Greater Hells Canyon Council
PO Box 2768
La Grande, OR 97850

January 15, 2019

Via: https://cara.ecosystem-management.org/Public//CommentInput?Project=41350

To: District Ranger Brandon Houck (Heppner District) &
District Ranger Paula Guenther (North Fork John Day District),
Umatilla National Forest

Re: Ellis Integrated Vegetation Management Project Proposed Action

Dear Rangers Houck and Guenther,

I am writing on behalf of the Greater Hells Canyon Council (GHCC) to provide comments on the proposed action for the Ellis Integrated Vegetation Management Project (Ellis project).

As you are aware, GHCC is a non-profit conservation organization based in La Grande. Our mission is to protect and restore the inspiring wildlands, pure waters, unique habitats and biodiversity of the Hells Canyon-Wallowa and Blue Mountain Ecosystems through advocacy, education and collaboration, advancing science-based policy and protective land management. GHCC actively participates in Forest Service proceedings and decisions concerning the management of public land—and is an interested public for timber sales—within the Umatilla National Forest.

The Proposed Action

The area being evaluated as part of the Ellis project consists of approximately 114,834 acres. The proposed action would treat up to 110,208 acres within the project boundary. This planning area is approximately 15 miles southeast of Heppner and 7 miles west of Ukiah, Oregon in Morrow, Umatilla, and Grant Counties. Private lands account for approximately 4,626 acres within the project boundary.

The scoping materials propose a variety of activities including:

- Logging in dry, moist, and cold forest types including regeneration logging (e.g.) clearcutting
- Small diameter thinning by hand and/ or heavy equipment
- Firewood, post, and pole cutting and removal
- Aspen and meadow restoration activities
- Shrub-steppe restoration /juniper removal
- Closing or seasonally closing 30 to 100 miles of road for elk security
- Reducing livestock damage to resources by through fencing and water development

- Stream enhancement and wood placement
- Scenic and recreation and campground activities
- Fuel reduction activities including:
    - Ember reduction treatments including logging on 56,960 acres
    - Low-intensity zone treatments including logging on 8,960 acres
    - Activity-generated fuel treatments
- Landscape fire on 87,670 acres
- Roadside logging treatments on 283 miles of road
- New temporary road construction of unspecified mileage.

Comments on the Proposed Action

In general, we support vegetation management projects in forests that would benefit ecologically from management activities; that reduce overall road density by returning expensive and deteriorating forest roads to the wild; and include components to improve watershed conditions and forest resiliency. Therefore, when reviewing projects that such as the Ellis project, GHCC carefully evaluates the proposed action against the following criteria:

- Fuel reduction thinning should be applied only in ecologically-appropriate dry ponderosa pine and pine intermixed with Douglas fir plant association group forests. This is the only fire-regime where fire suppression has potentially outlasted the range of the fire return interval and therefore stand structure may be outside of a historical condition. These projects should be ecologically constrained by elevation and by site-based evidence of non-lethal surface fire on a short return interval.

- Focus on previously-logged sites. Forests that have not experienced the same logging and road-building regime as other federal lands are relatively rare and have high conservation value. Restoration using fire alone is generally appropriate in these stands.

- A compelling ecological need that is clearly identifiable and warrants the proposed action. Returning stands to the Historical Range of Variability (HRV) alone should not be used as a justification for landscape-scale commercial thinning.

- Protect all trees with old growth characteristics regardless of their diameter or species. Old growth characteristics include thick bark, colored bark, asymmetrical growth, large braches, and dead tops. These old trees will generally be the some of the most fire resilient trees on the landscape.

- Protect all large trees. All trees 21 inches DBH and larger of all species should be retained. These large trees will generally be the some of the most fire resilient trees on the landscape.

- Holistic landscape management, with an awareness of effect of fuels reduction and other vegetation management activities on wildlife species, non-native species, soil and soil processes, and insect and disease risks.

- Utilize existing roads for removing and hauling wood products. Eliminate unneeded roads. No construction of new temporary roads.

- Protect all Inventoried Roadless Areas and Potential Wilderness Areas as identified in the Blue Mountains Forest Plan Revision process from commercial logging and mechanical activities.

- Maintain wildlife permeability throughout the project area. Movement to and from large core habitat areas should be consciously planned for. All roadless areas such as inventoried roadless areas, un-inventoried roadless areas and any areas with potential wilderness quality should be protected.

Preliminary review of the proposed action shows that some aspects of the project would potentially be aligned with the above criteria. In particular, we appreciate and support efforts to improve hydrology of wet meadows, implement prescribed burning at a landscape level, and improve habitat for wildlife.

However, we have significant concerns and questions that we hope will be addressed as this project moves forward.

Notably, the proposed action would authorize intensive logging over the vast majority of this very large project area. The forests that would remain after logging would be quite sparse, according to the targeted basal areas, and would include regeneration cuts (e.g. clearcuts). This level of heavy logging and the extent of its impacts raise a number of concerns including negative impacts to canopy cover, wildlife habitat, water quality, and carbon sequestration. Timber production should not come at the expense of the public forest.

We understand that the Purpose and Need statement for this project identifies needs to "aid in protecting values at risk; promote the health and safety of public and firefighters; and contribute to social, cultural, and economic needs." However, these needs could be effectively achieved through *limited* vegetation treatments on *specific* and *strategic* locations on the landscape to assist fire managers in the event of a wildfire, rather than widespread and heavy logging across more than one hundred thousand acres.

For example, according to the National Fire Protection Association, "Experiments, models and post-fire studies have shown homes ignite due to the condition of the home and everything around it, up to 200' from the foundation. This is called the Home Ignition Zone (HIZ)."
https://www.nfpa.org/Public-Education/By-topic/Wildfire/Preparing-homes-for-wildfire

Importantly, recent research increasingly shows that Oregon's forests are incredibly important for carbon sequestration, and that logging contributes more to Oregon's carbon emissions than forest fires. Please see the following articles for more information.
https://www.hcn.org/issues/50.11/climate-change-timber-is-oregons-biggest-carbon-polluter
https://www.pnas.org/content/115/14/3663
https://static1.squarespace.com/static/59c554e0f09ca40655ea6eb0/t/59dd4984a8b2b090a38f07a1/1507674513035/2017-OGWC-Legislative-Report.pdf

We strongly encourage the Forest Service to take a step back and re-think this initial approach to the Ellis project. We think that most or all of the "purpose and need" for the project can be met without the extensive and intensive logging being proposed.

Additionally, please seriously consider the following specific requests for the NEPA analysis of the Ellis project.

1. **The Forest Service must consider a reasonable range of alternatives to the proposed action**

The National Environmental Policy Act (NEPA) requires that federal agencies provide a detailed evaluation of alternatives to the proposed action in every NEPA document. 42 U.S.C. § 4332; 40 C.F.R. § 1502.14(a). This discussion of alternatives is essential to NEPA's statutory scheme and underlying purpose. *See, e.g.*, *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228 (9th Cir. 1988), cited in *Alaska Wilderness Recreation & Tourism Ass'n v. Morrison*, 67 F.3d 723, 729 (9th Cir. 1995). Indeed, NEPA's implementing regulations recognize that the consideration of alternatives is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. Therefore, the Forest Service must "[r]igorously explore and objectively evaluate all reasonable alternatives" in order "to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of [the agency's] actions upon the quality of the human environment." 40 C.F.R. §§ 1502.14(a), 1500.2(f).

In order to meet the NEPA requirement to consider a reasonable range of alternatives, we ask that the Forest Service develop an alternative to the proposed action that is compliant with all applicable laws and regulations and responds to each of the issues raised in this letter.

2. **The Forest Service must consider the best available science and give a hard look at the environmental consequences of the decision**

The Forest Service is required to consider best available scientific information. 36 C.F.R. § 219.3. It must also take a hard look at the environmental consequences of the decision. NEPA's hard look at environmental consequences must be based on "accurate scientific information" of "high quality." 40 C.F.R. § 1500.1(b). Essentially, NEPA "ensures that the agency, in reaching its decision, will have available and will carefully consider detailed information concerning significant environmental impacts." *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 349. The Data Quality Act expands on this obligation, requiring that influential scientific information use "best available science and supporting studies conducted in accordance with sound and objective scientific practices." Treasury and General Government Appropriations Act for Fiscal Year 2001, Pub.L. No. 106-554, § 515.

   a. <u>The Forest Service should use the distance banding approach when determining impacts to elk</u>

Thomas, et al. (1988), developed a Habitat Effectiveness Index (HEI) model for estimating elk habitat effectiveness on the landscape. This HEI was incorporated into the current forest plans for the Ochoco, Umatilla and Wallowa-Whitman National Forests using seasonal restrictions, cover/forage requirements and road density standards and guidelines. There are, however, more current methods to evaluate project impacts on elk habitat and its effectiveness.

For example, recent scientific information highlights the importance of distance from open motor vehicle routes (Rowland et al. 2000; Rowland et al. 2005). As Rowland et al (2005) report:

> *A plethora of studies have demonstrated an increasing frequency of elk occurrence or indices of elk use, such as pellet groups, at greater distances from open roads (defined here as any road where motorized vehicles are allowed). This response varies in relation to traffic rates (Wisdom 1998, Johnson et al. 2000, Ager et al. 2003), the extent of forest canopy cover adjacent to roads (Perry and Overly 1977, Lyon 1979, Wisdom 1998, Wisdom et al. 2004b), topography (Perry and Overly 1977, Edge and Marcum 1991), and type of road (e.g., improved versus primitive; Perry and Overly 1977, Lyon 1979, Witmer and deCalesta 1985, Marcum and Edge 1991, Rowland et al. 2000, Lyon and Christensen 2002, Benkobi et al. 2004), which also correlates with traffic rates*

Not only does the more recent scientific information identify open motor vehicle routes and the resulting impacts on the availability of forage as key determinates of habitat suitability, it also suggests a distance-band approach be used to address the impacts in addition to road densities. A method to evaluate effects of roads on elk using a distance-band approach has been suggested both by Roloff (1998) and by Rowland et al. (2000), as described above. Based on radiolocations of elk at the Starkey Experimental Research Station, Rowland et al. (2000) found no relation between number of elk locations and habitat effectiveness based on open road densities. By contrast, the authors found a strong, linear increase in selection ratios of elk as distance to roads increased. Specifically, the benefits of closing roads in order to create a spatial separation between elk habitat and roads include:

- Decreased energy expenditure by elk, a result of less frequent disturbance by motorized vehicles, with potential improvements in animal performance.

- Increases in total amount of effective habitat for elk in the area affected by the closures.

- Increased hunting opportunities on public lands, when roads are closed on public lands adjacent to comparatively less-roaded private lands, thereby enticing elk to remain on public lands rather than moving to private lands where hunting may not be allowed or is prohibitively expensive

- Decreased damage to crops and haystacks from elk on private lands, due to decreased disturbance from traffic on public land, which in turn causes elk to remain on public land longer during the fall and winter seasons.

- Improvements in diet quality when elk are able to forage undisturbed in areas previously avoided due to excessive motorized traffic; these changes may translate into improvements in animal fitness and population performance.

- Increased hunter satisfaction from the opportunity to hunt in a roadless area or the use of all-terrain vehicles on closed roads or other "off-highway" sites.

- Decreased vulnerability of elk during hunting seasons, due to fewer hunters willing to hunt without a vehicle or able to access the area.

We request that the distance band approach be used for the Ellis project analysis. Elk have great cultural and economic significance to local communities, First Nations people, and the Nation. Impacts on elk from project activities warrant in depth analysis and the use of the best available science.

b. <u>The Forest Service must consider a broad array of impacts related to forest roads in its NEPA analysis</u>

National Forests provide a range of significant environmental and societal benefits, including clean air and water, habitat for myriad wildlife species, and outdoor recreation opportunities for millions of visitors and local residents each year. See 66 Fed. Reg. 3244, 3245-47 (Jan. 12, 2001) (Preamble to Roadless Area Conservation Rule describing key ecosystem and other services of roadless National Forest lands). The Forest Service's extensive and decaying road system, however, poses a growing liability to the future ability of the National Forests to provide critical environmental, ecosystem, and recreation services. Collectively, the National Forest System contains over 370,000 miles of roads (not even counting the tens of thousands of additional miles of unclassified, non-system, temporary, and user-created roads). That is nearly eight times the length of the entire U.S. Interstate Highway System. The National Forest road system is primarily a byproduct of the big timber era. The system is often convoluted, unmanageable, and ineffective at meeting 21st century transportation needs. Much of the system is in serious disrepair: as of the end of Fiscal Year 2014, the National Forest road system had a 2.9 billion dollar maintenance backlog. USDA, Forest Service, National Forest System Statistics 2014.

Well-sited and maintained roads provide important services to society. But the adverse ecological and environmental impacts associated with the Forest Service's massive and deteriorating road system are well documented. Those adverse impacts are long-term, occur at multiple scales, and often extend far beyond the actual "footprint" of the road. A 2014 literature review from The Wilderness Society surveys the extensive and best available scientific literature—including the Forest Service's General Technical Report synthesizing the scientific information on forest roads (Gucinski 2001)—on a wide range of road-related impacts to ecosystem processes and integrity on National Forest lands. See The Wilderness Society, Transportation Infrastructure and Access on National Forests and Grasslands: A Literature Review (May 2014).

We request that the forthcoming environmental analysis take a hard look at the impacts to soils, wildlife, aquatic and other resources from system and non-system roads.

3. The forthcoming environmental analysis must analyze all reasonably foreseeable direct, indirect environmental impacts

NEPA requires full analysis and disclosure of all foreseeable direct and indirect environmental impacts, and a description of the location and activities to be undertaken. 40 C.F.R. § 1508.8. Direct effects are those caused by the action that occur at the same time and place. 40 C.F.R. § 1508.8(a). Indirect effects are those caused by the action that are later in time but are still reasonably foreseeable. *Id.* § 1508.8(b). These include growth-inducing effects, i.e. increased demand and other effects related to induced changes in land use, population density, and related effects on air and water and other natural systems. *Id.*

The forthcoming NEPA analysis must analyze the following direct and indirect environmental impacts <u>at the site-specific level</u>.

a. <u>Impacts to soil conditions</u>

Logging activities have significant direct and indirect impacts on the surrounding land and soils. Soil conditions strongly influence long-term forest productivity, the composition and condition of vegetation, rates of vegetative recovery after disturbance, sediment flux, and the quantity, timing, and quality of water produced by major watersheds, which in turn affect aquatic population and habitats. It is well established that soil compaction causes long-term losses in soil productivity and is a major soil productivity problem on public lands that have been subjected to logging and other high impact uses (Beschta et al., 2004).[1] Soil compaction reduces the ability for plant roots to develop successfully and access subsoil moisture and nutrients, thus increasing stress on the plant and lowering its chances of survival.

The Ninth Circuit has held that analysis of effects of logging activities on soil conditions based on assumptions is insufficient. *Ecology Center, Inc. v. Austin*, 430 F. 3d 1057, 1069 (9th Cir. 2005). In *Ecology Center,* the plaintiffs raised concerns regarding the impact of the proposed logging activities on soil conditions and questioned the reliability of the Service's soil quality analysis claiming that the Forest Service's soil quality analysis was inadequate because it employed an unreliable method for determining the percentage of detrimental soil conditions in the project area. The agency had estimated soil conditions on the basis of maps, samples from throughout the Forest, aerial reconnaissance, and computer modeling, but did not verify those estimates by directly observing soil conditions in the project area. *Id.*

In this case, the Forest Service must analyze all direct and indirect impacts to soil based on <u>field verified soil surveys</u> within the project area.

b. <u>Impacts to sensitive, MIS, and threatened and endangered species</u>

Monitoring data for the presence of threatened and endangered species (TES) within the project area must be gathered prior to environmental analysis and incorporated into that process. The Forest Service must additionally demonstrate that project level surveys have been conducted and current population data gathered for forest plan Management Indicator Species (MIS).

In some instances, a habitat model may be used as a proxy to determine MIS viability in lieu of surveys. *Inland Empire Pub. Lands Council v. United States Forest Serv.,* 88 F.3d 754, 760 n.6 (9th Cir. 1996). However, where the Forest Service's "methodology does not reasonably ensure viable

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[1] Beschta, R.L., J.J. Rhodes, J.B. Kauffman, R.E. Gresswell, G.W. Minshall, J.R. Karr, D.A. Perry, E.R. Hauer, and C.A. Frissell. 2004. Postfire management on forested public lands of the western USA. Conservation Biology 18: 957-967.

populations of the species at issue," using habitat evaluation as a proxy for monitoring population trends can be deemed arbitrary and capricious. See *Idaho Sporting Congress, Inc. v. Rittenhouse*, 305 F.3d 957, 972 (9th Cir. 2002). In the absence of an adequate evaluation of the project's impacts on fish and wildlife species, the public is unable to verify whether the Forest Service can reasonably ensure species diversity and viability will be maintained and all legal obligations under the Endangered Species Act and NFMA will be met.

In the pending NEPA analysis, please disclose what project level surveys have been conducted and MIS population data gathered in order to analyze impacts on species diversity viability.

c. Impacts to sensitive plant, lichen, bryophyte and fungal species

The species rich forests of the Blue Mountains contains many sensitive plants, lichen, bryophytes and fungi—some that have yet to be discovered. ***We request that new botanical, moss, bryophyte, and fungi surveys are completed for every unit and that the results of these surveys are disclosed in the pending environmental analysis.***

d. Impacts to wildlife and wildlife connectivity

One of GHCC's top concerns is the impact of agency management activities on wildlife connectivity. For many of our native wildlife species, survival depends on movement – whether it be day-to-day movements, seasonal migration, gene flow, dispersal of offspring to new homes, recolonizing an area after a local extirpation, or the shift of a species' geographic range in response to changing climate conditions. For most animals and plants, all of these types of movement require a well-connected natural landscape. See Western Governors' Association's, Wildlife Corridors Initiative (June 2008 report), p.2.[2] There is abundant scientific evidence that loss of habitat connectivity has profound negative impacts on fish, wildlife and plant populations. *Id.* at 3 (*citing* Wilcove et al. 1998, Crooks and Sanjayan 2006). Alarmingly, habitat loss and fragmentation is a cause of decline for about 83-percent of U.S. species. *Id.* at 4 (*citing* NatureServe and TNC 2000). As climate change accelerates and increases, protecting habitat connectivity is widely recognized as one of the best adaptation measures managers can take. This vital role that habitat connectivity plays in ensuring long-term species' viability and the disastrous effects of habitat fragmentation has inspired a growing call to action to address these issues through big-picture collaborative efforts. A primary example is the Western Governors' Association's (WGA) recent adoption of Policy Resolution 07-01 (adopted February 27, 2007), Protecting Wildlife Migration Corridors and Crucial Habitat in the West and preparation of the Wildlife Corridors Initiative (June 2008 report).

We appreciate that the Forest Service has identified "improve wildlife habitat" as one of the "purposes" for the proposed action of this project. We also appreciate that the proposed action would work towards increasing wildlife habitat variability and improving the distribution of elk. However, we strongly encourage the Forest Service to strengthen the proposed action to implement strong, pro-active measures to protect, maintain, and enhance wildlife connectivity for the wide variety of wildlife species native to this part of the Blue Mountains.

[2] https://www.nature.nps.gov/biology/migratoryspecies/documents/WGAWildlifeCorridorsInitiative.pdf

In the pending environmental analysis, we request that the Forest Service take a hard look at wildlife connectivity and permeability by analyzing wildlife movement throughout the project area and alter the proposed action to best accommodate wildlife needs.

Connectivity needs to be considered for a wide variety of organisms, ranging from those extremely limited by mobility to big game. Movement to and from large core habitat areas should be consciously planned for. All roadless areas, even areas under 5000 acres, should be protected. The functionality of riparian areas as wildlife corridors should be considered. While not all species would be covered by this approach, riparian areas are likely natural wildlife corridors where extra-large buffers or some other approach would help plan for day-to-day wildlife movement and dispersal needs.

The pending environmental analysis should also include a discussion of how this project may directly, indirectly, or cumulatively diminish habitat connectivity and contribute to further habitat fragmentation at the site-specific level. Failing to discuss this critical issue in the analysis will strongly suggest that the Forest Service failed to take the requisite 'hard look' at the environmental consequences of its actions, as required under NEPA.

e. Impacts to snag habitat

Snags are critically important for fish and wildlife habitat (many life functions), carbon storage, soil building, slope stability, and capture-store-release of water, nutrients, and sediment. At least one fourth of all bird species in western forests (McClelland et al. 1979)[3] and perhaps even as much as 45 percent of native North American bird populations (Balda 1975;[4] Scott et al. 1980)[5] are snag-dependent; that is, they require the use of snags at some point in their life cycle. Of the 102 terrestrial vertebrate species that occur in Washington State, over half (56) nest or den only in (require) the boles of dead or dying trees. Wilhere 2003.[6] Moreover, an astounding two thirds of all wildlife species use deadwood structures or woody debris for some portion of their life cycles. Brown 2002.[7] For birds in severely burned forests, the importance of snags goes well beyond the nesting needs of cavity-nesting species. At least 60 percent of the species that nest in severely burned conifer forests use snags as nest sites, and virtually all those species nest only in or on snags. Hutto 1995.[8] Such facts are clearly the driving force behind the development of snag-retention guidelines for managed lands.

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[3] McClelland, B.R., Frissle, S.S., Fischer, W.C., and Halvorson, C.H. 1979. Habitat management for hole-nesting birds in forests of western larch and Douglas-fir. J. For. 77: 480–483.
[4] Balda, R.P. 1975. The relationship of secondary cavity nesters to snag densities in western coniferous forests. U.S.D.A. Forest Service Wildlife Habitat Technical Bulletin 1, 37 pp.
[5] Scott, V.E., J.A. Whelan, and P.L. Svoboda. 1980. Cavity-nesting birds and forest management. In Management of western forests and grasslands for nongame birds: workshop proceedings, February 11–14, 1980, Salt Lake City, Utah. Edited by R.M. DeGraff. U.S.D.A. Gen. Tech. Rep. INT-86, Fort Collins, Colo. pp. 311–324.
[6] Wilhere, G. F. 2003. Simulations of snag dynamics in an industrial Douglas-fir forest. Forest Ecology and Management 174:521– 539.
[7] Brown, T. K. 2002. Creating and maintaining wildlife, insect, and fish habitat structures in dead wood. General technical report PSW-GTR- 181:883-892. U.S. Department of Agriculture Forest Service, Albany, California.
[8] Hutto, R.L. 1995. Composition of bird communities following stand replacement fires in northern Rocky Mountain (U.S.A.) conifer forests. Conserv. Biol. 9: 1041–1058.

In the pending environmental analysis, we request a robust analysis of the <u>existing</u> snag resource and the effects of each alternative on that resource. The cumulative effects of logging, wildfire and post-fire-logging, prescribed fire, and firewood gathering on the snag retention within the project area and forest as a whole must also be clearly articulated and quantified.

f. <u>Impacts on old forests and large trees</u>

The reasons for protecting old growth trees and forests continue to accumulate, indicating the life-giving and supporting nature of these complex, interconnected ecosystems. Studies have shown the immense value of old growth forests for protecting carbon stores (Smithwick et al. 2002, Luyssaert et al. 2008, Hudiburg et al. 2009, Keith et al. 2009) and for continued accumulation of carbon in soils (Zhou et al. 2006). Old growth forests are not just incredible stores of carbon, they are also key wildlife habitat, sensitive plant species refugia, and biodiversity strongholds. These forests are also a defining and irreplaceable part of our natural heritage and provide our region with a great cultural identity.

We request that the forthcoming analysis consider the best available science pertaining to old growth forests and take a hard look at the impacts of all proposed alternatives on this important resource. We request that all alternatives developed protect all old growth trees regardless of size or species. We also request that the pending NEPA analysis include information regarding the distribution and number of old forest patches and large trees currently within the project area along with an analysis of how all alternatives developed would impact this current condition.

g. <u>Impacts to multi-storied old forest</u>

There is a high level of uncertainty with respect to the long-term ecological consequences of the Forest Service's strategy of converting old forest multi-story (OFMS) to old forest single story (OFSS). The Ninth Circuit has held that the Forest Service's failure to disclose the scientific uncertainty of its decisions to "treat" old growth forest violated NEPA. *Ecology Ctr., Inc. v. Austin*, 430 F.3d 1057, 1065 (9th Cir. 2005); *Lands Council v. McNair*, 494 F. 3d 771 (9th Cir. July 7, 2007). In Ecology Center, the Forest Service sought to "correct uncharacteristic forest development resulting from years of fire suppression." *Id.* at 1063. This "treatment" was "designed to leave most of the desirable old-growth trees in place and to improve their health." *Id.*

> *Although treatment may be designed to restore old-growth to 'historic conditions,' . . . this can be a misleading concept: for example, information regarding historic conditions is incomplete; altering particular sections of forest in order to achieve "historic" conditions may not make sense when the forest as a whole has already been fundamentally changed; many variables can affect treatment outcomes; and the treatment process is qualitatively different from the 'natural' or 'historic' processes it is intended to mimic.*

Id. (citing Plaintiffs' arguments). The Ninth Circuit concluded that the Forest Service violated NEPA because it "treat[ed] the prediction that treatment will benefit old-growth dependent species as a fact instead of an untested and debated hypothesis" and it failed to "'address in any meaningful way the various uncertainties surrounding the scientific evidence' upon which the decision to treat the [ ] old-growth rests." *Id.* at 1065. Although, the Ninth Circuit ultimately overruled Ecology Center, to the extent it suggested that the Forest Service always violates NEPA every time it fails to address some scientific uncertainty in its analysis, it reaffirmed that the agency must at least acknowledge and respond to comments by outside parties that reasonably state such uncertainties exist. *Lands Council v. McNair,* 537 F.3d 981, 1001 (9th Cir. 2008).

We do not doubt the severe deficiency in OFSS in the region or the proposition that stands that were historically single-story may have shifted to more multi-storied conditions due to past management and fire suppression. However, we remain unconvinced that converting OFMS forest to OFSS stands is the appropriate solution, particularly when deficiencies exist in both forest types and the latter is simply more severe. This logic is akin to "robbing Peter to pay Paul."

We request the development of an alternative that would maintain and enhance all OFMS stands. The pending environmental analysis should also include a robust analysis of impacts of all alternatives to OFMS and the wildlife that depends on these forests.

h. Impacts to moist and cold forests

GHCC is concerned with the effects of logging within moist and cold forest types. Logging in these forests has a high likelihood of increasing fire risk as commercial treatments can allow more solar radiation to penetrate into the otherwise shaded, mesic forest understory environment. Logging can also increase fine fuels both though felling large trees and by subsequent growth of the understory. When fuels reduction treatments are applied in the appropriate environment, they can be followed-up with prescribed fire. However, in many of the mesic/moist mixed-conifer and cold forests, prescribed fire fails to mimic the natural fire regime and is at risk of damaging many sensitive species. There are also many fiscal, temporal and social constraints on the use of prescribed fire. Much of the planned prescribed fire in the Blue Mountains is not carried out because of these limitations.

For these reasons, we request the development of an alternative that does not include any logging within moist mixed-conifer or cold forests. Any alternatives that propose logging within these forest types must look at the risk of the proposed treatments resulting in higher risk of uncharacteristic fire.

i. Impacts to Riparian Habitat Conservation Areas

Land management activities often significantly increase sediment loads to channelized sediment sources. Logging—even if limited to hand thinning and what can be reached with mechanical equipment from existing roads—within RHCAs severely compromises the sediment retention abilities of these areas. It is widely recognized that the loss of vegetation in RHCAs reduces their sediment detention effectiveness. However, the loss of vegetation is not the only impact of logging in RHCAs. Logging compacts and disrupts soils, increasing runoff and erosion. Instead of arresting upslope sediment, logged areas within RHCAs act as sources of elevated erosion and sediment delivery.

There is a building scientific consensus that PACFISH/ INFISH standards are inadequate in protecting RHCAs. On non-fish-bearing streams, RHCAs are only 150 feet from the edge of non-fish bearing perennial streams and only 100 feet wide around intermittent streams. As noted in the aquatic assessment for the Interior Columbia Ecosystem Management Project (ICBEMP) (Quigley and Alberide, 1997),[9] these widths are inadequate to protect these types of streams from increased sediment delivery from upslope sediment production. Specifically, this assessment noted that these smaller, non-fish bearing perennial and intermittent streams are:

- More affected by sedimentation from sediment production accelerated by upslope activities than larger streams (pp.1365-1366).

- A primary source of sediment supplied to fish bearing streams (p. 1366).

- Typically comprise the majority of the channel network and "...therefore strongly influence the input of materials to the rest of the channel system." (p. 1366)

- Highly vulnerable to the impacts of upslope activities, because the likelihood for discernible instream effects increases with slope steepness and the erodibility of sideslopes (p. 1367); these smaller headwater streams tend to have steeper and more erodible sideslopes (p. 1371).

Even the PACFISH/ INFISH RHCAs on fish-bearing streams are not adequate to fully protect streams under all conditions. Quigley and Arbelbide (1997) noted that 300 foot wide RHCAs around streams might not be adequate to prevent increased sediment delivery to streams in some areas. There is a greater than 25 percent probability of sediment delivery to streams on a 30 percent slope with a 100-foot wide, fully functional, RHCA based on the analysis in Quigley and Arbelbide (1997). For slopes of 50 percent abutting intermittent stream channels, the aquatic assessment in Quigley and Arbelbide (1997) estimated buffer widths of more than 400 feet from each side of the stream would be needed to prevent sediment delivery in 95 percent of cases. The draft EIS for the ICBEMP included methods to expand RHCA widths based on slope steepness, in order to provide more protection from sediment delivery to smaller streams. These methods result in RHCAs with widths significantly greater than 100 feet on intermittent streams with slopes greater than about 15 percent.

Other applicable scientific literature has noted RHCAs wider than those of PACFISH are necessary to protect aquatic resources. Damage to headwater streams and riparian areas not only degrades habitats in headwater streams, but downstream habitats as well, because headwater streams provide most of the water and sediment for downstream reaches (Rhodes et al., 1994;[10] Moyle et al., 1996;[11]

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[9] Quigley, T.M., and S.J. Arbelbide, technical editors. 1997. An assessment of ecosystem components in the Interior Columbia Basin and portions of the Klamath and Great Basins, Volumes 1-4. General Technical Report PNW-GTR-405. USDA Forest Service, Pacific Northwest Research Station, Portland, Oregon.
[10] Rhodes, J.J., McCullough, D.A., and Espinosa Jr., F.A., 1994. A Coarse Screening Process for Evaluation of the Effects of Land Management Activities on Salmon Spawning and Rearing Habitat in ESA Consultations. CRITFC Tech. Rept. 94-4, Portland, Or.
[11] Moyle, P. B., Zomer, R., Kattelmann, R., & Randall, P., 1996. Management of riparian areas in the Sierra Nevada. Sierra Nevada Ecosystem Project: Final Report to Congress, vol. III, report 1. Davis: University of California, Centers for Water and Wildland Resources.

Erman et al., 1996).[12] Due to their sensitivity, headwater streams need as much protection, or more, than larger downstream reaches if aquatic habitats and water quality at the watershed scale are to be protected (Rhodes et al., 1994; Moyle et al., 1996; Erman et al., 1996; Espinosa et al., 1997).[13] Both Erman et al., (1996) and Rhodes et al., (1994) concluded, based on review of available information, that intermittent and non-fish-bearing streams should receive stream buffers significantly larger than those afforded by PACFISH/ INFISH.

The pending environmental analysis must analyze and disclose the impacts of all proposed treatments, within and outside the RHCAs, on aquatic resources. We also request an alternative that contains no treatment activity within RHCA areas. Any impacts to RHCA areas must be mitigated.

j. Impacts from temporary roads

The proposed action indicates that "new temporary roads may be constructed" in order to facilitate logging. Given the extensive amount of acreage proposed for logging, we are concerned about significant potential negative effects caused by temporary roads associated with this project.

The scientific literature suggests that mechanical fuels treatments aimed at reducing fire severity have so much inherent uncertainty in their effectiveness that the application should be limited and the most damaging activities such as temporary road building should be avoided (Crist et al. 2009,[14] Noss et al. 2006,[15] Rhodes et al. 2008).[16] The following is an excerpt from "The Watershed Impacts of Forest Treatments to Reduce Fuels and Modify Fire Behavior" by Jonathan Rhodes, 2007.

> *Avoid practices that consistently cause severe and persistent watershed damage, including machine piling and burning and the construction of roads and landings, including "temporary" ones. The numerous negative effects of roads are one of the primary sources of aquatic and watershed damage on a continental scale. Additional road construction is inimical to reducing road effects. It also inexorably adds to the currently insurmountable backlog in needed, but deferred, road maintenance on existing roads (USFS et al., 1993; USFS, 2000b; Beschta et al., 2004).*

Temporary roads are not temporary in impact. Temporary roads left in a state of non-use can have impacts on forests and soils that last for decades. The public often continues to use these roads long after implementation of camouflaging and other activities designed to leave them in a state of non-use. As a result, soil compaction/disturbance and sedimentation impacts will continue to persist. The permanent impacts of temporary road construction have been thoroughly documented (e.g.,

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12 Erman, D.C., Erman, N.A., Costick, L., and Beckwitt, S. 1996. Appendix 3. Management and land use buffers. Sierra Nevada Ecosystem Project Final Report to Congress, Vol. III, pp. 270-273.
13 Espinosa, F.A., Rhodes, J.J., and McCullough, D. A. 1997. The failure of existing plans to protect salmon habitat on the Clearwater National Forest in Idaho. J. Env. Management 49: 205-230.
14 Crist, M.R., T.H. DeLuca, B. Wilmer, and G.H. Aplet. 2009. Restoration of Low- Elevation Dry Forests of the Northern Rocky Mountains: A Holistic Approach. Washington, D.C.: The Wilderness Society.
15 Noss, R.F., J.F. Franklin, W.L. Baker, T. Schoennagel, P.B. Moyle. 2006. Managing fire-prone forests in the western United States. Frontiers in Ecology and Environment 4: 481-487.
16 Rhodes, J. J., W. L. Baker. 2008. Fire Probability, Fuel Treatment Effectiveness and Ecological Tradeoffs in Western U.S. Public Forests. The Open Forest Science Journal. 1: 1-7.

Beschta et al., 2004; Karr et al., 2004).[17] Such long-term damage has even been acknowledged by the USFS (Rhodes, 2007).

Additionally, the re-opening of closed or unclassified roads for access, and then re-closure following treatment activities has very serious ecological impacts. Extensive and intensive road reconstruction greatly increase road impacts on watershed systems, as documented, graphically in Karr et al (2004). Reconstruction impacts are extremely significant because the elevated sedimentation they cause is already a ubiquitous water quality problem throughout the West and a major cause of the loss of aquatic biodiversity.

We request that an alternative is developed that does not use any temporary roads or any closed roads requiring reconstruction.

We recommend any potential units that can only be accessed with temporary roads will be dropped and considered as wildlife refugia, or else be non-commercially treated by hand crews. We recommend the same regarding re-opening closed roads, unless there are roads which are currently causing resource damage and that could be restored.

Finally, we request that any alternatives that propose temporary road building include a cost-benefit analysis of the purported benefits of the treatment weighed against the negative impacts to wildlife, soil structure, hydrology, from invasive weed spread from temporary road building and road reconstruction.

k. Impacts from forest roads

We support the proposed action to close or seasonally close 30 to 100 miles of roads. We encourage the Forest Service to develop an alternative to decommission, return to the landscape and remove from the road system closed roads that have been identified as either duplication access or no longer needed. Erosion, compaction, and other alterations in forest geomorphology and hydrology associated with roads seriously impair water quality and aquatic species viability. *Id.* at 2-4. Roads disturb and fragment wildlife habitat, altering species distribution, interfering with critical life functions such as feeding, breeding, and nesting, and resulting in loss of biodiversity. *Id.* at 4-6. Roads facilitate increased human intrusion into sensitive areas, resulting in poaching of rare plants and animals, human-ignited wildfires, introduction of exotic species, and damage to archaeological resources. *Id.* at 6, 9, & Att. 1. Roads are also major vectors for spreading weeds.

A robust analysis under NEPA of the forest road system and its environmental and social impacts is especially critical in the context of climate change. As the CEQ's recent draft guidance on addressing climate change in NEPA analyses recognizes, "[c]limate change can increase the vulnerability of a resource, ecosystem, human community, or structure, which would then be more susceptible to climate change and other effects and result in a proposed action's effects being more environmentally damaging." CEQ, *Revised Draft Guidance for Greenhouse Gas Emissions and Climate Change Impacts* (Dec. 18, 2014), page 22 (attached as Exhibit C). The draft CEQ guidance makes clear that "[s]uch considerations are squarely within the realm of NEPA, informing decisions on whether to proceed with and how to design the proposed action so as to minimize impacts on the

[17] Karr, J.R., J.J. Rhodes, G.W. Minshall, F.R. Hauer, R.L. Beschta, C.A. Frissell, and D.A. Perry. 2004. Postfire salvage logging's effects on aquatic ecosystems in the American West. BioScience 54: 1029-1033.

environment, as well as informing possible adaptation measures to address these impacts, ultimately enabling the selection of smarter, more resilient actions." *Id.*

Climate change intensifies the adverse impacts associated with roads. The Forest Service should consider the risk of increased disturbance when analyzing this proposed project. For example, as the warming climate alters species distribution and forces wildlife migration, landscape connectivity becomes even more critical to species survival and ecosystem resilience. Exhibit C at 9-14. *See also* USDA, Forest Service, *National Roadmap for Responding to Climate Change* at 26 (2011), *available at* http://www.fs.fed.us/climatechange/pdf/Roadmapfinal.pdf (recognizing importance of reducing fragmentation and increasing connectivity to facilitate climate change adaptation).

Climate change is also expected to lead to more extreme weather events, resulting in increased flood severity, more frequent landslides, altered hydrographs, and changes in erosion and sedimentation rates and delivery processes. Many National Forest roads are poorly located and designed to be temporarily on the landscape, making them particularly vulnerable to these climate alterations. Even those designed for storms and water flows typical of past decades may fail under future weather scenarios, further exacerbating adverse ecological impacts, public safety concerns, and maintenance needs. The Forest Service should analyze in detail the impact of climate change on forest roads and forest resources.

The President's Executive Order 13,653 (Nov. 2013) provides direction on "Preparing the United States for the Impacts of Climate Change." The Order recognizes that "[t]he impacts of climate change – including an increase in prolonged periods of excessively high temperatures, more heavy downpours, an increase in wildfires, [and] more severe droughts . . . – are already affecting communities, natural resources, ecosystems, economies, and public health across the Nation," and that "managing th[o]se risks requires deliberate preparation, close cooperation, and coordinated planning . . . to improve climate preparedness and resilience; help safeguard our economy, infrastructure, environment, and natural resources; and provide for the continuity of . . . agency operations, services, and programs." Exec. Order 13,653, § 1. To that end, the Order requires agencies to take various actions aimed at making "watersheds, natural resources, and ecosystems, and the communities and economies that depend on them, more resilient in the face of a changing climate." *Id.* § 3. For example, "recognizing the many benefits the Nation's natural infrastructure provides, agencies shall, where possible, focus on program and policy adjustments that promote the dual goals of greater climate resilience and carbon sequestration." *Id.* Agencies also must develop and implement adaptation plans that "evaluate the most significant climate change related risks to, and vulnerabilities in, agency operations and missions in both the short and long term, and outline actions . . . to manage these risks and vulnerabilities." *Id.* § 5(a).

The Forest Service's 2014 adaptation plan recognizes that the wide range of environmental and societal benefits provided by our national forests "are connected and sustained through the integrity of the ecosystems on these lands." *See* USDA Forest Service, *Climate Change Adaptation Plan*, page 58 (2014). The plan highlights USDA's 2010-2015 Strategic Plan Goal 2 of "[e]nsur[ing] our national forests . . . are conserved, restored, and made more resilient to climate change, while enhancing our water resources." *Id.* at 58. And consistent with section 5(a) of Executive Order 13,653, the plan identifies numerous climate change risks – including increased wildfire, invasive species, increasing water temperatures, extreme weather events, and fluctuating precipitation and temperature – that "pose challenges to sustaining forests and grasslands and the supply of goods and services upon which society depends, such as clean drinking water, forest products, outdoor recreation opportunities, and habitat." *Id.* at 60-64. With respect to transportation infrastructure specifically, the adaptation plan recognizes that, "[w]ith increasing heavy rain events, the extensive road system on NFS lands will require increased maintenance and/or modification of infrastructure (e.g. larger culverts or replacement of culverts with bridges)." *Id.* at 62.

The Forest Service's Climate Change Adaptation Plan points to a number of actions to address the risks of climate change to our forests, and in particular to forest roads. For example, the plan highlights the 2012 Planning Rule as a mechanism to ensure that "National Forest System . . . land management planning policy and procedures include consideration of climate change." *Id.* at 73. The final directives to the planning rule echo the importance of designing plan components "to sustain functional ecosystems based on a future viewpoint" and "to adapt to the effects of climate change." FSH 1909.12, ch. 20, § 23.11. The adaptation plan also points to Forest Service Manual 2020, which provides "Ecological Restoration and Resilience" directives designed "to restore and maintain resilient ecosystems that will have greater capacity to withstand stressors and recover from disturbances, especially those under changing and uncertain environmental conditions, including climate change and extreme weather events." USDA Climate Change Adaptation Plan at 73.

The forthcoming analysis must consider these impacts from forest roads in developing a robust range of alternatives to the proposed action. All alternative must meet existing Umatilla National Forest plan direction for open road density.

We request that the Forest Service develops an alternative to decommission, return to the landscape and remove from the road system closed roads that have been identified as either duplication access or no longer needed.

l. <u>Impacts from forest insects and diseases</u>

Forest insects and pathogens are increasingly being recognized as important agents in shaping the structure and composition of forests. The forest uses mistletoe, fungi and insects as a way to thin and maintain space between trees. These disturbance processes also recruit dead wood and snags, and provide unique habitat, benefiting many species of birds and wildlife. Removal of these trees has a negative impact on future recruitment of these important habitat features.

GHCC requests an alternative that leaves diseased trees and those with mistletoe. If the pending NEPA analysis includes alternatives that propose to remove diseased trees and trees with mistletoe, those alternatives should also address how removal of these trees will affect future snag and dead trees retention with regards to habitat needs and historic ranges.

4. **The forthcoming environmental analysis must analyze all connected, cumulative, and similar actions that could contribute to cumulative effects**

NEPA also requires an agency to consider not only the project proposal itself, but also connected, cumulative, and similar actions that could contribute to cumulative effects. 40 C.F.R. § 1508.25. Connected actions are those that are closely related and should be discussed in the same EIS. *Id.* § 1508.25(a)(1). The regulations explain that connected actions: (1) automatically trigger other actions that may require an EIS; (2) cannot or will not proceed unless other actions are taken previously or simultaneously; (3) are interdependent parts of a larger action and depend on the larger action for their justification. *Id.* Cumulative actions are those "which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement." *Id.* § 1508.25(a)(2). Finally, "similar actions" are those "which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating the environmental consequences together, such as common timing or geography." *Id.* § 1508.25(a)(3). Cumulative effects (distinct from cumulative actions) are the effects on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future projects. 40 C.F.R. § 1508.7. The Washington Office directed forests to consider adjacent subwatersheds for connected actions and cumulative effects.[18]

It is not enough to make "conclusory" or "perfunctory references" to cumulative impacts or to continue to use the same boilerplate language throughout the draft EIS. *Natural Resources Defense Council v. Hodel*, 865 F.2d 288, 298-99 (D.C. Cir. 1988). Cumulative effects analysis requires "some quantified or detailed information. . ." *Neighbors of Cuddy Mountain v. U.S.F.S.*, 137 F.3d 1372, 1379 (9th Cir. 1998).

Here, the Forest Service must look at the connected, cumulative and similar actions that would contribute to cumulative effects including recent wildfires, salvage logging activities, active, recent, or reasonably foreseeable vegetation management, and grazing management.

Cumulative effects from those actions that should be analyzed include the effects on snag and down woody debris, soil health, old forests, climate resiliency, carbon sequestration, rare and sensitive plants, wildlife habitat and connectivity, threatened and endangered species, big game, and aquatic resources.

m. Cumulative effects on climate

The Ellis project may significantly impact the environment with substantial greenhouse gas emissions as well as direct, indirect and cumulative effects on forest carbon stores and sequestration rates. The Ninth Circuit has concluded that the "impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct." *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin. ("NHTSA")*, 538 F.3d 1172, 1217 (9th Cir. 2008). There is no scientific question that incremental increases in greenhouse gases can have a cumulatively "significant" effect on climate change. *Id* at 1222. Further, "the fact that climate change is largely a global phenomenon that includes actions that are outside of [the agency's] control . . . does not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming." *Id.* (internal citations omitted); *see also id.* ("[w]e cannot afford to ignore even modest contributions to global warming. If global warming is the result of the cumulative contributions of myriad sources, any one modest in itself, is there not a danger of losing the forest by closing our eyes to the felling of the individual trees?") (citing *City of Los Angeles v. NHTSA*, 912 F.2d 478, 501 (D.C. Cir. 1990) (Wald, C.J. dissenting); *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016, 1032 (9th Cir. 2006) ("No provision of NEPA . . . allows [agencies] to eliminate a possible environmental consequence from analysis by labeling the risk as 'unquantifiable'").

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[18] 2012 Weldon Memo at 2.

NEPA clearly requires the pending analysis to consider the cumulative impact of project effects on climate change.

n. Cumulative effects to forest health from grazing, logging, and other management activities

The research clearly shows that livestock grazing changes forest dynamics in ways that alter natural fire regimes and vegetative species composition. For example, grazing reduces the biomass and density of understory grasses which otherwise outcompete conifer seedlings and prevent dense tree recruitment (Belsky et al 1997).[19] Grazing has been show to contribute to a change in natural fire frequencies and intensities (Campbell 1954,[20] Zimmerman et al 1984).[21] In addition, studies have shown that livestock also alter forest ecosystem processes by reducing the cover of herbaceous plants and litter, disturbing and compacting soils, reducing water infiltration rates, and increasing soil erosion. (*See e.g.* Allen et al 1989,[22] Belsky et al 1997). Grazing also negatively affects water quality and seasonal quantity, stream channel morphology, hydrology, riparian soils, in-stream and stream vegetation, and aquatic fish and wildlife (*See e.g* Armour et al 1991,[23] Belsky 1999).[24]

Many peer reviewed scientific papers document these adverse impacts of grazing on wildfire, species composition, and other forest ecosystem processes. Continuation of current grazing management within the project area will result in high-density forest structure, lack of stand initiation structure, detrimental soil conditions, and retarded RHCA conditions. Thinning, logging, and burning prescriptions, particularly within or adjacent to RHCAs, may result in increased livestock access to riparian areas.

The forthcoming environmental analysis must address the cumulative impacts on the project area from logging and grazing. We request an alternative that reduces grazing activities within logged and burned areas to allow them to recover post project implementation in order to reduce the cumulative impacts resulting from grazing and management activities proposed under this project.

o. Cumulative impacts from forest roads

The Forest Service should look at all of the cumulative impacts from the road system within the project area and adjacent sub watersheds as part of this NEPA analysis. This includes impacts from temporary roads, re-opening of closed or unclassified roads, user created roads, and classified roads. The analysis should be based on the current on-the-ground conditions, not just the official road system. ***If there are past decision that closed roads and those decisions have yet***

[19] Belsky, A. J., and D. M. Blumenthal. 1997. Effects of livestock grazing on stand dynamics and soils in upland forests of the Interior West. Conservation Biology 11:315–327.
[20] Campbell, R.R. 1954. Fire in relation to forest grazing. Unasylva 8:154-158.
[21] Zimmerman, G.T. and L.F. Neuenschwander. 1984. Livestock grazing influences on community structure, fire intensity, and fire frequency within the Douglas-fir/ninebark habitat type. Journal of Range Management 37(2):104-110.
[22] Allen, B.H., and J.W. Bartolome. 1989. Cattle grazing effects on understory cover and tree growth in mixed conifer clearcuts. Northwest Science 63:214-220.
[23] Armour, C.L., D.A. Duff, and W. Elmore. 1991. The effects of livestock grazing on riparian and stream ecosystems. Fisheries 16(1):7-11.
[24] Belsky J, Matzke A, Uselman S. 1999. Survey of livestock influences on stream and riparian ecosystems in the western United States. J. Soil Water Conserv. 54:419–31.

to be implemented, the Forest Service should incorporate those decisions in this proposed action. If the agency chooses to exclude past decisions that have yet to be implemented, it needs to explain why.

Conclusion

Thank you for the opportunity to participate in this planning process and for your review of these comments. GHCC looks forward to working with the district as this project progresses. Please do not hesitate to contact me with any questions.

Sincerely,

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