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First name: Clinton

Last name: Nagel

Organization: Gallatin Wildlife Association

Title: President

Comments: Office of the Chief, Randy Moore

U.S. Forest Service

1400 Independence Ave., SW

Washington, D.C.

20250-0003

Dear Randy Moore:

Please accept the comments as attached on behalf of the Gallatin Wildlife Association and its membership. We believe we are in a time where the protection of our forest is paramount for the defense of our planet's ecological and climatological well being. Time has run its course and for the most part societies have wasted the time that we had. We strongly urge strong conservation measures be put in place for the protection of not only old-growth forest, but for those mature forests as well.

Clinton Nagel, President

Gallatin Wildlife Association

On December 19, 2023, the U.S. Forest Service released a Notice of Intent to prepare an Environmental Impact Statement (EIS) [ldquo]to amend all land management plans on all units within the National Forest System[rdquo] (NFS). The purpose of which is [ldquo]to include direction to conserve and steward existing and recruit future old-growth forest conditions[rdquo]. Such is the language of the Notice of Intent (NOI) dated December 19, 2023. As stated in the NOI, this action begins the scoping process and predates preliminary action of the proposed EIS expected in May of 2024.

This NOI allows each Forest Service unit to adopt or create their own Adaptive Strategy for Old-Growth Forest Conservation. This amendment would add new restrictions on old growth logging and is a step toward fulfilling the promise of President Biden[rsquo]s April 2022 Executive Order 14072, which directed the Departments of Agriculture and the Interior to develop policies to conserve and address threats to mature and old growth forests on federal lands as a natural climate solution.

Gallatin Wildlife Association (GWA) has long been interested in issues dealing with climate change as a warming world impacts biodiversity as well as the existence of wildlife species. GWA is a local, all volunteer wildlife conservation organization dedicated to the preservation and restoration of wildlife, fisheries, habitat and migration corridors in Southwest Montana and the Greater Yellowstone Ecosystem, using science-based decision making. We are a nonprofit 501(c)(3) organization founded in 1976. GWA recognizes the intense pressures on our wildlife from habitat loss and climate change, and we advocate for science-based management of public lands for diverse public values, including but not limited to hunting and angling.

Our Nation's Forest has played a significant role in this country's economic and developmental history. Much of our Nation's Forest were used outside the normal confines of forest protection measures that we have available today, hence why it is estimated that 96% of this Nation's virgin forest has been cut¹ throughout our history. But even still, the protections of today fall way short of what is necessary to ensure our forest resources will be sustainable into the future. Today our Nation and our planet Earth face a new global threat, but also a new global challenge, that of global warming.

President Biden's Forest Executive Order 14072 entitled "[Strengthening the Nation's Forests, Communities, and Local Economies]" is one mechanism the Administration sought to address this global challenge. This NOI is part of that effort. Section 2 of the Executive Order (E.O.) recognizes the following.

"The distinctive role that Federal forest lands play in sustaining ecological, social, and economic benefits throughout the nation and calls particular attention to the importance of mature and old-growth forests on Federal lands for their role in contributing to nature-based climate solutions by storing large amounts of carbon and increasing biodiversity, mitigating wildfire risks, enhancing climate resilience, enabling subsistence and cultural uses, providing outdoor recreational opportunities, and promoting sustainable local economic development."

According to an original research article titled "[Mature and old-growth forests contribute to large-scale conservation targets in the conterminous United States]" (2022) by Della Sala², et al., climate solutions are limited by the harvest of old-growth trees. The many beneficial functions of old-growth trees are clear:

"Old-growth forest importance can also be described along a spatial gradient from individual trees within a stand to their context within watersheds and landscapes. At the tree level, the largest trees in old-growth forests may represent just 1% of all stems yet store at least 40% of the above-ground carbon as carbon stock increases with tree size as trees age (Stephenson et al., 2014; Lutz et al., 2018; Mildrexler et al., 2020). At the stand level, old-growth forests store 35 to 70% more carbon, including in the soils, compared to logged stands (Keith et al., 2009; Mackey et al., 2014; Mayer et al., 2020). Old-growth forest stands may also act as a natural buffer against extreme climate conditions (De Frenne et al., 2013; DellaSala et al., 2015; Frey et al., 2016; Betts et al., 2017). At the watershed level, old-growth forests maintain hydrological cycles (Perry and Jones, 2016; Crampe et al., 2021). In the Pacific Northwest, old-growth forests may function as fire refugia in large wildfire complexes (Lesmeister et al., 2021).

As we have just read, the value of mature and old growth forests has long-lasting value in terms of carbon sequestration. GWA would like to provide one more source of reference in this regard, that found in the online newsletter called The Conversation dated January 19, 2024. The article entitled "[Idquo]Old forests are critically important for slowing climate change and merit immediate protection from logging[rdquo]" by Beverly Law³ and William Moomaw state these facts in their opening paragraph.

[Idquo]Forests are an essential part of Earth[rsquo]s operating system. They reduce the buildup of heat-trapping carbon dioxide in the atmosphere from fossil fuel combustion, deforestation and land degradation by 30% each year. This slows global temperature increases and the resulting changes to the climate. In the U.S., forests take up 12% of the nation[rsquo]s greenhouse gas emissions annually and store the carbon long term in trees and soils.[rdquo]

The next several paragraphs read as follows.

[Idquo]Mature and old-growth forests, with larger trees than younger forests, play an outsized role in accumulating carbon and keeping it out of the atmosphere. These forests are especially resistant to wildfires and other natural disturbances as the climate warms.[rdquo]

[Idquo]Most forests in the continental U.S. have been harvested multiple times. Today, just 3.9% of timberlands across the U.S., in public and private hands, are over 100 years old, and most of these areas hold relatively little carbon compared with their potential.[rdquo]

[Idquo]The Biden administration is moving to improve protection for old-growth and mature forests on federal land, which we see as a welcome step. But this involves regulatory changes that will likely take several years to complete. Meanwhile, existing forest management plans that allow logging of these important old, large trees remain in place.[rdquo]

[Idquo]As scientists who have spent decades studying forest ecosystems and the effects of climate change, we believe that it is essential to start protecting carbon storage in these forests. In our view, there is ample scientific evidence to justify an immediate moratorium on logging mature and old-growth forests on federal lands.[rdquo]

GWA does not believe that a moratorium is included within the realm of the current amendment being proposed by this Administration. But GWA raises the issue here and suggest that perhaps it should be, at least it deserves further discussion.

The amount of available science promoting the importance of forests being critical in our self-regulating planet, especially in terms of carbon sequestration, is not new. But the amount of science reinforcing that belief is becoming insurmountable.

But as we shall see, the value of mature and old-growth forests also has long-lasting value in terms of biodiversity and ecological integrity. In using the DellaSala reference from above, we shall see the other benefits from the protection of mature and old-growth forests.

[ldquo]Old-growth forests (the most structurally advanced stage) generally have exceptional levels of biodiversity compared to logged forests (the least structurally advanced) (Luyssaert et al., 2008; Keith et al., 2009; Lindenmayer et al., 2012, 2014; Cannon et al., 2022). However, because of the timber value of older trees they are declining globally (Lindenmayer et al., 2012, 2014; Mackey et al., 2014). The loss of old-growth forests is coupled with changes to the global climate (Lawrence et al., 2022), reducing opportunities for natural climate solutions (Griscom et al., 2017; Moomaw et al., 2019). In the United States, conservation importance of old-growth forests has been recognized in every forested region, including Alaska (DellaSala, 2011; Orians and Schoen, 2012; Vynne et al., 2021; DellaSala et al., 2022), Pacific Northwest (Strittholt et al., 2006; Krankina et al., 2014), West (Rockies, Pacific Southwest, Southwest collectively: Kauffman et al., 1992, 2007), Central (Shifley et al., 1995), Great Lakes (Alverson et al., 1994; Carleton, 2003), Southeast (Hanberry et al., 2018), and Northeast (Davis, 1996; Leak and Yamasaki, 2012; Ducey et al., 2013).

Both roles enhance forest sustainability. As we move forward to combat climate change, we should ensure that all these forest characteristics work together in harmony, independent from human sources. They did at one time before colonialization. Our forest don[rsquo]t need constant managing, but what they do need is constant protection. GWA believes our anthropogenic society has taken a greater toll on natural processes than originally conceived.

GWA believes we are at, perhaps even beyond, an inflection point that will determine the climate future of this planet. There needs to be sound, firm, and quick action to curtail a warming atmosphere. As we have seen, the importance of utilizing the full purpose of our world[rsquo]s forests in climate mitigation cannot go quietly into the night. Our forests are part of the solution to climate change, and we need to ensure solutions exceed or at least are equal to the task at hand.

Bullet points below are specific concerns that we feel we must see in the upcoming EIS in addressing our climate challenge and biodiversity.

* We must recognize that our mature forests of today will be our old-growth forests of tomorrow. There must be

measures in place to preserve the abundance and distribution of our mature forests. This is especially true for the eastern half of our Nation, whereas most mature forests exist, and old-growth forests are nearly non-existent.

- * Serious consideration, perhaps even an alternative or two should include a moratorium on the logging of both mature and all old-growth forests Nationwide.

- * Acknowledge that logging, thinning, and vegetative treatments are a threat to carbon storage and biodiversity.

- * There are many Forest Service projects that are using vegetation treatments, thinning projects, and outright clearcutting as an excuse for fire prevention against wildfires on public lands, whereas they are an excuse for timber harvesting. This needs to stop.

- * It needs to be stressed that economic reasons should not be an excuse for continued mature or old-growth logging on federal, public lands. The creation of our forest preserves at the turn of the 20th century was not for job creation. It was for the higher ideal of conserving the resource, for the reliable watershed protection. We firmly believe the preservation of our climate and our world is a higher priority than jobs at this point in time.

- * Amendment needs to address, mitigate, and counter the loss of biodiversity across the landscape.

- * The amendment must recognize that old-growth forests encompass all vegetation within those designated forests and that those landscapes are not permissible to cut, treat, harvest, or remove material in any way from within a designated old-growth forests.

- * In the process of implementing this amendment, definitions must be inclusive of mature and old-growth conditions and easily understood.

- * The Forest Service must remove any and all exceptions for the cutting of the old-growth forests in the Tongass National Forest. The Tongass should be exempted from further logging of old-growth period.

- * There needs to be further and continued monitoring of both mature and old-growth forests so a monitoring network can be maintained.

- * GWA has previously urged the Forest Service to include carbon sequestration as a concept to be included within the Multiple Use-Sustained Yield Act of 1960. Forest Service should either contain carbon sequestration within that concept or have carbon sequestration an overriding policy of the U.S. Forest Service.

- * We also recognize that exceptions to any administrative rule or amendment may have to be entertained from time to time based upon human safety, those exceptions should be rare and specifically written to avoid abuse or overuse. Perhaps they should have some oversight by a regulatory panel to make sure they are not overused.

- * The alternatives in the DEIS should be sufficient in number and complexity to include several protective measures that enhance biodiversity and ecological integrity.

Conclusionary Remarks:

The time for allowing politics to play out in its own time has passed. This has done nothing but help delay action and provide time for others to mislead the public. Scientists and Administration officials need to have a strong discourse with the public over the issue of climate change and global warming. In that discourse, discussions can occur over the actions to be taken, and how this endeavor will be part of a much larger effort by the Administration to combat a changing, warming world. In the words of Dr. Martin Luther King, Jr. when he spoke at the March on Washington 61 years ago, he used the phrase [ldquo]the urgency of now[rdquo].⁴ Then he was referring to a divided Nation needing to heal itself. We still have that divided Nation, but we also need to work together to mitigate the climate crisis and that [ldquo]urgency is now[rdquo].

The thirteen bullet points above should be part of the DEIS and hopefully will be incorporated to some degree in the Final Environmental Impact Statement. Mature and old-growth forests must not be seen as two biotic communities, but as one integrated community, one that cannot be separated without harming the other. As

stated, mature trees of today will be our old-growth forests of tomorrow. Old-growth forests will eventually die, but this does not mean that forests are unhealthy or in need of management. If left alone, forests will reach a serene condition, a fairly stable community. GWA has stated before in editorials, etc., that mankind must learn to let a forest be a forest.

Allowing a forest to become itself and not some manmade concept is the only way to reach biodiversity, ecological integrity, balance, and sustainable harmony on the landscape. Our society must allow a tree to fulfill its purpose and allow the forest to do the same.

In the eleventh bullet point above, GWA has repeated our call in urging the Forest Service to change their paradigm and include carbon sequestration into their overall program. One suggestion was to recommend the Forest Service place carbon sequestration into their multiple use-sustained yield concept. GWA is pleased to find our call to such action is fairly similar to the recommendations found in the previous reference above by Beverly Law and William Moomaw. This is shown here.

[ldquo]Federal lands are used for multiple purposes, including biodiversity and water quality protection, recreation, mining, grazing and timber production. Sometimes, these uses can conflict with one another [ndash] for example, conservation and logging.

Legal mandates to manage land for multiple uses do not explicitly consider climate change, and federal agencies have not consistently factored climate change science into their plans. Early in 2023, however, the White House Council on Environmental Quality directed federal agencies to consider the effects of climate change when they propose major federal actions that significantly affect the environment.[rdquo]

Changing the paradigm will be a shift in Forest Service policy, but it is a necessary one in order to allow forests to become part of the solution. Forest carbon sequestration and allowing natural processes to be part of that solution is the intent of Executive Order 14072. This not only needs to be a national role, but a global one as well. We know that. We need leaders who will lead globally, but we also need leaders here at home to set an example for others to follow.

The science is telling us that we as a Nation can do two things at once. We can help preserve our climate and mitigate a warming world, while at the same time, provide sustainability to our biodiversity, our ecological integrity. That in and of itself will help cool a warming planet. Perhaps our mature and old-growth forests never had so much recognized importance in the welfare of our planet, but that has been the problem. That lack of acknowledgement of how our world works has left societies around the world take our forests for granted. That time needs to come to an end.

To help keep all things in perspective, GWA will showcase an article found in World Resources Institute dated January 21, 2021 entitled "[quote]Forests Absorb Twice As Much Carbon As They Emit Each Year[quote]" by Nancy Harris and David Gibbs⁵. There is this vital statistic.

[quote]New research, published in Nature Climate Change and available on Global Forest Watch, found that the world[rsquo]s forests sequestered about twice as much carbon dioxide as they emitted between 2001 and 2019. In other words, forests provide a [quote]carbon sink[quote] that absorbs a net 7.6 billion metric tonnes of CO₂ per year, 1.5 times more carbon than the United States emits annually.[quote]

In our conclusionary remarks, we would like to reaffirm our commitment to the protection of nearly 17 million acres of the Tongass National Forest in Alaska, our ninth bullet point above. We recognize that portions of this vast landscape have already been logged, but much of it has not. In fact, 9 million acres⁶ of forested land has been reinstated because of the 2001 Roadless Rule. Because of that, the Southeast Alaska Conservation Council claims the following.

The Tongass stores approximately 44% of the carbon contained in U.S. National Forests and is recognized as a globally significant carbon storage reserve.

This fact alone highlights the vital importance we place in our forests. We want to take that opportunity now and make sure our voices are heard when we say there is an intrinsic value in what lies before us, our Nation[rsquo]s forests. We must make sure our forests remain intact as forests, and that they fulfill their role in nature as designed. They need them to save ourselves and our planet from Man[rsquo]s own actions.

In as much as time is running out in our ability to comment, a new scientific paper has just recently become available for us to use as a reference. We suggest that scientists and administration officials within the highest levels of federal and state governments become familiar with the works of Kellett⁷, Michael J., et al. The article entitled "[quote]Forest-clearing to create early successional habitats: Questionable benefits, significant costs[quote]", found in Frontiers, Frontiers in Forests and Global Change states the faulty rationale that our society is touting before the public. This scientific journal should be required reading for both land and wildlife management agencies. We will quote three paragraphs from the text as they describe the causal-effect relationship between how current forests are managed and the effects they have on biodiversity, carbon sequestration, and human health.

Biodiversity:

[quote]The fragmentation of forests, particularly with roads and other human intrusion, can result in the decline of forest interior species. This can have significant impacts on the abundance, species richness, and community

dynamics of migratory birds (Small and Hunter, 1988; Askins, 1992; Hagan et al., 1996; Zuckerberg and Porter, 2010; Askins, 2015; Betts et al., 2022). Apex predators can be lost, leading to further biodiversity loss as well as altered dynamics of disease, carbon accumulation, invasive species, and biogeochemical cycles (Terborgh et al., 1999; Anderson et al., 2004; Estes et al., 2011; Terborgh, 2015). Even common forest species are subject to major declines due to loss of natural forest habitats. A global report shows a 69% decrease in monitored wildlife populations between 1970 and 2018, in large part due to habitat fragmentation and degradation (WWF, 2022). Fragmentation can increase prevalence of wildlife diseases including Raccoon Roundworm (*Baylisascaris procyonis*) (Wolfkill et al., 2021) and may be a factor in oak decline and loss of ecosystem services (Tallamy, 2021) as well as reduced underground biodiversity—a concern that is less explored in the Northeast and Upper Great Lakes than in western forests (Simard, 2021).

Carbon sequestration:

Forests influence water cycles, reduce local and global temperatures, and sequester and accumulate carbon. While carbon receives the most attention, multiple biophysical processes are crucial and interactive (Makarieva et al., 2020; Lawrence et al., 2022). Proponents of forest-clearing assert that carbon emissions are offset by increased sequestration rates of younger forests, by converting trees to wood products, by burning logging waste for bioenergy, and by forest carbon accumulation elsewhere—or that the amount of forest removal is so small as to be inconsequential (Hawthorne, 2020; Jenkins and Kroeger, 2020; USDA Forest Service, 2021a). On the contrary, these activities have significant climate costs, including the release of greenhouse gases from the cutting, processing, and transporting of trees for wood products; the disposal of waste and wood products; the release of methane from each log landing; the release of carbon from disturbed soils; and the loss of carbon uptake and accumulation by standing trees (Smith et al., 2006; Nunery and Keeton, 2010; Ingerson, 2011; Mika and Keeton, 2013; Catanzaro and Amato, 2019; Cook-Patton et al., 2020; Leturcq, 2020; Vantellingen and Thomas, 2021).

The amount of carbon lost when cutting a mature or old-growth forest is not recovered by fast-growing young forests for many decades to well over a century (Harmon et al., 1990; Aalde et al., 2006; Krebs et al., 2017). One study found almost no net carbon accumulation for 15 years after clearcutting—currently a critical time window for reining in global greenhouse gas emissions (Hamburg et al., 2019). In some cases, older forests are accumulating more carbon as the climate warms (Finzi et al., 2020), they are better able to withstand physiological stress, and they are also more resistant to the stress of climate change than younger forests, particularly regarding carbon storage, timber growth rate, and species richness (Thom et al., 2019). Soil accounts for approximately 50% of total ecosystem carbon storage in the Northeast, with mineral soils comprising the majority (Fahey et al., 2005; Petrenko and Friedland, 2015). Forest-clearing can mobilize and release soil carbon for decades (Nave et al., 2010; Petrenko and Friedland, 2015; Lacroix et al., 2016). It can take from 60 to 100 years for soils on a site to recover from clearcut logging (James and Harrison, 2016).

Impacts on Human Health:

With more than 50 million acres of U.S. forests projected to be developed over the next 50 years (Thompson,

2006), forest-clearing for early-successional habitats risks further loss of vital natural green space and threatens the stability of regional temperature and water cycles. All of these have impacts on communities. There is an increasing recognition that natural ecosystems offer the public numerous benefits to physical, mental, and spiritual health, as well as social well-being (Karjalainen et al., 2010; Berman et al., 2012; Buttke et al., 2014; Newman and Cragg, 2016; Hansen et al., 2017; Watson et al., 2018; Connecticut Department of Energy and Environmental Protection, 2020). Adolescents may benefit more from natural woodlands than other types of green space in terms of cognitive development and reduced emotional and behavioral problems (Maes et al., 2021). Natural areas are important places to avoid human-related noise and listen to sounds of the natural world, which can decrease pain, lower stress, improve mood, and enhance cognitive performance (Bratman et al., 2015; Buxton et al., 2021).

As one can tell, science does exist and is available to counter the narrative of current forest industry practices. By ignoring this scientific advice, we, meaning the societies on this planet, are truly digging ourselves into a deeper hole. Why, because they are not listening. They see dollars as the overriding and driving factor. We need bold and decisive leadership to counter the greed that is driving our planet into a darker and darker hole. We need someone to make the right positive decisions when it comes to climate, even though they may be unpopular at the time. We hope that the science as depicted above is self-explanatory. We know what we need to do, now we just need to do it.

Reference:

1. Save America's Forest, Citizen Action Guide

<https://www.saveamericasforests.org/pages/educationrtfacts.htm#:~:text=Of%20the%20original%201.04%20billi on,land%20and%20other%20public%20lands.>

1. Della Sala, Dominick A., et al., [ldquo]Mature and old-growth forests contribute to large-scale conservation targets in the conterminous United States[rdquo], *Frontiers in Forest and Global Change*, September 2022.

<https://www.frontiersin.org/articles/10.3389/ffgc.2022.979528/full>

1. Law, Beverly, and Moomaw, William, [ldquo]Old forests are critically important for slowing climate change and merit immediate protection from logging[rdquo], *The Conversation*, January 19, 2024.

<https://theconversation.com/old-forests-are-critically-important-for-slowing-climate-change-and-merit-immediate-protection-from-logging-220771>

1. [ldquo]Our Fierce Urgency of Now[rdquo], White House, Aug. 26, 2013.

<https://obamawhitehouse.archives.gov/blog/2013/08/26/our-fierce-urgency-now>

1. Harris, Nancy, Gibbs, David, [ldquo]Forests Absorb Twice As Much Carbon As They Emit Each Year[rdquo], *World Resources Institute*, January 21, 2021.

<https://www.wri.org/insights/forests-absorb-twice-much-carbon-they-emit-each-year>

1. Southeast Alaska Conservation Council,

<https://www.seacc.org/our-work/tongass/>

1. Kellett, Michael J., et al., [ldquo]Forest-clearing to create early successional habitats: Questionable benefits, significant costs[rldquo], *Frontiers, Frontiers in Forests and Global Change*, January 9, 2023.

<https://www.frontiersin.org/articles/10.3389/ffgc.2022.1073677/full>

ATTACHMENT: 20240131.Comments on Forest Service Amendment.docx is letter content.