedule of forage monitoring and posting results with public access.
- Each allotment should be evaluated for suitable forage and results posted for public access.
- Modify Allotment Management Plans and Allotment Operating Instructions, and put into place Forest Wide Standards and Guidelines for the following.
  - Livestock grazing should only be permitted on acreage considered capable/suitable.

- Livestock grazing should only be permitted in open defensible spaces, failure to limit grazing to these spaces puts livestock and wildlife in harms way.
- Livestock will not be released or managed in areas within one mile of a known active wolf site, den or rendezvous, wildlife management should implement appropriate seasonal restrictions based on site specific consideration and potential activity effects, to reduce disturbance to wolves and protect livestock.
- Do not authorize turnout or grazing of sick or injured livestock.
- Remove sick and injured livestock and remove carcasses so they do not become predator attractants.
- Do not authorize salt or other livestock attractants near a known active wolf den or rendezvous site.
- Do not authorize turnout of livestock in an area of known (during the same calendar year that use is documented) wolf den or rendezvous site. Alternative grazing site away from known wolf areas should be offered when possible.
- Remove livestock from grazing allotments when conflict with wolves or other wildlife occurs.
- Require a 24 hour human presence on an allotment following documented conflict with wolves or other wildlife to protect livestock and public trust wildlife
- Establish grazing guidelines and standards to protect native wildlife – including gray wolf, native fish and plants;
- Establish guidelines and standards that suspend grazing authorization in upland meadows and other high concentration grazing areas where soil damage, loss of ground cover including native grasses & shrubs exceeds 85% of historic range of variability (including pre-grazing of domestic livestock);
- Modify Allotment boundaries to close the Kettle Crest above 5,000' to all permitted cattle & sheep grazing to protect the Pacific Northwest National Scenic Trail, sensitive plants, wildlife and water sources;
- Ranger permittees must repair damage their livestock do to recreation trails and water sources.
- To the extent feasible, natural materials will be used to prevent cattle from grazing within the historic high water mark along fish bearing streams.

We look forward to resolving our Objection issues during the Resolution period.

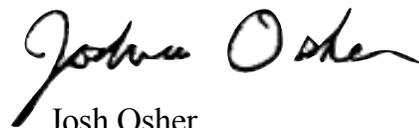
Sincerely,



Mike Petersen  
Executive Director  
The Lands Council



Tim Coleman  
Executive Director  
Kettle Range Conservation Group



Josh Osher  
Montana Director  
Public Policy Director  
Western Watersheds Project