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To:

Chris Mattrick, District Ranger

Cc John Sinclair, Forest Supervisor

Martina Barnes, District Ranger (adjacent)

Jay Strand, Forest Planner

I am writing to you directly as well as putting this comment in the Telephone Gap comment form to be part of the official record of decision. I do not want this to be missed by you or perhaps watered down through the process of aggregating and synthesizing comments. As a planner myself I appreciate the multidisciplinary process you have gone through to produce the Telephone Gap scoping document. The breadth of your analysis is impressive. I realize the GMNF offers a huge array of values and ecosystem services to society, but I am focusing my comments on one which I, and many others, consider to be THE overriding issue facing our society today, that of climate change and our forests' role in combating it. This is a long memo, but I hope you will read it through and consider the huge ramifications of what I discuss.

My experience if it can be helpful

Most of my career I have been a planner within government agencies or as consultant to them. I also have worked on large scale multidisciplinary real estate planning processes for major projects being built in the US and abroad. And, I have experience in marketing, advertising, and public relations, all critical to advancing new, creative endeavors. Unique to my experience, perhaps, was my tenure as executive director of Mobility Lab, a transportation think tank in Arlington County, Virginia dedicated to promulgating new best practices to local, state, and national decision makers.

This experience includes researching and developing best practices and policies and, equally important then marketing them to federal agencies, state agencies, federal state and local policy makers, nonprofits, businesses, and individuals. Nobody implements new practices if they are not aware of them or don't understand their benefits. That is what set Mobility Lab apart. We were embedded within the local transportation agency of Arlington County which enabled us to test, refine and prove our practices and then work through associations to promulgate them to the entire chain of entities mentioned above. I also served for many years on a subcommittee of the Transportation Research Board of the National Academies, which was an invaluable adjunct to our work and afforded access to many top-level decision makers. Our location in DC also enabled us to work directly with the top administrators of FHWA and FTA, and occasionally cabinet level officials. The business of developing and disseminating new industry policies and practices is an extremely complex undertaking, whether in FHWA, or USDA. It takes time, creativity, and perseverance, as I am sure you know.

Enough about my background, but if you think any of this experience might be valuable to your work, or to the planning process I recommend below if you choose to entertain that, I would be honored to be of service, as a retired but energetic professional.

My overall thrust

The overall thrust of my comment is simply this: climate change is such an urgent, overriding crisis that business as we have done it must change on a rapid basis; and forests, especially old forests, are one of our best, most immediate, and cost-effective ways of fighting climate change. I will examine this premise in both a technical science-based fashion as well as in an emotional and values-based fashion concerning the impact upon people. Like the many values of the forest, the whole range of climate impacts are valid, including human suffering and serious degeneration of quality of life.

This is a direct appeal to all of you (and your management team) as the ones who will make the decision on Telephone Gap and other critical Forest matters. As we all know people make decisions - not governments, or businesses, or bureaucracies, or policies, or procedures. In the end people decide. I know you are required to operate within the enabling law of the USFS, but you also have considerable discretion in how you implement the Forest Plan and projects. For example, the pace of projects approved, and acreage harvested has increased in the past few years. I am sure you have the discretion to slow that pace down again if you choose. Also, you have much latitude I am sure for creativity in the various silvicultural treatments you employ, some more disruptive to the forest than others.

The climate emergency now

Through my lens as a research manager, I have examined many reports on climate change, and the only rational conclusion I can reach is that we are in deep, deep trouble now. This is not about nameless future generations it is about our young people alive today. Unless we take dramatic action, we will almost certainly cross the tipping point of no return in the next 10-20 years. To illustrate this timeframe in a personal way, this will be before my two-year-old grandson Arlo is a teenager or at least before he finishes college. I don't want to condemn him and his generation, and his parents, to the chaotic future that is coming. We have heard warnings for decades about warming and tipping points, but they are finally coming home to roost in undeniable ways. Please watch this 13-minute PBS documentary about research on Tipping Points. It will probably change the way you think about climate change forever. It did for me, because it is downright terrifying, especially when I think of the impact on my sons and grandson. I suspect you may think about your kids as you watch it.

<https://www.pbs.org/video/what-will-earth-look-like-when-these-6-tipping-points-hit-gavfpl/>

Please take a look at these numbers and trends with me and see if you reach a different conclusion about the urgency of this. I hope I am wrong, but I don't see much hope for us unless we get mitigation actions into a much higher gear. I can provide sources for all this if you like.

The International Panel on Climate Change (IPCC) 2022 report is ringing the alarm bells about as loudly as they can be rung: "Any further delay in concerted global action will miss a brief and rapidly closing window to secure a livable future." The report focuses on the probable tipping point of 1.5 degrees Celsius above the preindustrial baseline and concludes that the world could exceed that threshold by as early as 2030 to 2040-just seven to 17 years from now.

It is easy for us to get a taste how bad 1.5 degrees may be, because climate related disasters are happening all around us, and we are only 1.1 degrees Celsius above the baseline today. In the US alone, virtually every year hundreds of people are dying of heat, wildfires, and unusual floods or ice storms (770 US climate-related deaths in 2021 alone). Thousands of people are flooded or burned out of their homes (15 percent of homes in the US destroyed or impacted in 2021). Many people are put out of work for long periods. Sea level rise will force evacuation of many coastal areas in the US in the not-too-distant future and much, much worse on some other continents.

One particular threat is worth looking at in more detail, because it illustrates so dramatically the magnitude and urgency of the situation. The southwestern states of California, Nevada, and New Mexico are on the verge of a water and electric power catastrophe within the next two to five years. The drought there is the worst it has been in 1,200 years, and it is estimated to be 40% worse because of global warming, including extreme heat and less

snow to replenish the reservoirs. Lake Powell and Lake Mead on the Colorado River that feed the Hoover Dam hydropower plant, are at the lowest level they have ever been and are unlikely to ever refill within our lifetimes. Lake Mead is dropping rapidly and is within 150 feet of "Deadpool level" at which the lake cannot flow, and the Hoover Dam will no longer be able to provide water and electricity to the surrounding three state region. Entire communities will be abandoned with lives and livelihoods wrecked. Those three states will be severely impacted economically, and the potential repercussions for the entire US economy are tremendous.

In addition to the human suffering, the US incurs billions of dollars in damages each year from these combined disasters (\$165 billion in 2022). This is a huge and growing drag on our economy. Even if we are not in the immediate path of a disaster, we all will feel the economic drag.

Dire projections and impacts

Looking ahead the 2022 IPCC Report projects five scenarios of warming, and all but the most optimistic shows us exceeding the 1.5 tipping point and never coming down. The best scenario climbs to 1.6 degrees as early as 2040, but then begins to decline slowly. The impacts even in that best case will be bad for at least 50 years, but at least they will slowly get better. The four worst scenarios climb 1.7, 2.0, 2.1 and 2.4 degrees by 2040, then increasing beyond that essentially forever. These scenarios are all predicated on how vigorously the world responds with meaningful actions; so, we can alter this; but it will take very, very drastic action to achieve either of the two best scenarios, which are the only fairly livable scenarios. The higher three scenarios are basically unlivable in many parts of the planet.

This time frame projected by the IPCC for urgently needed action is corroborated by the Global Carbon Tracker report of 2022 (presented at the 2023 UN Climate Change Summit) which stated: "If emissions were to merely stay flat at 2022 levels, the world would likely put enough carbon into the atmosphere to exceed the 1.5-degree Celsius threshold within nine years and exceed the 2-degree Celsius threshold within 30 years." Very grim indeed.

The IPCC reports have also examined in detail the impacts of these warming trends and they will get worse, and eventually catastrophically worse. Globally, millions of people face starvation and forced migration away from untenable living conditions, some of which is already happening. A recent UN report declared that as many as one hundred million people may be forced to migrate. The immigration issues that will ultimately be caused by a hundred million refugees are difficult to comprehend. Food shortages and instability will have severe global economic repercussions. Worldwide economic disruption and even endemic recession are easy to imagine given our recent experience with the global economic impacts of the pandemic and the war in Ukraine.

Even here in Vermont the future looks ominous. A 2022 EPA report shows that New England is one of the fastest warming areas on the planet, warming approximately 50 percent faster than the global average. Already in Vermont we are seeing damaging changes: milder winters with periods of erratic cold, ski areas struggling, pests moving in from the south, droughts and temperature changes threatening crops and forests. More intense and more frequent windstorms, ice storms, flooding, and even fires are likely to be on the horizon.

What can we possibly do?

I am going through my own process of trying to comprehend the magnitude of what this crisis means. How can it possibly be this bad? It is easy to be complacent in the face of such monumental issues. I wish it weren't true, but with so much at stake for our kids' and humanity's future, I realize I have to dig deeper and try to understand and figure out what I can do - what we all can do. I hope you at the GMNF will seriously examine what you can do too.

My general takeaway is that to solve this crisis, we all must do our level best in all sectors of the economy and in our lives. I'm not pointing any fingers. We all just have to jump in together in our own spheres of influence. The forests can't shoulder it all, of course, but their role is huge, and this is where the GMNF can have an outsized

role.

There are many promising things happening around the world, of course, in the oceans, other land-based opportunities, energy and food production, lifestyle, industry, etc. This is not hopeless. But virtually all these take time - time to be deployed and to scale up enough to turn the tide.

- Markets need to shift

- Supply chains must adjust

- New technologies need to be proven, funded, and deployed

- Funding for government and private initiatives needs to be procured

There is one major thing, however, that is immediate and money saving: stop cutting down our old and maturing forests.

Working toward a new paradigm

Scaling back on cutting the forests is complicated, nuanced, and will take skill and collaboration I realize. But I have faith that where there is a will, there will be a way.

I also feel that everyone is boxed into old paradigms, policies, and a 2006 Forest Plan based on even older science and practices that simply are not appropriate in today's situation. Now is the time to let them go. They no longer serve the future or the public's interests.

I am suggesting that you the managers of the GMNF lean your shoulders into moving the Forest Service towards a new paradigm in Climate-Smart Forestry. Not my term, others are using it, but our GMNF can lead the way nationally in a bold experiment for dealing with climate. You've probably already thought of this, and if so, I strongly encourage you. I have a lot of respect and confidence in your staff. I have talked with a number of them on various occasions. In particular, last year I carpooled with Jay Strand, Martina Barnes, and a botanist from Finger Lakes to an Early Successional Habitat tour and had an excellent time getting to know them and appreciating their sincerity and candor in discussing issues. I am impressed by everyone's knowledge, professionalism, and dedication to taking care of the Forest. From what I can see I think you have a great team in many disciplines if they can be given the latitude and leadership to work creatively on implementing a new climate-smart paradigm, collaborating with others in the community, as I suggest later in this document.

Garnering support, not opposition

Much of my planning work has included extensive public participation processes. As I have learned, these can be either perfunctory processes only done as required by law or policy makers, or they can be transparent and genuinely collaborative processes harnessing citizens' creative energy and support. Though it can be time consuming, citizens often provided good ideas we planners hadn't thought of. Very importantly, the processes often turned potential opposition into active support. I would strongly suggest you take this approach in thoroughly examining alternatives in the EA process, not simply doing the minimum to satisfy the law and not presenting a serious alternative.

Nobody wants a fight, not the GMNF, or political leaders, or the conservationists. I can easily imagine appeals, delays and potential lawsuits coming unless the EA process develops and analyzes a true alternative that takes climate change into account. Why not head that off by engaging with community groups who might be opposed and generate support instead? If we can develop a trusted working relationship among your professional team, perhaps additional outside consultants, community groups, and other citizens (without getting too unwieldy), I believe we can do great things. Vermont citizens care deeply about the Forest and are hungry to contribute. I would be honored to help in this.

Key issues

Here are some of the key issues that I believe need to be part of the new paradigm, incorporating newer research that must supplant the old science on which the 2006 Forest Plan and the Telephone Gap proposal

were based.

1. When any area is cut, whether a large clearcut, smaller patch cuts, shelterwood, etc. the area becomes a net SOURCE of carbon into the atmosphere for approximately 20 years before the small trees begin to outweigh, even in a small way, the carbon transpired from the soil. The new forest never realizes the same carbon storage and ongoing sequestration as the stand that was cut. This principle is fundamental to virtually every management treatment in the Plan and Project. See Dr. Bev Law's research brought vividly to life in this 10-minute PBS documentary. tinyurl.com/Forest-Carbon. Dr. Law was the prime mover behind development of a network of 1,600 research stations around the world supporting this data.

2. Old trees and the old and mature forests store by far the most carbon, not the younger vigorously growing trees as was previously thought. The vast preponderance of research over the past 20 years supports this, as documented in a 2022 synthesis by Law, Moomaw et al of papers by over 200 scientists. Forests sequester a huge 30% of the CO₂ emissions worldwide each year, and they store 50% of the existing above ground carbon. We simply cannot afford to cut them down any more than absolutely necessary. And, when they are logged it is important to do so in ways that minimize the amounts of carbon unnecessarily released.

3. The core concept of managing forests by cutting older trees to bend the forest to the Forest Service goals of uneven age categories (Forest Plan Goal 2 p. 11, Project Section 2.1 p. 7-11) is outmoded in the face of the climate crisis and needs to be reevaluated. The forests in Vermont had been thriving for thousands of years on their own before European settlers arrived and cut most of them down, and they do not need human assistance to achieve optimal health. Forests take care of themselves just fine by their own natural processes, though there may be circumstances such as severe pest infestations that warrant exceptions. Left alone, they will continue to sequester and accumulate up to four times the carbon they now store as they mature back to their true old-growth characteristics. These sections of the Plan and Project should be removed or altered. I don't say this lightly as I realize this has been USFS policy for a long time, but it simply runs counter to the latest science and the actions needed today for the forest to mitigate the effects of climate change.

4. Many people contend that the forests on public lands should be permanently protected as carbon reserves and privately owned forests using climate-smart forest management should supply the timber society needs. I support this.

Key questions

Certainly, there will be lots of issues to balance. I realize this is complicated.

-How much wood is truly needed for what essential purposes, as opposed to discretionary purposes?

-What is the most climate-friendly way to get it?

-When timber is cut on the GMNF, how much goes into durable wood products that store carbon, and what about the losses from milling and emissions from logging? How much goes into nondurable products or is burned as biomass and immediately releases carbon to the atmosphere? Should the GMNF consider restrictions on where the timber goes?

-Maybe we as a society need to phase out biomass on an industrial scale, and rate its true carbon emissions, factoring in the actual combustion when it is burned.

-Maybe it is time to phase out the early successional habitat policy from the US Forest Service. And perhaps also tackle the national goal of the Young Forests Initiative which I understand is to cut 11 million acres for habitat creation for no demonstrated timber needs and to essentially support game species that are not endangered. I have been a lifelong hunter, so I am definitely not against hunting, but this is a truly irresponsible national program, if I may say so, in today's context. I realize it is supported by the USFS, most state forest and game agencies, and a host of private groups, but from a climate standpoint it is just plain wrong, especially at this moment in time and in light of the key research cited above.

I realize these are huge issues and questions to take on, but someday we must, and the sooner we start the better. The stakes are simply too high not to do so.

Specific recommendations

In addition to the above issues, I respectfully recommend several specific things in this process:

1. Take your foot off the gas. Pause the Telephone Gap project until you can figure out the best course. Also, within the approximately 40,000 acres of other approved projects, delay sales that are not already contracted. Every stand we don't cut now helps us in the climate fight during the critical 10-20 years ahead.

2. Give yourself some time, a year or more, to build on the good work you have already done on the Tel Gap project and develop this citizen-engaged planning process. There is nothing that says the EA needs to be done on the timetable you have presented, is there? The EA should include such a serious alternative.

3. Revise the 2006 Forest Plan and EIS to address the impact of forest management on climate change and bring the Plan into compliance with President Biden's Executive Order 14072. This doesn't have to be a full scale revision, but can be targeted to the necessary provisions. Please stop the Telephone Gap project until this is done.

4. Develop a well-thought-out Climate-Smart Forestry strategy that can be the beginning of a new paradigm for the nation. The idea of a national trend setter coming out of Vermont and the GMNF is a really exciting thought! Given the over 1,000 official comments and nearly 13,000 signatures from around the country in opposition to Telephone Gap, I think this idea is an imperative whose time has come. We might be able to attract significant funding from many sources to support such an innovative concept.

5. Based on research I have been able to find, true biodiversity can best be protected and encouraged by retaining the old and mature forests and letting them continue to achieve full old-growth characteristics. The biodiversity that the project and Plan claim to promote is relatively artificial encouragement of species not predominant in the old forest-species that can undoubtedly find sufficient habitat on private forests and farmlands. The species encouraged by clearcutting and its variants are not endangered, even though they are declining in this region as the forest reverts to its natural condition. Many scientists consider biodiversity and extinction as crises nearly as large as climate change and inextricably interrelated with it. This should be addressed in a new approach.

Sadly, there is a certain inevitability about the climate crisis. The USFS' leadership can still ignore it if they choose to, digging the hole deeper while citing any number of reasons. But, if current trends continue, the USFS (and the world) will be forced to deal with it soon, when the situation is more dire, your options are fewer, and your challenges much more difficult.

I hope you and other USFS leaders will rise to meet the challenge of climate change at this critical moment in time, and help get the nation, Vermont and the GMNF on a path to climate-smart forestry. All our young people today and generations beyond need your bold and principled leadership right now.

Sincerely,
Howard Jennings