Data Submitted (UTC 11): 4/18/2022 4:00:00 AM
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Comments: The USFS site and all USFS documents should be linked to the 2022 IPCC report, rather than the 2018 report.

The Lake Tarleton documents failed to account for the effects of logging on carbon sequestration, diversity and severe dearth of old growth forests in WMNF.

The Lake Tarleton logging documents failed to account for the cumulative effects of logging on global warming: "Forest Service Categorical Exclusions Challenged in Virginia Federal Court. A lawsuit filed in the federal district court for the Western District of Virginia challenged three categorical exclusions adopted by the U.S. Forest Service to exempt certain projects from NEPA review. The three categorical exclusions are for commercial logging projects up to 2,800 acres and construction of up to three miles of logging roads; construction of up to two miles of permanent road for any purpose; and "special use" authorizations for private uses affecting up to 20 acres of national forest lands. The complaint asserted that the final rule violated NEPA and the Administrative Procedure Act, including because the Forest Service did not consider the exclusions' impacts in light of conditions that are rapidly changing due to climate change. The complaint also alleged that the final rule would allow significant climate impact to occur without analysis "[b]ecause there is no programmatic analysis of the cumulative impact of successive projects on carbon storage." The plaintiffs contended that the Forest Service should have prepared an environmental impact statement or an environmental assessment to address, among other subjects, the rule's impact on efforts to limit greenhouse gas emissions." 1/8/2021 http://climatecasechart.com/climate-change-litigation/case/clinch-coalition-v-us-forest-service/.

The Lake Tarleton Logging Project EA and other documents failed to take the best science into account, most importantly, recent data on climate change which shows that intact forests accomplish USFS habitat diversity and carbon sequestration goals: "Intact forests[mdash]largely free from human intervention except primarily for trails and hazard removals[mdash]are the most carbon-dense and biodiverse terrestrial ecosystems, with additional benefits to society and the economy.

The EA describes old growth in a misleading and inaccurate way. It gives the impression that old growth forest is dark and smothering, without forest openings or young trees. The Revised EA states: "The proposed action affects a relatively small amount of forest land and carbon on the White Mountain National Forest and, in the near-term, might contribute an extremely small quantity of greenhouse gas emissions relative to national and global emissions (Dugan and McKinley 2019)." Engaging in the tragedy of the commons is not an adequate response to climate change. "The proposed action would not convert forest land to other non-forest uses, thus allowing any carbon initially emitted from the proposed action to have a temporary influence on atmospheric greenhouse gas concentrations, because carbon will be removed from the atmosphere over time as the forest regrows."

The Tarleton project documents provide no real comparison between carbon sequestered by a forest left alone for 100 years and one logged. "Temporary influence" is meaningless now that we have dumped so much CO2 into the atmosphere that at least 3 degrees warming is inevitable even if we stop emitting CO2 right now, which we won't. This statement is grossly irresponsible, misleading and calls into question the accuracy of the whole document. The graphs in the Carbon report submitted with the rest of the Lake Tarleton documents show that WMNF is losing carbon through logging. We have no sequestering capacity we can "give up" at this point, without increasing the rate of ecological collapse. The EA fails to acknowledge and incorporate the 2022 IPCC report.

The Lake Tarleton EA provided no sources to support the statement that: "The prescribed treatments enhance the diversity of tree species, ages, and structures that are present in forest ecosystems, and this diversity can increase the ability of forests to withstand increasing pressures from climate change and other stressors." This assertion is contradicted by this 2019 paper: "Intact forests[mdash]largely free from human intervention except primarily for trails and hazard removals[mdash]are the most carbon-dense and biodiverse terrestrial ecosystems, with additional benefits to society and the economy. Internationally, focus has been on preventing loss of tropical forests, yet U.S. temperate and boreal forests remove sufficient atmospheric CO2 to reduce national annual net emissions by 11%. U.S. forests have the potential for much more rapid atmospheric CO2 removal rates and biological carbon sequestration by intact and/or older forests. The recent 1.5 Degree Warming Report by the Intergovernmental Panel on Climate Change identifies reforestation and afforestation as important strategies to increase negative emissions[hellip]" https://www.frontiersin.org/articles/10.3389/ffgc.2019.00027/full "In the absence of forest harvest, the forest where this proposed action would take place would thin naturally from mortality-inducing natural disturbances and other processes resulting in dead trees that would decay over time, emitting carbon to the atmosphere."

The project documents provides no figures comparing the tree loss from the proposed logging to the tree loss that would happen over the next 200 years if the forest was left alone. The graphs in the Carbon report show that not-logging increases carbon stored in the forest, so the statement above is basically meaningless except for providing the appearance of analysis, care. "Furthermore, the proposed project would transfer carbon in the harvested wood to the product sector, where it may be stored for up to several decades and substitute for more emission intensive materials or fuels. This proposed action is consistent with internationally recognized climate change adaptation and mitigation practices." Any action is consistent with internationally recognized climate change adaption and mitigation practices, especially when most of the practices are devised by entities controlled by industries that are opposed to any recommendations or actions that limit their profits. The question is, is the logging consistent with a rational approach to global warming. It is not. WMNF must take on the role of protecting the forest and stop all logging on our public lands, and let the corporate forest owners log. "Hydrology The proposed action is consistent with the laws and policies related to the Clean Water Act. Project design, including design features, and best management practices would reduce or avoid impacts to water quality or quantity to de minimis levels. No measurable adverse effects to water quality or quantity are expected due to project implementation."

The project documents provide no data showing that logging does not adversely affect watersheds. The following sources contradict the EA: 1.) "In addition to terrestrial impacts, timber harvesting may have significant effects on stream discharge and water quality. Loss of mature vegetative cover leads to decreased evapotranspiration and correspondingly increased peak flows. These effects are compounded by road construction, which creates permanently bare surfaces and compacts soil, resulting in decreased infiltration and increased surface runoff. Logging roads also fragment and isolate habitat patches from smaller, less mobile animals such as salamander species, and roads' stream crossings and culverts sometimes become barriers to fish passage. Surface runoff on or near logging roads effectively increases stream density in logged watersheds, resulting in more rapid drainage and higher fluctuations between peak flows and base flow. Increased surface runoff, along with fewer trees for bank stabilization, generally causes increased erosion and siltation, while road construction on steep slopes often results in slope failure and excess sediment delivery to streams. Overall effects can also include elevated and more variable water temperature, increased turbidity, and higher uniformity of substrates, which generally impair habitat for a number of fish and invertebrate species. Riparian buffers are required in many jurisdictions, but these have not always been successful in mitigating effects on streams. In general, it should be recognized that the effects of logging on stream discharge and temperature are caused by watershed-level processes and, as such, are unlikely to be completely mitigated by riparian buffers alone. (Harr 1986, Murphy 1995, Jones and Grant 1996) A major change in federal land management policy in the 1990s has begun integrating watershed analysis into timber management and multi-purpose land management on federal lands across the US." US EPA 2.) "In the humid Northeast, the greatest increase in streamflow occurs during the first growing season after the clearcut. But in following years, as the area begins to revegetate, the increased flow lessens. Five to ten years

after the cut, streamflow may return to precut levels. This effect on quantity is most important to managers of water-supply watersheds. Of greater concern to woodland owners is the effect of timber harvesting on water quality. Because of the possibility of accelerating erosion, logging can contribute to sedimentation[mdash]the most damaging and widespread water pollutant from forested watersheds. Sediment harms water resources by destroying fish habitat, reducing the storage capacity of reservoirs, and increasing treatment costs for municipal water supplies. The greatest problems do not occur as a result of the actual cutting of trees, but from moving them out of the forest, which requires the use of heavy equipment on a system of trails and roads. If the transportation system is not carefully designed and maintained, erosion on the watershed can be greatly increased because roads account for the vast majority of sediment associated with timber harvesting." Penn State Extension 3.) "Nitrogen (N) and phosphorus (P) concentrations and loads increase in receiving waters after clear-cutting because the removal of trees decreases water and nutrient uptake and increases runoff (Vitousek et al. 1979; Stednick 1996; Kreutzweiser et al. 2008). In addition, increased soil temperatures following clear-cutting accelerate mineralization and nitrification in the soil (Paavolainen and Smolander 1998; Smolander et al. 2001) and nutrients are released from decomposing logging residues (Palviainen et al. 2004). Clear-cutting may also increase total or dissolved organic carbon (TOC, DOC) export (Lamontagne et al. 2000; Schelker et al. 2012, 2014), which have implications for catchment carbon budgets (Schelker et al. 2012), the structure of aquatic food webs (Jansson et al. 2000), the acid-base chemistry of surface waters (Buffam et al. 2008), and the mobility, toxicity, and bioavailability of trace metals and organic pollutants (Porvari et al. 2003; Bergknut et al. 2011). The impacts on water quality are long-term and they are generally at its greatest during the first years after clear-cutting (Ros[eacute]n et al. 1996; Ahtiainen and Huttunen 1999; Palviainen et al. 2014). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4552712/ "This is the stage of forest development at which the rate of carbon sequestration is highest, as the amount of leaf area and the rate of photosynthesis peak during this period of high tree-to-tree competition. These higher rates generally occur when the forest is approximately 30-70 years old or the trees are approximately 4"-16" in diameter, though the specific age and size will depend on such factors as site quality and land-use history. Soon after the forest canopy closes, the overall growth of the forest slows down and, with it, the sequestration rate. However, trees continue to sequester significant amounts of carbon in order to grow and maintain themselves. One important thing to recognize is that the forest might actually be a source of carbon immediately following a disturbance, as rates of tree growth, although rapid, are unable to counteract losses of carbon due to the decomposition of organic matter in the soil. This loss of carbon from decomposition is enhanced when large openings are created in the forest, which increases soil temperature and moisture availability and hence microbial activity. It generally takes 10-15 years before there is enough forest growth to shift a disturbed area from a carbon source to a carbon sink... Old-growth forests can provide us a guide as to how much carbon mature forests store. Estimates of the carbon stored in these forests range from 100 to 120 metric tons of carbon per acre (Hoover, Leak, and Keel 2012). Due to our past land-use history, our current forests are relatively young, many around 100 years old, and generally store 60-80 metric tons of carbon per acre. Carbon in our current aged forests accumulates at a rate of about 0.41 metric tons per acre each year in a typical maple-beech- yellow birch forest (Smith et al. 2006). Given this rate of carbon accumulation, our current maple- beech-yellow birch forests would need to continue growing at this rate, without a major forest disturbance, for about another 100 years before they would have the levels of carbon storage that we find in old-growth forests. Future gains in forest carbon will primarily come from the diameter growth of trees, additions to the deadwood pool from dying trees, and the accumulation of soil organic carbon from root growth and decomposition."

The Tarleton Lake logging documents provide no cumulative measure of the carbon loss caused by its logging and its effect on climate change. "What is the recipe for getting people to accept unsightly practices like clear-cutting? Give them plausible sounding reasons: tell them that the forest is unhealthy, that red maple is taking over, that alien species are invading, that trees will fall on people, that there is an unacceptably high fire danger, that a hurricane will blow everything down. Sound familiar? Presumably, clear-cutting is needed to help avert such impending catastrophes. But if people aren't buying, what then? Push the "early successional habitat" argument. Win support from a naive public by insisting that we need more cottontails and game bird species, of a mid-1800s landscape. Have I missed any of the arguments?"