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Comments: Attached are Thompson River Lumber's comments on the Draft Assessment for the Lolo Forest Plan.

Thank you,

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Amanda Milburn

Revision Team Leader, R1 Ecosystem Planning

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RE: Draft Assessment, Lolo National Forest Management Plan

Dear Amanda:

We at Thompson River Lumber want to provide comments on the Draft Assessment for the Lolo National Forest Management Plan as we have a vested, long-term interest in how this plan is determined. The Forest Products industry supports over 7,000 jobs in Montana with earnings of over $300 million annually, and at a local level, Thompson River Lumber is the only mill remaining in Sanders and Mineral County, contributing significantly to the economy in these areas. We have a strong desire to see a revised Plan that maintains and builds a stronger and more viable timber program. Effective management to reduce hazardous fuels, improve forest health, and mitigate the risk of high-intensity wildfire is critical to this program.

We specifically offer our comments on:

1. Social and Economic Conditions
2. Carbon Stocks
3. Infrastructure
4. Species of Conservation Concern
5. Fire Management and the Wildland Urban Interface (WUI)

Social and Economic Conditions

Section 3.1.4 assesses [lsquo]ecosystem services and benefits to people[rsquo]. The Assessment defines ecosystem services as benefits that people obtain from ecosystems. The status and trends of multiple ecosystem services are outlined in this section, including timber products. However, the assessment for timber products is one-dimensional: it only considers the economic benefits of timber products, not the social benefits. We are concerned how this omission may influence the substance of the Plan Revision.

This Section[rsquo]s assessment on Clean Water noted that [ldquo]as populations in the area of influence continue to grow, demand for clean water will also increase.[rdquo] The same can, and should, be said for timber products. Unfortunately, societal needs and demands for wood products are often overlooked in Forest Service project and plan development. Benefits from the harvest of timber are typically confined to those of an ecological or economic nature, while social benefits are omitted. However, those social benefits are well documented, and we urge the Planning Team to incorporate them into the Final Assessment.

A 2022 report from Research and Markets concluded that [ldquo]the North America wood products market is forecasted to grow at a compound annual rate of 6.75%, over the period 2022-2026. Factors contributing to this growth include a growing population, escalating new residential construction, surging demand for wooden furniture in offices and rising inclination of population towards home repair and remodeling.[rdquo][1] A 2012 report prepared for the Forest Stewardship Council (FSC) predicted that annual demand for timber products will quadruple by the year 2050.[2] Technical reports from both 2010[3] and 2012[4] completed for the Forest Service determined, among other things, that:

* Wood products fulfill fundamental needs and have remained competitive with alternate means of meeting those

needs.
* US lumber production and demand is expected to increase through 2040.
* The forest products sector helps sustain the social, econom[shy]ic, and ecological benefits of forestry in the United States.
* Ecological and social benefits can be supported by timber revenue to landowners that help keep land in for[shy]ests and by forest treatments that can help maintain ecologi[shy]cal functions.

Please consider incorporating these data points to support the social benefits that people obtain from timber products.

Much of the socioeconomic section in the Assessment was informed by the Economic Profile System maintained by Headwaters Economics. This toolkit was developed in partnership with the Bureau of Land Management and the U.S. Forest Service. We are concerned that the Headwaters information provides an incomplete cross-section of the forest products industry. For example, many smaller contractors and operators that work in the Forest and in secondary manufacturing but do not report or file unemployment insurance reports to the State and Counties are not represented in the Headwaters resources. In this respect we believe that the existing assessment of jobs generated from timber harvest on the Lolo National Forest is flawed.

We recommend that the planning team focus its analysis on publications by the University of Montana Bureau of Business and Economic Research (BBER) to improve the portrayal of the economic impacts of timber harvest on the Lolo.

Carbon Stocks

The assessment on carbon stocks, particularly those discussions on the role of active forest management in mitigating climate change, is detailed and comprehensive. We appreciate the Assessment[rsquo]s acknowledgment of the role of active forest management in climate change mitigation and the role of carbon storage in long-lasting wood products.

However, we believe that simply assessing existing carbon stocks provides an incomplete set of baseline data. Climate change is driven by excess greenhouse gases in the earth[rsquo]s atmosphere, not by a shortage of stored carbon in terrestrial ecosystems. Therefore, any efforts to mitigate climate change are twofold: minimize stored carbon release and accelerate carbon sequestration. Quantifying existing carbon stocks merely provides the level of carbon sequestration that has previously occurred. From a management perspective, the level of these stocks is only useful as they inform management efforts to reduce their future release from wildfire, insect infestation, or disease. However, these stocks do not inform management efforts to increase future carbon sequestration. Baseline data should also be complied that assesses the carbon sequestration potential of the existing forest.

Section 3.4 of Appendix 2 outlines uncertainties associated with estimates of carbon in harvested wood products. While uncertainties with quantifying exact storage timelines are real, the notion that carbon is indeed stored in wood products is undeniable. A 2009 study focused on carbon stored in wood products concluded that [ldquo]the carbon stored in wood products as an offset to emissions was shown to be significant.[rdquo][5]

Active forest management is more effective in capturing and storing atmospheric carbon in forest and wood product carbon pools than a policy of hands-off management that precludes periodic harvests and the use of wood products. This notion is supported by analysis of the most recent U.S. Forest Service Inventory and Analysis (FIA) program[rsquo]s report that summarize differences in growth (and hence sequestration) between owner types reflecting these different management strategies.[6][7] This is also consistent with the findings and

recommendations of international scientific bodies, including the IPCC. In fact, the IPCC[rsquo]s 4th Assessment recognized the carbon mitigation benefits of forests and wood products:

[ldquo]Mitigation options by the forestry sector include extending carbon retention in harvested wood products, product substitution, and producing biomass for bio-energy. This carbon is removed from the atmosphere and is available to meet society[rsquo]s needs for timber, fiber, and energy.[rdquo]

[ldquo]In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fiber or energy from the forest, will generate the largest sustained mitigation benefit.[rdquo]

The Assessment[rsquo]s consideration of the effects of [ldquo]forest aging[rdquo] in Section 4.2 and 6.1 is astute and insightful. This coalition agrees with the Forest[rsquo]s concern over the role of [ldquo]older[rdquo] forests in climate change mitigation. Research supports the notion that, if the role of forests in combatting climate change is to reduce global greenhouse gasses through maximizing the sequestration of carbon from atmospheric CO2, then increasing the acreage of young, fast growing small trees is the most prudent management approach. A 2016 study in the Pacific Northwest concluded that, although large trees accumulated carbon at a faster rate than small trees on an individual basis, their contribution to carbon accumulation rates was smaller on an area basis, and their importance relative to small trees declined in older stands compared to younger stands. It also noted that although large trees are important carbon stocks, they play a minor role in additional carbon accumulation.[8]

These conclusions support the practice of regular harvests at an age where tree growth begins to slow, storage of that tree carbon in long-lasting wood products, and proactive reforestation. A failure to do so would hamper that acre[rsquo]s ability to maximize carbon sequestration through the replacement of slow growing large trees with fast growing small trees and the storage of those large trees in long-lasting wood products. Not storing that carbon in wood products also poses the risk of losing the carbon in standing trees from high intensity wildfire, which is becoming increasingly prevalent on public lands in western states. A 2022 study estimated that wildfires in California in 2020 emitted 127 million metric tons of carbon into the atmosphere, making the greenhouse gas (GHG) emissions from wildfires the second most important source in the state, after transportation.[9] For context, the U.S. Forest Service recently disclosed that the agency only [ldquo]commercially harvests one tenth of one percent of acres within the National Forest System each year. Harvests designed to improve stand health and resilience by reducing forest density or removing trees damaged by insect or disease make up 86 percent of those acres. The remainder are final regeneration harvests that are designed to be followed by reforestation.[rdquo][10] There is extraordinary opportunity to increase the practice of sustainable forest management on federal lands as an effective tool to sequester carbon.

Harvesting trees and transferring the stored carbon to wood products allows a land manager to [ldquo]stack[rdquo] the sequestration potential of that land. For example, assume an objective to maximize carbon sequestration on 100 acres over a 150-year period starting at year zero. Without active management and timber harvest, those trees would grow to 150 years and represent the only carbon sequestered on those 100 acres at the end of the 150-year cycle (assuming they don[rsquo]t burn in a wildfire). Alternatively, the trees could be harvested on a 50-year rotation and stored in wood products. After 150 years, there would be carbon stored in an existing 50-year-old stand, plus carbon stored in wood products from an additional two 50-year-old stands previously harvested. The figure below illustrates the concept of stacking[11].

A 2013 study from the Journal of Sustainable Forestry summarized these concepts well: More CO2 can be sequestered synergistically in the products or wood energy and landscape together than in the unharvested landscape. Harvesting sustainably at an optimum stand age will sequester more carbon in the combined products, wood energy, and forest than harvesting sustainably at other ages.[12]

In summary, we applaud the assessment on carbon stocks and urge the planning team to supplement that assessment with additional science on the carbon storage capacity of long-lasting wood products and the capacities of both young and old forests in carbon sequestration. We also urge you to consider quantifying the carbon sequestration capacity of the existing forest system on the Lolo.

Infrastructure

Section 3.7 of the Assessment outlines the many benefits of an intact road system on the Lolo National Forest. Specific socioeconomic uses are acknowledged in this section, including recreation, forest management, and other special uses. However, the assessment of biophysical resources in the context of infrastructure (namely roads) in Section 2.1.11 mischaracterizes the impacts of roads to watershed health. Here, the Forest Service states that [ldquo]transportation corridors are one of the most prominent threats to watersheds and aquatic ecosystems.[rdquo] We believe that this conclusion is a function of a narrow assessment of the values and risks of an intact road system.

Certainly, roads, specifically poorly maintained and poorly located and engineered roads, can adversely affect water quality and watershed health. However, this Section completely omits the adverse effects to water quality and watershed health resulting from high-severity wildfire and the positive correlation between an intact road infrastructure and effective wildfire suppression. We believe that a significant factor contributing to increased fire activity in the region is the decreasing road access to our federal lands. This factor is often overshadowed by both climate change and fuels accumulation when the topic of wildfire is discussed in public forums. However, we believe that a deteriorating road infrastructure has also significantly contributed to recent spikes in wildfires. Indeed, the Assessment notes that [ldquo]since the 1986 Forest Plan was adopted, the general trend over time has been a reduction in the miles of roads open for motorized public use.[rdquo] This deterioration has been a result of both reduced funding for road maintenance and the federal agency[rsquo]s subsequent direction to reduce their overall road networks to align with this reduced funding. The outcome is a forested landscape that is increasingly inaccessible to fire suppression agencies due to road decommissioning and/or road abandonment. This inaccessibility complicates and delays the ability of firefighters to quickly and directly attack nascent fires. On the other hand, an intact and well-maintained road system would facilitate a scenario where firefighters can rapidly access fires and initiate direct attack in a more safe and effective manner.

Nearly every single incident of an undesirable wildfire [ldquo]escaping[rdquo] containment includes a summary of obstacles to achieving that containment. And nearly every single summary includes [ldquo]poor access[rdquo] as a primary obstacle. We would like the planning team to assess the impact that a reduced and deteriorating road infrastructure has on effective wildfire suppression activities.

Species of Conservation Concern

We believe that a plan guided by ecosystem management is the most effective way to provide habitat for a diverse array of wildlife species. The Draft Assessment clearly acknowledges the emphasis placed on

[lsquo]ecosystem integrity[rsquo] and outlines how future land management will be largely a function of providing a multitude of habitat types guided by the Natural Range of Variation (NRV). This approach aims to ensure that all plant and animal species that are native to the Lolo National Forest are provided for through habitat management. Species driven management, on the other hand, has proven to be problematic. For example, the northwest forest plan was designed to emphasize management primarily for late-seral forest species. This has resulted in land managers being pressured to create specific types of wildlife habitat in locations where such habitat is not able to persist. This approach of trying to put a round peg in a square hole has ultimately not benefited any type of wildlife, specifically those plant and animal species that depended on early seral forest habitat.

For these reasons we caution the Forest Service from expanding the current list of potential [lsquo]species of conservation concern[rsquo] described in the Draft Assessment. If management guided by the NRV is deemed insufficient for certain wildlife species, then perhaps those species naturally occur at limited scope and scale on the Lolo National Forest. Creation of an exhaustive list of plant and animal species may hamstring future land management and complicate the ability for managers to attain the desired NRV.

Fire Management and the Wildland Urban Interface (WUI)

Finally, we believe the Assessment should consider how the concept of NRV can be reconciled with community protection against catastrophic wildfire. The concept of managing for NRV assumes that if the landscape appears within a range of forest successional types at any given time, then the ecosystem will be in a state of balance that will benefit all resources and provide for [ldquo]resiliency[rdquo]. However, our understanding is that the NRV was determined based on modeling efforts aligned with pre-European settlement[mdash]which is to say that the NRV used in the assessment correlates to a [ldquo]human environment[rdquo] that looked drastically different from that which exists today.

Table 54 of the Assessment indicates that 1,314,494 acres of the Lolo National Forest are within areas identified by county wildfire protection plans as WUI. The Assessment also indicates that WUI acres are likely to increase in the future. It is unclear how management for NRV in the WUI will balance [ldquo]natural[rdquo] fire regimes and community protection. How, for example, would the Forest Service manage portions of the WUI for NRV that historically burnt at high intensity? Perhaps those high intensity fires benefited wildlife and did not harm human populations 1,000 years ago, but certainly the same cannot be said for today. The Assessment seems to acknowledge this challenge, noting in Section 3.3.2 that [ldquo]while wildfire plays an essential role in maintaining the health and function of the Forest[rsquo]s plant and animal communities, it can also threaten human safety, health, livelihoods, homes, and property.[rdquo]

Ultimately, we support the general concept that managing forests consistent with NRV may benefit wildlife and other natural resources. However, we are skeptical that such a management paradigm will benefit the human environment and protect communities in the WUI. We are also skeptical about how the Assessment outlines fire suppression policy. Section 3.3.3 states that [ldquo]fire management is achieved through prescribed fire, which includes management-ignited fire and naturally ignited wildfire (ignited by lightning as opposed to humans).[rdquo] Categorizing naturally ignited wildfires as [ldquo]prescribed fire[rdquo] is extremely concerning to us and should be concerning to those living in the WUI. Instances of prescribed fires burning beyond prescription boundaries are well documented.[13][14] If the Forest Service is unable to fully control all prescribed fires that are meticulously planned ahead of time, how can it expect to fully control fires ignited by lightning that have no preplanning afforded? The Assessment asserts that naturally ignited fires [ldquo]can be managed without full suppression.[rdquo] There are far too many examples of poor fire management, either prescribed or natural, surrounding our mill and across Sanders County. We would like the Assessment to be updated with examples of such successful management.

Conclusion

Thompson River Lumber urges the planning team to consider our input when supplementing the Assessment[rsquo]s discussion on carbon stocks, socioeconomics, infrastructure, and fire management and the WUI.

Sincerely,

Shawn Morgan and Cody Daiutolo

Thompson River Lumber Foresters

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[10] 88 Fed. Reg. 24,497 (April 21, 2023).

[11] McKinley, Duncan C., et al., A synthesis of current knowledge on forests and carbon storage in the United States, Ecological Applications, 21(6), pp. 1902[ndash]1924 (2011)

[12] Oliver, Chadwick Dearing, et al., Carbon, Fossil Fuel, and Biodiversity Mitigation With Wood and Forests, Journal of Sustainable Forestry, 33:3, 248-275 (2014), DOI: 10.1080/10549811.2013.839386.

[13]Two prescribed fires in New Mexico escape and become wildfires - Wildfire Today

[14]Prescribed burn escapes, becomes 120-acre wildfire near McKenzie Bridge (registerguard.com)