February 27, 2022

Cynthia Simonds

Objection Reviewing Officer

USDA Forest Service Southern Region
160 Zillicoa St., Suite A
Asheville,NC 28801

Re: Commenting on Nantahala and Pisgah NFs Plan Revision #43545

To Objection Reviewing Officer:

I am a resident of Black Mountain, N.C., and I am passionate about our natural spaces. I am a member of the Garden Club of America, the Black Mountain Beautification Committee, and a volunteer with several local organizations promoting greenways, pollinator gardens, and native plants. I am a grandmother, a gardener, a beginning bird watcher, an enthusiastic hiker, and an occasional biker.

The motto of the U.S. Forest Service is "To sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations." There is no substitute for protecting existing old-growth forests, and every inch of them needs to be protected. In addition, more area needs to be designated to grow old and become old- growth. Large, older trees have been found to grow faster and absorb carbon dioxide more rapidly than younger, smaller trees. Native forests, in terms of their value as carbon storage, significantly outweigh their value as pulp and timber. When you add that to the value of biodiversity and water, it's pretty clear what forest policy should be. Old growth forests should not be touched, there are just too few of them left.

https://www.highlandsnews.com/local-news/final-revision-nantahala-pisgah-forest-management-plan-released
https://biologicaldiversity.org/w/news/press-releases/forest-service-proposes-quadrupling-timber-harvests-in-countrys-most-popular-national-forest-2022-01-21/

OLD GROWTH

"There are a handful of high priority issues, and the old growth is probably the most outstanding by consensus of the group," Hayler said. "The forest service will tell you that they have increased their old growth acreage in the network, but then you have to take the next look at it and say not all of that is old growth. If old growth is found during a project implementation phase, like a timber harvest, there is no guarantee that it will be protected. It can be cut. The very fact that the forest service, in this new plan, is still not protecting existing old growth is emblematic of the mindset of the agency that harvesting timber is their highest priority."

"...we believe that the best available science points to climate change as being an existential threat to our human race and the plants and animals that are with us. To address climate change, the best thing you can do is to protect ecosystems that sequester carbon. All of that points back to preserving old growth. So, for the forest service to claim they are using the best available science, but allow the harvesting of existing old growth on the ground, what year is this? This is ground zero on using best available science and how it should be applied to manage our public land."

Forests function as some of the planet's vital organs, often being described as the lungs of the Earth. The colonization of land by plants between 425 and 600 million years ago, and the eventual spread of forests, helped create a breathable atmosphere with the high level of oxygen we continue to enjoy today. Forests suffuse the air with water vapor, fungal spores and chemical compounds that seed clouds, cooling Earth by reflecting sunlight and providing much-needed precipitation to inland areas that might otherwise dry out. Researchers estimate that, collectively, forests store somewhere between 400 and 1,200 gigatons of carbon, potentially exceeding the atmospheric pool.

Crucially, a majority of this carbon resides in forest soils, anchored by networks of symbiotic roots, fungi and microbes. Each year, the world's forests capture more than 24 percent of global carbon emissions, but deforestation — by destroying and removing trees that would otherwise continue storing carbon — can substantially diminish that effect. When a mature forest is clear-cut, the planet loses an invaluable ecosystem and one of its most effective systems of climate regulation. The razing of an old-growth forest is not just the destruction of magnificent individual trees, it is the destruction of an ecosystem.

In a thriving forest, a lush understory captures huge amounts of rainwater, and dense root networks enrich and stabilize the soil. Clear-cutting removes these living sponges and disturbs the forest floor, increasing the chances of landslides and floods, stripping the soil of nutrients and potentially releasing stored carbon to the atmosphere. When sediment falls into nearby

rivers and streams, it can kill fish and other aquatic creatures and pollute sources of drinking water. The abrupt felling of so many trees harms and evicts countless species of birds, mammals, reptiles and insects.

We need to prioritize management practices that mitigate the effects of climate change, foster biodiversity, and protect native plant communities and endangered species.

https://www.pacificforest.org/ee-old-trees-store-more-carbon-more-quickly-than-younger-trees/
https://e360.yale.edu/features/why-keeping-mature-forests-intact-is-key-to-the-climate-fight
https://www.usgs.gov/news/large-old-trees-grow-fastest-storing-more-carbon
https://foreststewardsguild.org/old-growth/
https://www.blueridgeoutdoors.com/magazine/july-2005/ancient-appalachia-the-southeasts-old-growth-forests/
https://biologicaldiversity.org/w/news/press-releases/missing-link-in-bidens-climate-agenda-letting-older-trees-grow-2022-02-15/
https://www.climate-forests.org/post/eastern-forests-an-untapped-carbon-storage-and-biodiversity-stronghold

"Our publicly owned national forests are far more valuable standing than chain-sawed down," wrote Harlan in a Jan. 21 press release. "Protecting drinking water, clean air, scenic views, iconic trails and old-growth forests will provide far more benefits than board feet of timber."

The Forest Service has failed to properly analyze 5,000 acres of the Craggy/Big Ivy section of Pisgah National Forest in its draft ROD and FEIS. As a result, it has failed to include these key conservation and recreation areas in its Forest Scenic Area designation. Instead, it has placed these areas—which include old-growth forests, popular recreation trails, panoramic vistas, and municipal drinking water sources—in its highest priority logging designations.

The Forest Service has also failed to fully consider and analyze the proposed Craggy National Scenic Area. Accordingly, the Forest Service must amend its plans to include 5,000 acres of Snowball Mountain, North Fork, Shope Creek, and Ox Creek in its Forest Scenic Area and fully consider recommending the proposed Craggy National Scenic Area.

The U.S. Forest Service received an unprecedented, record-setting number of comments on the Nantahala Pisgah Forest Plan. Over 22,000 comments were received by the U.S. Forest Service. 92 percent of all comments supported more protected areas in the Nantahala and Pisgah National Forest. They also supported stronger and more permanent protections for the most important recreation and conservation areas in the Nantahala Pisgah National Forest.

Over 10,000 public comments—nearly half of all comments submitted on the Nantahala Pisgah Forest Plan—supported the complete Craggy National Scenic Area.

The Buncombe County Commission also passed two unanimous bipartisan resolutions in 216 and again in 2020 supporting the entire 18,000-acre Craggy National Scenic Area. Asheville City Council has also passed a unanimous bipartisan resolution in 2020 supporting the entire Craggy National Scenic Area.

The Nantahala Pisgah Forest Partnership—a coalition of over 30 diverse organizations, including the forest products industry, hunting organizations, and recreation groups—have endorsed the entire Craggy National Scenic Area as their top priority consensus recommendation.

Over 150 local businesses and organizations have also endorsed the entire Craggy National Scenic Area.

In addition, over 300 community members attended a Forest Service meeting at the Craggy/Big Ivy Community Center in February 2015 to support the permanent protection of the Craggy/Big Ivy section of Pisgah National Forest. The community center was completely filled and standing-room-only, and many additional community members waited outside in the parking lot on a cold winter evening for the opportunity to express their support for protecting the Craggy/Big Ivy section of Pisgah National Forest.

Despite this clear mandate from the local community, political leaders, stakeholders (including the timber industry and hunting organizations), and the public, the FEIS and ROD places over 5,000 acres of Craggy's most important conservation and recreation areas in the Matrix Management Area.

I object to the Forest Plan for the above reasons, and I am also interested in joining an objection to the plan as an interested party.

Placing 5,000 acres of Craggy's most important recreation and conservation areas in Matrix Management Area disregards the unanimous and overwhelming local and community support, support from stakeholders, and support from business and local leadership.

The plan fails to consider these important attributes of the areas it has place in high priority logging areas:

1. The significance of protecting the Ivy River headwaters. The Craggy/Big ivy section of Pisgah National Forest is the headwaters for the Ivy River, the drinking water supply for the town of Weaverville, N.C. Craggy's headwaters also provide an alternate drinking water supply for the town of Mars Hill, and the Ivy River headwaters are also interconnected to the Asheville water system.

2. 1,500 acres of old-growth forests. (See opening statements) Dr. Alan Smith, emeritus professor of biology at Mars Hill University, has inventoried over 1,500 acres of old-growth in the Snowball and North Fork sections of Big Ivy.

ENDANGERED SPECIES

(https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3797968.pdf):

3. Habitat for federally listed endangered species and species of conservation concern. The portions of Craggy placed in Matrix shelter a diversity of wildlife and provide habitat for federally listed species and species of conservation concern, including Carolina Northern flying squirrel, spruce-fir moss spider, rock gnome lichen, Northern long-eared bat, tricolored bat, little brown bat, and cerulean warbler.

The bog turtle has also been listed as a concern: https://defenders.org/sites/default/files/2022-01/Petition%20to%20Reclassify_List%20the%20Southern%20Population%20of%20the%20Bog%20Turtle%20%28Glyptemys%20muhlenbergii%29%20as%20Endangered%20or%20Threatened%20Under%20the%20Endangered%20Species%20Act_Submitted%20by%20Defenders%20of%20Wildlife%20%28Jan.%2027%2C%202022%29.pdf

Birds: Audubon Society cites concern for the status of birds such as the Veery, Broad-winged Hawk, Peregrine Falcon and Blackburnian Warbler. See their comments on the plan (https://nc.audubon.org/news/speak-birds-nantahala-pisgah-forest-plan):

Old Growth Forest: The Nantahala and Pisgah forests include old growth forest as well as areas that will be old growth in the future. These forests are rare across the landscape and provide critical habitat for birds that thrive in dense interior forests, species like Veery, Broad-winged Hawk, and Blackburnian Warbler. Not all of these places are currently protected from active management that degrades their old growth condition, such as timber harvesting. Recommendation:

- Existing old growth forests should be protected in designated old growth networks.
- Places that are projected to become old growth forest in the future—backcountry areas and conservation lands like Mountain Treasure Areas, for example—should be added to designated old growth networks as well.

State Natural Areas: The North Carolina Natural Heritage Program has identified habitats across the forests that hold our state's best examples of unique ecosystems, biodiversity hotspots, and rare plant and animal communities. Recommendation:

- Timber production shouldn't be permitted in these designated natural areas.
- These designated natural areas should be managed only to maintain their rare or exemplary ecological values.

Unroaded Areas, or Wilderness Inventory Areas: Wilderness Inventory Areas are some of the wildest and most remote places within the Nantahala and Pisgah forests. One of the defining

characteristics of these places is that they have very few roads, or none at all. But many of these places could still see active management, such as timber harvesting.

These unprotected wild places represent our best opportunity to maintain large, intact forests in perpetuity, places where natural processes help ensure birds like Ovenbird and Blue-headed Vireo survive and thrive long into the future. This is especially important in the face of habitat fragmentation and forest loss on private lands in the region. Recommendation:

- All Wilderness Inventory Areas should be managed to maintain or restore their wildland values and should be off limits for construction of utilities, highways, and energy development.

Congressional Designation: There's no stronger land protection classification in the U.S. than official Wilderness designation. For rivers, the equivalent designation is Wild and Scenic. The protections of Wilderness Areas and Wild and Scenic Rivers allow natural processes to take place on the landscape and protect the birds that depend on them.

In the face of the many pressures on our forests, Audubon and our partners are advocating for Wilderness and Wild and Scenic designation for the landscapes and rivers listed below. All told, these recommendations, along with existing Wilderness Areas, only account for about 175,000 acres of the total forest, or 17 percent of Forest Service land. Recommendation:

- The following areas should be recommended for Wilderness or National Scenic Area designation: Craggy/Big Ivy (Wilderness and National Scenic Area), Overflow, Black Mountains, Mackey Mountain, Joyce Kilmer Extensions (excluding Yellowhammer), Southern Nantahala Extensions, Ellicott Rock Extension, Shining Rock Extensions, Harper Creek, Lost Cove, Snowbird, Tusquitee, Unicoi & Cantrell Top, and Middle Prong Extension.
- The following rivers should be included as Eligible Wild and Scenic Rivers: North Fork of the French Broad, Panthertown Creek, Greenland Creek, the East Fork of the Tuckasegee, the East and West Forks of Overflow Creek, and nine additional miles of Fires Creek. In addition, Big Laurel Creek and the West Fork of the Pigeon should be reclassified as "scenic" rather than "recreational" streams, and Overflow Creek, Thompson River, and Whitewater River should be reclassified as "wild" rather than "scenic."

Recreation and Trails: North Carolina's national forests have enough space to support all kinds of people and activities, from bird watching to mountain biking. As population growth continues to expand in areas around our forests, these public lands have only become more important and popular for recreation.

This can put pressure on birds and the places they need, but it also presents new opportunities and constituents for conservation. Our recommendation:

- The natural setting and biodiversity of the forests will always be the biggest draw for visitors and should be protected to the greatest degree possible.
- The plan should continue to support conservation and protection of Peregrine Falcons through monitoring, seasonal closure of select rock faces, and collaboration with the climbing and outdoor recreation community.

Ecological Restoration: Ecological restoration can help breathe new life into degraded sections of the forest. Restoration work can help improve biodiversity, water quality, and resilience to climate change. Our recommendation:

- Include Ecological Interest Areas in the plan. These are areas of high ecological value identified as potentially benefiting from restoration work.
- Include a list of specific priorities for ecological restoration and ensure that they are actually included in projects when opportunities are present.

Climate Change: As Audubon's 2019 Survival by Degrees Report shows, climate change and the immediate threats associated with those changes (extreme rain events, spring heat, etc.) pose an existential threat to birds.

The large, intact forests of western North Carolina create a natural system more resilient to these threats, and management and restoration should protect that function rather than degrade it. Our recommendation:

- The plan must require that all infrastructure (e.g. stream crossings and culverts) be designed and maintained to accommodate increased storm intensity and frequency.
- The Forest Service should monitor how phenomena like droughts and fires affect the forest and commit to mitigating their impacts if we begin to see more impacts from these threats.
- New or reconstructed stream crossings under roads must provide passage for fish and other aquatic organisms.
- Unroaded areas should be protected to provide intact, connected forests.
- The Forest Service should provide a full accounting of the Nantahala and Pisgah National Forests' role in sequestering and storing carbon.

Arthropods, including the endangered spruce-fir moss spider and the noonday globe (https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3793079.pdf)

(https://www.mdpi.com/1999-4907/8/4/97/htm):

Although efforts to protect increasingly isolated remnants of old-growth forest typically focus on endangered plants and vertebrates, arthropods are equally important to the functioning of forest ecosystems and are vulnerable to extinction through loss of old-growth forests. In fact, the value of old-growth forests may lie primarily in their diversity of native species that provide population sources for colonization and ecological functions in regenerating forests. In particular, the diversity of plant species, predaceous arthropods, and insectivorous vertebrates in old-growth forests help maintain lower abundances of herbivores than often occur in younger, managed, forests. Arthropod diversity generally increases with forest age, time since prior disturbance, and the remaining area of forest. Remnant old-growth forests are particularly rich in arthropod biodiversity. The number of arthropod species known to be associated with old-growth forests is likely to grow over time as more data become available, given the high diversity of plant species and habitats in these forests. Old-growth arthropods often have limited mobility, and many are flightless, making them vulnerable to forest fragmentation. Furthermore, populations of arthropods typically are more stable in old-growth forests than in younger forests. Many species are particularly important in maintaining ecological processes that sustain forest production and ecosystem services. Forest canopies provide a wide variety of temperature and moisture conditions, as well as structurally-complex branching patterns, multi-layered canopy structure, and chemically-distinct foliage qualities of diverse tree species, and may host half of the world's species. Old-growth forests, in particular, typically provide the richest diversity of plant species, habitats, and vertical and horizontal gradients in temperature, moisture, and soil type that, in turn, support the richest diversity of associated herbivores, detritivores, and their predators and parasites, compared to younger forests. By contrast, younger, managed forests typically are composed of only one or a few commercially-valuable tree species. Typically, arthropod communities in old-growth forest canopies can be distinguished from those in younger forests by their greater diversity and by their relatively higher proportions of folivores (e.g., caterpillars, tree crickets, and leaf beetles), arboreal detritivores and fungivores (Collembola and oribatid mites), and predators (e.g., predaceous beetles, true bugs (Hemiptera), and spiders), compared to sap-suckers (e.g., scale insects, aphids, aleyrodids, leafhoppers, and treehoppers (Hemiptera)) and ants, which are more abundant in younger forests. For sources, citations and a full discussion, please see: https://www.mdpi.com/1999-4907/8/4/97/htm.

4. Four North Carolina Natural Heritage Areas within or adjacent to Craggy. The North Fork section of Craggy shares a boundary with the 700-acre Price Creek/Coxcomb Mountain Natural Heritage Area (2157), with a collective, representational, and overall ranking of High. It also contains the 200-acre ivy Knob Natural Heritage Area (25) and the 50-acre Ivy Creek Natural Heritage Area. The Snowball section of Craggy shares a boundary with the 500-acre Reems Creek Bowl Natural Heritage Area, which protects the Town of Woodfin's drinking water supply. It also has a collective, representational, and overall rating of High.

VIEWSHED

Most users' enjoyment of trails hinges on the natural surroundings of the trails. Natural settings and biodiversity of the forests will always be the biggest draw for visitors and should be protected to the greatest degree possible. Viewsheds for trails within the Nantahala and Pisgah National Forests should not be logged.

5. The Snowball Trail—one of the most popular trails along the Blue Ridge Parkway. The Snowball Trail is located near the Craggy Gardens Picnic Area and Visitor Center, two of the most popular destinations along the Blue Ridge Parkway. Over 500,000 people visit this area annually. The Snowball Trail is one of the Parkway's most popular footpaths, stretching six miles along a rolling high-elevation ridgeline. The Snowball Trail includes panoramic vistas from Hawkbill Rock and ends at the Little Snowball Fire Tower cultural heritage site. The Snowball Trail corridor provides habitat for several rare bird and bat species. The Snowball Trail also connects with the Mountains to Sea Trail, North Carolina's State Trail.

6. Little Snowball Fire Tower Heritage Site: The Forest Service analysis of the Craggy/Big Ivy also fails to include any discussion of the Little Snowball Fire Tower site, an important cultural and community site for the Big Ivy community and the region. A fire tower constructed by the Civilian Conservation Corps was located at the end of Snowball Trail on a panoramic plateau that is now in the Matrix Management Area. The fire tower was later moved to the Big Ivy Community Center, where it is a source of pride and celebration. Each year, the community opens the fire tower to the public at festivals, and it is the anchor of the Big Ivy Historical Park.

7. Shope Creek contains old-growth forest and growing recreation use. Shope Creek shelters around 300 acres of old growth forest, some of the last old0growth forest in Buncombe County and the closest to the city of Asheville. Shope Creek is the closest section of national forest to Asheville. Protecting Shope Creek for its recreation and conservation values is the highest priority for this section of forest.

8. Ox Creek shares a boundary with the Town of Woodfin Watershed. When logging was proposed previously in this watershed, massive public outcry resulted in permanently protecting this watershed from logging in 2005. Logging adjacent to a permanently protected water supply for a rapidly growing municipality would threaten water quality and raise concerns for the communities it serves.

9. Ox Creek contains a portion of the Mountains to Sea Trail. This 1,175-mile footpath from Clingmans Dome to Jockey's Ridge. It is North Carolina's official state trail and longest marked footpath. Ox Creek is also surrounded by the Blue Ridge Parkway and Southern Appalachian Highlands Conservancy conservation easements.

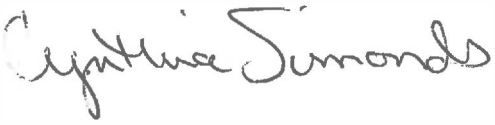
10. The Forest Service also failed to study the Craggy National Scenic Area proposal, the most popular and publicly supported portion of the entire Nantahala Pisgah Forest Plan. Despite a clear mandate from the local community, political leaders, stakeholders and the public, the

Forest Service arbitrarily and capriciously decided not to study the Craggy proposal in detail. Instead, it placed over 5,000 acres of Craggy's most important conservation and recreation areas in the Matrix Management Area without any analysis or explanation.

The Forest Service failed to fully analyze the proposal with the most widespread public, community, political, and stakeholder support, and it offered absolutely no concrete explanation or analysis in the Forest Plan for this decision.

The Forest Service must amend the plan to The Forest Service failed to properly evaluate approximately 5,000 acres of forest in the proposed Craggy National Scenic Area and Craggy/Big ivy section of Pisgah National Forest in its draft ROD and FEIS. It also failed to include these key conservation and recreation areas in its Forest Scenic Area designation. Accordingly, the Forest Service must amend its plans to include 5,000 acres of Snowball Mountain, North Fork, Shope Creek, and Ox Creek in its Forest Scenic Area.

Respectfully submitted,



Cynthia Simonds

My previous comments on this issue were submitted May 10, 2020:

I support the Buncombe County Commission proposal to create a new Craggy Mountain National Scenic Area and Wilderness and permanently protect the 16,000-acre portion of Pisgah National Forest. The Craggies, including the Big Ivy watershed, Shope Creek, and the Blue Ridge Parkway Corridor, provide superlative scenery, world-class recreation for hikers and runners, mountain bikers, rock climbers, equestrians, and anglers, extensive old-growth forests, and pristine water quality for communities downstream.

Under the current management plan, the Craggy Mountains are open to development for logging and road construction, which can jeopardize old-growth forests, rare species, pristine watersheds, trout streams, trails and the panoramic vistas enjoyed by thousands of drivers along the Blue Ridge Parkway.

92% of federally managed land in the Craggies is visible from just a few popular viewpoints and the immediate foreground of the area's roads and trails. The National Scenic Area would formally recognize the extraordinary value of the Craggies' scenic integrity. Most people experience the Craggies without ever setting foot on a trail. Around a half-million visitors per year enjoy this area's scenic grandeur from the Blue Ridge Parkway.

Throughout the planning process, the public has overwhelmingly asked for more protections for the Craggies—more than any other area. But these protections are incomplete and short-term. In contrast, a National Scenic Area and Wilderness designation would permanently protect the area. The proposed National Scenic Area and Wilderness would permanently protect all the area's current uses, including recreational and traditional activities like mountain biking, hiking, rock climbing, horseback riding, fishing, camping and edible plant gathering, and continue to generate tourism income for generations to come.

Dear Forest Supervisor Allen Nicholas and Planning Team Leader Michelle Aldridge,

I support the Craggy Mountain Wilderness and National Scenic Area. The entire Craggy-Big Ivy section of Pisgah National Forest should be permanently protected as an 8,693-acre Wilderness and 16,000-acre National Scenic Area/Special Interest Area.

The Craggy-Big Ivy section of Pisgah National Forest is home to the wildest and most important recreation and conservation lands in the East. It shelters over 4,000 acres of old-growth and at least 44 rare and endangered species. Craggy-Big Ivy is also home to waterfalls and world-class recreation—and it's located only 15 miles from downtown Asheville.

Specifically, it's critically important to include Coxcomb Mountain, Snowball Mountain, and Shope Creek sections of Craggy in the National Scenic Area/Special Interest Area. They contain several thousand acres of old-growth forests and rare species habitat.

The complete Craggy-Big Ivy Wilderness has unanimous bipartisan support from the Buncombe County Commissioners and the City of Asheville. The complete Wilderness also is endorsed by the Nantahala-Pisgah Forest Partnership. In addition, the complete Craggy Mountain Wilderness and National Scenic Area are supported by a broad and diverse coalition of over 100 organizations, dozens of Buncombe County businesses, and thousands of local supporters.

The complete Craggy Mountain Wilderness and National Scenic Area will permanently protect the panoramic viewsheds from Craggy Gardens, the most popular and most photographed spot along the entire Blue Ridge Parkway. It also will protect one of the largest old-growth forests in the East and iconic trails like the Mountains to Sea Trail. Its pristine headwaters are home to native trout and part of the protected watershed of the Ivy River, an important tributary of the French Broad and the drinking water source for the cities of Weaverville and Mars Hill.

Craggy has globally significant botanical, zoological, geologic, scenic, and recreational resources that are currently underrepresented across the Pisgah-Nantahala National Forest. The Craggy Mountain Wilderness and National Scenic Area offers some of the best opportunities for primitive recreation and solitude in Pisgah National Forest, with rugged, remote peaks surrounded by 100,000 acres of contiguous wildlands.

The North Carolina Natural Heritage Program has identified over 3,000 acres of the Craggy Mountain Wilderness and National Scenic Area for highest priority protection, and it has been highlighted by The Nature Conservancy as one of the most important core forests in the Southern Blue Ridge.

Already, the Forest Service has received more comments supporting permanent protections for Craggy than any other area in the Pisgah-Nantahala National Forest. I applaud the Forest Service for recognizing the rare and special natural heritage of the Craggy-Big Ivy Forest and for recommending stronger protections for this area. In the final plan, I ask the Forest Service to expand its wilderness recommendations to 8,693 acres as endorsed by the Nantahala-Pisgah Forest Partnership. I also ask that the special interest area acreage include the entire 16,000-acre Craggy-Big Ivy Forest, including Coxcomb Mountain, Snowball Mountain, and Shope Creek.

Thank you for the opportunity to comment,

Cynthia Simonds

March 2, 2022

The Highlander
www.highlandsnews.com

Final revision of Nantahala, Pisgah Forest Management Plan released

Highlands, NC 28741 41 °F 64 °F

By Highlander Editor on Thursday, February 3, 2022

Conservation organizations concerned about lack of old growth forest protection

Photo by Christopher Lugo/Staff The Nantahala National Forest sign coming into Highlands from Scaly Mountain.

Editor's note: This is the first in a series covering the final revision plan. Next week's article will feature an interview with the Southern Environmental Law Center.

After years of the assessment phase of its land management plan, The U.S. Forest Service has released the Nantahala and Pisgah National Forests' revised forest plan and the revision process has entered the final phase, a 60-day objection period for parties who submitted substantive comments during development of the plan.

Once any objections have been resolved, the forest plan will be finalized, and implementation can begin.

According to the U.S. Forest Service, in developing the plan, forest resource specialists worked with representatives of state and local government, Tribes, interest groups and the public to consider alternative approaches to managing the forests that offered different ways to make progress towards multiple goals and be sensitive to special places. The forest service said the final plan balances the tradeoffs among the multiple uses of national forests including recreation, timber, water, wilderness and wildlife habitat.

The forest service received more than 20,000 comments from the public, following the release of the proposed plan. In analyzing the comments, the forest service developed a new management option, Alternative E.

According to the Draft Record of Decision, a 91-page document that outlines the rationale for the decision, Alternative E will increase emphasis on prescribed fire, establish an expanded network of old-growth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forest, promote sustainable trail development and focus on addressing a backlog of road maintenance by decommissioning unneeded roads and expanding access in areas with high demand.

Some regional conservation organizations do not agree with the forest service's statements.

MountainTrue public lands biologist Josh Kelly said after eight years, and the wealth of public comments the forest service received, he had higher hopes.

"I think there are a number of areas in the plan where they could have done more," Kelly said. "I think the best alternative that I have read so far is the collaborative alternative submitted by the Nantahala, Pisgah Forest partnership that the forest service dismissed in their Record of Decision. That proposal had a great strategy for achieving all of the needs for the interests of the forests. I think what the forest service has chosen in Alternative E is likely to decrease efficiency overtime and is least likely to bring all of the interests of the forest together."

In the plan, Kelly said he saw several things that will affect the Highlands area.

"A place where I would point out where the forest service missed the mark is Panthertown Valley," Kelly said. "The Friends of Panthertown asked for the entire area to be either a special interest area or back country and the forest service allocated around 2,000 acres of the area on the northern side to Matrix and Interface, which are timber management companies. It leaves it open for the possibility of timber harvesting in that area. What that will create is a fight among stakeholders that could have been avoided."

Regarding the areas that the plan could improve on, Kelly said land allocation and protecting existing old growth.

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"I think the plan right now, allows the forest service to cut old growth in Matrix and Interface management areas," Kelly said. "That is something I am real concerned about. I think the plan leaves too many loopholes open for cutting timber in management areas like the Appalachian Trail corridor. I think those need to be managed to a standard set up by the Appalachian Trail Conservancy. I think the forest service is trying to give themselves more leeway and discretion. In general, I haven't read the whole plan yet, but I see too much discretion in the plan and not enough accountability."

Another problem that Kelly noted is that he believes the two forests are not being treated equally in the plan.

"I think it is pretty interesting how differently the forests are being treated," Kelly said. "If you look at the backcountry area, the Pisgah National Forest has about twice the amount of the Nantahala National Forest; 80,000 acres compared to 47,000 acres, but if you look at the timber production areas, Nantahala National Forest has about 90,000 more acres. So, for me, they are pretty equal in quality and value. I wouldn't want to speculate as to why they are doing that, but it may be political."

Kelly said even though it could have been a better plan, there are some good things in it.

"There are some things that have improved over the planning revision," Kelly said. "One of those things is the increase in special interest area acres. That was a welcome addition to the plan. I also think the fire management goals and strategies were really big improvements."

The Chattooga Conservancy is part of the Nantahala-Pisgah National Forest Partnership. The partnership, formed in February of 2013 as a collaborative group

of more than 30 organizations, represents a diverse cross-section of public lands interests, including recreation, forest products, local government, cultural heritage, conservation, wildlife, hunting, angling, and other forest user groups. The Partnership was created with the goal of working collaboratively and in parallel to the US Forest Service planning process. Representing a diverse spectrum of interests, partners have worked to foster civic engagement, generate positive guidance, and develop recommendations for creating the best possible revised management plan for the Nantahala and Pisgah National Forests.

Nicole Hayler, executive director of the Chattooga Conservancy, participated in a multiple hour long meeting with the partnership, members of the forest service and others heavily involved in the planning process.

Hayler said the overall reception of the meeting was "one of bitterness and disappointment."

"While we appreciated the presentation, it did confirm our reading of the plan," Hayler said. "I think overall, with our partnership group, they have been working for many years towards a vision of collaborating with the forest service on a give and take consensus process, where the group would agree to more active management of the forests, which means increased timber harvesting with a comparable amount of increased protection for special areas. What the plan came out as going for the significant increase in timber harvest without the significant increase in protection of special areas. For this particular group that we are an affiliate member of, from my view point, that would be a fair summary of this meeting."

From the beginning, Hayler said the forest service

noted that the plan supports the management of the forests for young and open forest conditions, which, according to Hayler, brings a concern about old growth maintenance.

Table i. Alternative Features Comparison, Organized by Issue

Plan Decision	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Issue 1: Vegetation Patterns and Wildlife Habitats					
Young forest creation (annual acres)	650 acres	Tier 1: 650-1200 acres Tier 2: 1200 to 3200 acres			
Intermediate thinning treatments (annual acres)	150 acres	Tier 1: 150-400 acres Tier 2: 400- 600 acres			
Thin and burn for open forest woodland (annual acres)	N/A	N/A	N/A/	N/A	Tier 1: 300 to 600 acres Tier 2: 600 to 900 acres
Land operable for timber management, all conditions (estimated acres)	206,000-430,000 acres	240,000-594,000 acres	238,000-488,000 acres	243,000-535,000 acres	233,000-505,000 acres
Land operable for timber management, commercially viable currently (estimated acres)	98,000-216,000 acres	113,000-265,000 acres	111,000-235,000 acres	113,000-260,000 acres	108,000-245,000 acres
Plan level designated old growth network (acres)	211,118 acres	202,524 acres	255,968 acres	226,015 acres	265,441 acres
Adjustments to the old growth network expected at the project level	Project level adjustments may be made	Project level adjustments may be made	Network set at plan level; no project level adjustments	Project level adjustments must meet identified conditions	Network set at plan level; no project level adjustments
Prescribed fire (annual acres)	8,500 acres	Tier 1: 6,500 to 10,000 acres Tier 2: 10,000 to 20,000 acres			Tier 1: 10,000 to 20,000 acres Tier 2: 20,000 to 45,000 acres
Ecological Interest Area MA (acres)	N/A	0	79,550 acres	26,000 acres	22,195 acres
Issue 2: Special Area Designations					
Special Interest Areas	50,519 acres	102,650 acres			118,810 acres

Submitted Chart

A comparison of the different alternatives broken down by issues.

"There are a handful of high priority issues, and the old growth is probably the most outstanding by consensus of the group," Hayler said. "The forest service will tell you that they have increased their old growth acreage in the network, but then you have to take the next look at it and say not all of that is old growth. If old growth is found during a project implementation phase, like a timber harvest, there is no guarantee that it will be protected. It can be cut. The very fact that the forest service, in this new plan, is still not protecting existing old growth is emblematic of the mindset of the agency that harvesting timber is their highest priority."

According to the draft plan, Alternative E added more than 54,000 acres of old growth to its Old Growth Network. The plan states that the alternative was built in consideration of the latest scientific literature, academic input and information provided by commenters and the N.C. Natural Heritage Program regarding inventoried locations of existing old growth patches. The resulting network includes 291 separate patches, totalling 265,385 acres that represent approximately 25 percent of the Nantahala and Pisgah National Forests. The forest service noted that compared to the Old Growth Network presently, Alternative E has a 13 percent increase in old growth acreage.

"Alternative E would provide the largest network of any alternative," The forest service said in the draft. "Only Alternative C is close in size, with about 9,000 fewer acres. Under Alternatives A, B and D, it would take many decades to achieve such a network. Additionally, this alternative increases the amount of larger patches by 25 percent more than the existing network, increasing overall resiliency and connectivity. Only Alternative C has as many larger patches as Alternative E, however, Alternative E has an additional 20,000 acres dispersed across these large patches, improving their resiliency."

It also states in the plan that in Alternative E it restricts any additions to the old growth network but compensates that restriction by adding 54,000 acres to the network and if existing high-quality old growth is found during project level analyses, then project decisions would have the opportunity to decide what management actions could occur. The plan monitoring program will monitor whether the forest service is moving toward their desired conditions for old growth on the landscape and may make recommendations for changes needed in the next

planning cycle.

Table 130. Old Forest Trending Landscapes by Patch Size (Acreage and Number) by Alternative

Size Class	Alternative Acres (Number Patches)				
	A	B	C	D	E
Large +	76,674 (3)	99,344 (4)	135,158 (5)	53,709 (2)	53,142 (2)
Large	242,137 (35)	246,430 (34)	254,066 (34)	264,536 (34)	270,873 (37)
Medium	28,679 (78)	36,100 (88)	46,506 (112)	39,869 (94)	51,245 (103)
Small	6,183 (135)	6,707 (152)	8,196 (208)	6,978 (160)	7,734 (188)
Total	353,673 (251)	388,351 (278)	443,926 (359)	365,092 (290)	382,994 (331)
% Total Forest	34%	39%	43%	35%	38%
compared to OG Network	14% increase	18% increase	19% increase	13% increase	13% increase
% Larger Patch Acres Compared with Current Designated Larger Patch Acres	82%	98%	123%	82%	86%

Submitted Chart

According to the draft plan, Alternative E added more than 54,000 acres of old growth to its Old Growth Network.

With the forest service citing the best available science as their reasoning for most of what was added in Alternative E, Hayler said everything points back to preserving old growth.

"Across the board, the forest service said they used the best available science, whether it was talking about endangered species or old growth," Hayler said. "In our group, we believe that the best available science points to climate change as being an existential threat to our human race and the plants and animals that are with us. To address climate change, the best thing you can do is to protect ecosystems that sequester carbon. All of that points back to preserving old growth. So, for the forest service to claim they are using the best available science, but allow the harvesting of existing old growth on the ground, what year is this? This is ground zero on using best available science and how it should be applied to manage our public land."

As far as the Highlands-Cashiers areas, Hayler said they had some very specific requests with one being flat out turned down.

"The forest service originally recognized Overflow Creek as eligible for 'Wild and Scenic' classification

as more towards the scenic side, but the public did not want that, they wanted it to be recognized as wild," Hayler said. "In response, the forest service completely struck it. That is how they are saying they considered public input. Basically what they said is that they looked at it and it has very high scenic value, but we don't think it's anything special. We vehemently disagree. That stream is tributary to the wet work of the Chattooga, which the forest service in this new plan recognizes as a high priority watershed for protection, but downgrading the protective status of this stretch of Overflow Creek does not reflect that."

The Overflow Creek area is located in Macon County, southwest of Highlands. The area includes the congressionally designated Overflow Creek Wilderness Study Area. The late Dr. Robert Zahner, Highlands resident and one the most respected conservationists in the Southern Blue Ridge Mountains, championed the Overflow Creek area as a qualified wilderness area.

The Forest Service stated that the Overflow Creek area is "smaller than stand-alone area size usually considered practicable for preservation and use in an unimpaired condition." However, the Overflow Creek area is not too small.

"The Forest Service only evaluated the Overflow area as far as the North Carolina state line, and failed to consider the area's contiguousness with 2,700 acres of primitive backcountry just across the state line, in the Chattahoochee National Forest in Georgia," Hayler said. "Overflow's 3,900 acre potential wilderness area in NC, together with a contiguous 2,700 acres of primitive backcountry in GA, encompass a 6,600 acre potential wilderness area. State boundaries should not determine the boundaries of wilderness."

Now, with the plan in the objection period, Hayler said there will definitely be objections from her organization, as well as the Nantahala-Pisgah Partnership.

"These organizations went through all of this and made an active effort to collaborate with the forest service, and try to balance the timber production and the protection," Hayler said. "What came out of this was more timber production and less protection."

This is the first part in a series on the Nantahala and Pisgah Forest Land Management Plan.

- By Christopher Lugo

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CENTER for BIOLOGICAL DIVERSITY

For Immediate Release, January 21, 2022

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Forest Service Proposes Quadrupling Timber Harvests in Country's Most Popular National Forest

Pisgah-Nantahala National Forest Plan Fails to Protect Old-Growth Forests, Water, Rare Species in North Carolina

ASHEVILLE, *N.C.*— The long-awaited Pisgah-Nantahala National Forest Plan released today proposes a massive increase in timber harvests while weakening protections for old-growth forests and rare species.

The Forest Service plan is a blueprint for the next 15 to 30 years of management for the 1.1-million-acre national forest in western North Carolina. It will guide which areas of the forest will be logged and which will be protected.

"The final plan doesn't reflect the interests of the public, who have overwhelmingly supported more and stronger protections for Pisgah-Nantahala," said Will Harlan, a senior campaigner at the Center for Biological Diversity. "Instead, the plan prioritizes logging and utterly fails to protect old-growth forests, rare species and clean water."

The Pisgah-Nantahala is the country's most popular national forest; nearly 5.2 million people visited it last year. The forest provides drinking water for cities, businesses and communities across the Southeast.

Under the plan, over half of the forest — 540,000 acres — will be open to logging, according to the Pisgah-Nantahala National Forest's Final Environmental Impact Statement. The plan quadruples the acres of forests that would be cut down annually.

The plan fails to protect most of the forest's important recreation and conservation areas. It removes protections for 100,000 acres of Wilderness Inventory Areas and places 45,000 acres of North Carolina Natural Heritage Areas in logging-priority designations. The plan also allows 40,000 acres of old-growth forests to be logged.

The plan also excludes over a quarter-million acres of mature, intact forest from its old-growth network to accommodate a massive increase in timber harvests, which will also have significant impacts on rare and endangered species. At least 20 rare species have most of their habitat placed in logging-priority designations.

Significant portions of the Appalachian Trail, Art Loeb Trail, Bartram Trail, Benton MacKaye Trail and Mountains to Sea Trail corridors will now be open to logging.

The climate and carbon-storage benefits of mature, intact forests are largely neglected in favor of increased timber harvests.

"Our publicly owned national forests are far more valuable standing than chainsawed down," said Harlan. "Protecting drinking water, clean air, scenic views, iconic trails and old-growth forests will provide far more benefits than board feet of timber."

The Forest Service received a record-setting number of comments on the forest plan, and over 92% of them supported more permanently protected areas for the Pisgah-Nantahala.

The Center for Biological Diversity is a national, nonprofit conservation organization with more than 1.7 million members and online activists dedicated to the protection of endangered species and wild places.

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More Press Releases

E&E: OLD TREES STORE MORE CARBON, MORE QUICKLY, THAN YOUNGER TREES

By Tiffany Stecker
Friday, January 17, 2014
E&E ClimateWire

A sweeping study of forests around the world finds that the older the tree, the greater its potential to store carbon and slow climate change.

The 38 researchers from 15 countries found that 97 percent of trees from more than 400 species studied grew more quickly as they aged, thus absorbing more carbon. Although trees become less efficient at processing carbon as they get older, there are a greater number of leaves to absorb CO2, explained Nate Stephenson, lead author of the study. Leaves are crucial in photosynthesis, the process by which plants make energy and absorb carbon dioxide.

"Even though on an individual leaf scale their productivity might be declining slightly, they just have so many more leaves that the net effect is that they're able to fix more carbon in total than a small tree," said Stephenson, a scientist with the U.S. Geological Survey's Western Ecological Research Center in Three Rivers, Calif.

If a typical tree's diameter grows 10 times as large, it will undergo a hundredfold increase in leaf mass and a fiftyfold to hundredfold increase

in total leaf area, the study found. This outweighs the lower rate of productivity.

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More than 400 species of trees from six continents were repeatedly measured, with some records dating 80 years ago. The findings were published in Nature yesterday.

The study supported findings from a 2010 study on eucalyptus and sequoia trees, which found that large trees could add up to 600 kilograms (1,300 pounds) of aboveground biomass each year, Stephenson said.

The findings — that old trees not only store carbon and prevent it from escaping into the atmosphere, but actively covert CO2 in the air into their trunks, branches and leaves — make an important case for the preservation of the country's old-growth forests.

Going into the future, "we are going to want to manage some forests for carbon sequestration; to do that, you've really got to know which trees are your star players," Stephenson said. In this case, the star players on the team are not the young 20-year-olds, but the 90-year-olds, he added.

The study highlights the critical role old forests play in climate mitigation, said Laurie Wayburn, president of the Pacific Forest Trust, which represents private forest owners nationwide.

"Young forests have a role, but they are not the game changer that old forests are," she said.

The study differentiates between individual trees and entire forests, an important point, said Mark Harmon, a forestry professor at Oregon State University and a co-author of the paper. Forests have a diversity of old and young, and many different species.

"Is the amount of total carbon in those forests changing radically? Probably not," he said. Nevertheless, he said the study puts to rest any assumptions that forests with many old trees are less valuable for storing carbon.

A separate study in the New Phytologist last week found that the taller the tree, the more carbon it stores. The researchers found that tall trees receive more light at the top of the canopy, are better able to suppress competitors and allow for pollen to disperse over greater distances.

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GUIDESTAR SILVER TRANSPARENCY 2021

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Yale Environment 360
Published at the Yale School of the Environment

INTERVIEW

Why Keeping Mature Forests Intact Is Key to the Climate Fight

Preserving mature forests can play a vital role in removing CO2 from the atmosphere, says policy scientist William Moomaw. In an e360 interview, he talks about the importance of existing forests and why the push to cut them for fuel to generate electricity is misguided.

BY FEN MONTAIGNE • OCTOBER 15, 2019

William Moomaw has had a distinguished career as a physical chemist and environmental scientist, helping found the Center for International Environment and Resource Policy at Tufts University's Fletcher School and serving as lead author on five reports of the Intergovernmental Panel on Climate Change (IPCC). In recent years, Moomaw has turned his attention to working on natural solutions to climate change and has become a leading proponent of what he calls "proforestation" – leaving older and middle-aged forests intact because of their superior carbon-sequestration abilities.

While Moomaw lauds intensifying efforts to plant billions of young trees, he says that preserving existing mature forests will have an even more profound effect on slowing global warming in the coming decades, since immature trees sequester far less CO2 than older ones. In an interview with *Yale Environment 360*, Moomaw explains the benefits of proforestation, discusses the policy changes that would lead to the preservation of existing forests, and sharply criticizes the recent trend of converting forests in the Southeastern U.S. to wood pellets that can be burned to produce electricity in Europe and elsewhere.

"The most effective thing that we can do is to allow trees that are already planted, that are already growing, to continue growing to reach their full ecological potential, to store carbon, and develop a forest that has its full complement of environmental

William Moomaw

services," said Moomaw. "Cutting trees to burn them is not a way to get there."

Yale Environment 360: How do you define proforestation?

William Moomaw: So I began looking at some of the data and some of the papers that had come out recently, and I found that if we managed our forests and grasslands in a different way they could be sequestering twice as much carbon dioxide from the atmosphere as they currently do. One paper found in multi-aged forests around the world of all types, that half of the carbon is stored in the largest one-percent diameter trees. So I began thinking about this, and I realized that the most effective thing that we can do is to allow trees that are already planted, that are already growing, to continue growing to reach their ecological potential, to store carbon, and develop a forest that has its full complement of environmental services.

We needed a name for that, so I began thinking about names. I actually sat down and went to Google and searched for prefixes, found a whole bunch of them, and the one that I settled on was pro. Proforestation. It's not that we shouldn't do afforestation [planting new trees] and we shouldn't do reforestation. We should. But recognize that their contribution will be farther in the future, which is important. But in order to meet our climate goals, we have to have greater sequestration by natural systems now. So that entails protecting the carbon stocks that we already have in forests, or at least a large enough fraction of them that they matter. We have to protect wetlands, which are actually storing an amount of carbon in the United States that equals what's in our standing forests. We need to protect and improve the carbon sequestration by agricultural soils and grazing lands.

It's taken a very long time for people to focus on something besides reducing emissions of carbon dioxide and other greenhouse gases. And to recognize that even though we're putting almost 11 billion tons of carbon into the atmosphere every year, the increase is only 4.7 billion tons. So where is the rest going? It's going into plants on land and plants in the ocean. And the largest single place that's

removing carbon dioxide [from the atmosphere] on an annual basis is forests. Even what we think of as mature forests are still accumulating carbon because carbon makes up about roughly half of the dry weight of wood, but it is also in the soils. Even older forests continue to accumulate carbon in the soils. In fact there are forests where there's more carbon in the soils than there is in the standing trees. As trees get older, they absorb more carbon every year, and because they are bigger they store more carbon.

> "The loss of forest canopy is the greatest in the Southeastern United States of any place on the planet."

We've seen a lot of interest lately in planting more trees. And planting trees is great and it makes us all feel good and it's a wonderful thing to do and we absolutely should be reforesting areas that have been cut. A recent paper talked about how we could plant more than a trillion trees on nearly a billion hectares of land and how much that would do to solve the problem. These are great things to do, but they will not make much of a difference in the next two or three decades because little trees just don't store much carbon. Letting existing natural forests grow is essential to any

climate goal we have.

e360: In terms of CO_2 emissions, we're putting 30 to 35 billion tons of CO_2 from burning fossil fuels into the atmosphere every year, while at the same time there's this dramatic destruction of forests in the Amazon and in Southeast Asia. What we're looking at right now is really a perfect storm for soaring CO_2 emissions.

Moomaw: That's right. But don't leave out the United States. The most disturbed forests in the world are in the United States, not the Amazon and not Indonesia. I don't wish to lessen the significance of the Amazon and Indonesia. But the loss of forest canopy is the greatest in the Southeastern United States of any place on the planet.

e360: Let's talk about what's happening in the Southeastern U.S. and the wood pellet and biomass-burning industry that is driving that deforestation and what can be done about it.

Moomaw: Well, a little over a decade ago, as a result of a rule change in the European Union, they declared bioenergy, like burning wood pellets, to basically be a carbon-neutral and renewable energy source. But bioenergy is more expensive than all the fossil fuels, more expensive than wind and solar, and the industry would not be economically viable without huge subsidies. So the EU, particularly the UK, is giving bioenergy huge subsidies. The UK has reduced their coal use a lot, but their emissions have not been reduced at the same rate as their coal reductions would indicate because a big part of their replacement is from burning wood in the form of wood pellets that primarily come from the Southeastern U.S. The largest coal plant [in the UK], Drax, has converted half of its units to burning wood pellets instead of coal. And there are a bunch of other power plants in the UK that are doing the same thing, and the same thing is happening on the continent. And they claim it's carbon-neutral.

ALSO ON YALE E360

Carbon Loophole: Why is wood burning counted as green energy? Read more.

An area of clearcut forest in the Tar-Pamlico River basin in northeastern North Carolina. DOGWOOD ALLIANCE

The tragedy in the Southeastern U.S. [where large amounts of wood for biomass burning originates] is it's the most biodiversity-rich region in North America and has more species of animals and plants than anyplace else. That is being decimated. For pellets, wetland, hardwood forests are preferable to the pines and the pine plantations, which don't burn as hot, so those wetland hardwood forests are really

being gone after. For a long time, the companies made the claim they were only using the residuals, the branches and so on. An NGO down there called Dogwood Alliance documented that that isn't true. They're converting whole trees [into pellets].

e360: What is the solution here, both in the U.S. and in Europe?

Moomaw: As you may recall, [former U.S. EPA administrator] Scott Pruitt made the declaration that all forest bioenergy was carbon-neutral. [U.S. Senator] Susan Collins of Maine actually introduced an amendment, which is still binding, that states that all federal agencies must consider all forest bioenergy from sustainably managed forests to be carbon-neutral. There have been lots of letters by scientists and statements that that is just false.

We'll continue to need and want forestry products – that's understood. But the attitude in much of the forestry industry is that all forests must be managed by principles that improve forests for timber production. But we have to recognize that there's a distinction between industrial production forests and natural forests, and we must make clear that natural forests are managed for biodiversity and the full set of ecosystem services that forests provide. And, by the way, which biodiversity are we shortest of? The biodiversity that's associated with older forests. We hardly have any older forests left in the Lower 48 states. It's in the small single digits of our original forests. The Forest Service says that less than 7 percent of U.S. forests are over 100 years old.

> "The forests in the range of 70 to 125 years are the ones that are going to add the most carbon in the coming decades."

e360: Talk about the need to expand protections of forests that now have little or no protection.

Moomaw: Except for the designated federal wilderness areas in national forests, the rest of our forests are almost all devoted to timber production. And as you've seen, the Trump administration is now going after the roadless areas, as well. We need to have a conversation about which forests are most capable of sequestering carbon in the near term. And those are forests that are generally in the age range of 70 to 125 years – they are the ones that are going to add the most carbon in the coming decades. Unfortunately, 70 years, for many species, is the perfect size for the sawmill. So it is going to mean saying ,well, we're going to not cut these. This has to apply to federal and state forests. In Connecticut, there is not a single acre of state forest that is not subject to being cut.

e360: And this is New England, the legendary home of reforestation in the last century.

Moomaw: That's right. And that all happened by benign neglect, which worked out in our favor. The [U.S.] Forest Service has just moved into Massachusetts in an alliance with the state and is creating cooperative organizations that will lead to more cutting of this now very carbon-dense, rich forest that we have in this part of New England. The Department of Energy Resources in Massachusetts has put forth proposed changes and regulations that would increase the amount of forests that qualify for subsidies for bioenergy as a renewable resource, as an alternative energy resource. The outcry from the scientific community, the NGO community, and

citizens has been enormous. There's pressure to build a wood-burning electric power generating station in a low income neighborhood in Springfield, Massachusetts. And that's being pushed back against very hard by the public. But the governor and his team are pushing forward to make it happen, with more subsidies – subsidies that come from our electric bills. That subsidy doesn't go to solar panels, it goes to burning wood. We've got a real problem here.

A mature forest in the Berkshire Hills in western Massachusetts. LIZA DALY/FLICKR

e360: So what policies do you pursue to have a sustainable forest products industry?

Moomaw: I think what you do is you concentrate it on an appropriate set of lands. [Biologist] E.O. Wilson argues that we need "half earth" – that is, half the world needs to be left to nature in order to function. I suppose with one kidney and one lung, we can make it.

One policy that I would suggest is that with privately owned forests and relatively small forest plots, people be paid for the ecosystem services of storing carbon and promoting old-growth biodiversity and the resiliency to climate change that these forests provide. We need to compensate private land owners for leaving their forests standing. Not everybody will do it, but that might get us a mechanism where we get closer to our goal.

The other thing – and there's legislation proposed here in Massachusetts – is that there be no more timber harvesting on state forest lands. We now have a regulatory system that sets aside about 60 percent of forest lands as either parks or reserves.

This would say that the remaining state woodlands would become reserves or parks and not harvested. Well, that would mean that 13 percent of the forests in Massachusetts would not be available for timber. The howling has been unbelievable – "This is the end of the world!" And yet, today, the regulatory system is not controlling this adequately at all.

e360: What about in the Southeastern U.S.? How do you slow down what's happening with the wood pellet industry?

Moomaw: The best thing of course would be to remove subsidies. That would end it.

"Wood pellet plants are all being built in low-income, African American communities."

The other thing is there's a social justice issue here. The plants that make the pellets are all being built in low-income, African American communities that have five times the asthma rate as the state of North Carolina as a whole. These plants produce a tremendous amount of dust and particulate matter. Some of these communities are beginning to fight back. There's a big push down there politically to deal with this. You know, it's really amazing how short-term economic interest can dominate social justice, climate outcomes, everything else. So I think one way is to fight fire with fire and turn the subsidies around. Get rid of the subsidies for bioenergy, begin to support the maintenance of existing forests for private landowners, and really change our policies on state and federal public lands.

e360: Is there any progress in Europe in terms of recognizing that this is not a carbon-neutral source of energy and should not be supported or subsidized?

Moomaw: Yes, there are efforts. There's an organization called Biofuelwatch in the UK. They are an amazingly well-informed, spunky bunch of activists. The scientific community in Europe is beginning to shift its views on this. It turns out that almost two-thirds of all the renewables used in Europe are bioenergy.

e360: If we do a better job of protecting these older forests, what difference could it make in moderating temperature increases?

Moomaw: If we get to net-zero emissions by 2050 and we continue to reduce our emissions after that, and if we continue to increase the biological sequestration – the nature-based solutions as they're sometimes referred to – we would actually start reducing the amount of carbon dioxide in the atmosphere between 2050 and 2100. The more we can increase the sequestration rate and the faster we can reduce the emissions, the better off we'll be. But cutting trees to burn them is not a way to get there.

This interview has been edited for length and clarity.

ALSO ON YALE E360

In Israel, questions are raised about a forest that rises from the desert. Read more.

Fen Montaigne is senior editor of *Yale Environment 360* and author of the book, *Fraser's Penguins: A Journey to the Future in Antarctica.* His work has appeared in *The New Yorker, National Geographic, Outside, Smithsonian,* and other magazines. **MORE →**

By Western Ecological Research Center (WERC) January 15, 2014

Trees do not slow in their growth rate as they get older and larger — instead, their growth keeps accelerating, according to a study published today in the journal *Nature*.

"This finding contradicts the usual assumption that tree growth eventually declines as trees get older and bigger," says **Nate Stephenson**, the study's lead author and a forest ecologist with the USGS Western Ecological Research Center. "It also means that big, old trees are better at absorbing carbon from the atmosphere than has been commonly assumed."

- **Read study at *Nature***
- **Download study PDF and supplementary materials PDF**

An international team of researchers compiled growth measurements of 673,046 trees belonging to 403 tree species from tropical, subtropical and temperate regions across six continents, calculating the mass growth rates for each species and then analyzing for trends across the 403 species. The results showed that for most tree species, mass growth rate increases continuously with tree size — in some cases, large trees appear to be adding the carbon mass equivalent of an entire smaller tree each year.

"In human terms, it is as if our growth just keeps accelerating after adolescence, instead of slowing down," explains Stephenson. "By that measure, humans could weigh half a ton by middle age, and well over a ton at retirement."

This continuously increasing growth rate means that on an individual basis, large, old trees are better at absorbing

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carbon from the atmosphere. Carbon that is absorbed or "sequestered" through natural processes reduces the amount of carbon dioxide in the atmosphere, and can help counter-balance the amount of CO2 people generate.

However, the researchers are careful to note that the rapid absorption rate of individual trees does not necessarily translate into a net increase in carbon storage for an entire forest.

"Old trees, after all, can die and lose carbon back into the atmosphere as they decompose," says **Adrian Das**, a USGS coauthor. "But our findings do suggest that while they are alive, large old trees play a disproportionately important role within a forest's carbon dynamics. It is as if the star players on your favorite sports team were a bunch of 90-year-olds."

The study was a collaboration of 38 researchers from research universities, government agencies and non-governmental organizations from the United States, Panama, Australia, United Kingdom, Germany, Colombia, Argentina, Thailand, Cameroon, Democratic Republic of Congo, France, China, Taiwan, Malaysia, New Zealand and Spain. The study was initiated by Stephenson and Das through the USGS Western Mountain Initiative and the USGS John Wesley Powell Center for Analysis and Synthesis.

Scientists analyzed data from 403 species of trees from around

the world and learned that in general, a tree's growth continues to accelerate as it ages. This finding reverses previous assumptions, and suggests that large old trees play an unexpectedly dynamic role in removing carbon from the atmosphere. (Image Credit: Rob Hayden)

Read the global media coverage:

- **Nature News and Nature Podcast (UK)**
- **The Guardian (UK)**
- **DotEarth @ New York Times (USA)**
- **TIME Magazine (USA)**
- **Bloomberg News (USA)**
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https://foreststewardsguild.org/old-growth/

Old growth forests deserve protection

Why are old growth forests important?

Old growth forests play essential roles in wildlife habitat, species diversity, hydrological regimes, nutrient cycles, carbon storage, and numerous other ecological processes. They have unique structures and attributes that provide habitat for plant and animal species, such as lichen, bats, birds and mammals that are not found in other forest types. Old growth forests inspire a sense of awe, offer recreation, and have spiritual values.

These old forests are rare, and unfortunately becoming rarer every day due to natural disturbances like fire, human disturbance where old growth isn't protected, and the warming and drying climate.

What are old growth forests?

There are many different definitions of old growth, in part because old growth looks different in ecosystems across the world where productivity, species, and disturbances drive differences in stand development. Most definitions focus on age and forest structures including large trees, signs of decay, multilayered canopies, canopy gaps, snags, and large downed logs. Tree size alone is not a marker of old growth. High productivity stands may have large, relatively young trees. Like all forests, old growth forests are affected by disturbances. Old growth forests are part of the ever-changing ecosystem and are the result of forest development.

Recognizing old growth

Most old growth in North America is protected in a park or reserve, but it is possible to encounter a forgotten patch of old growth while working or wandering in the woods. Tree size is likely to be the first indication of an old stand, but on dry or unproductive sites, other attributes might be more useful.

Old trees often have relatively open crowns, large diameter branches, flattened crowns, and raised crowns with few or no lower branches. Signs of tree age and decay are common in old growth stands such as large down logs, broken treetops, bayonet tops, cracks, scars, bark loss, hollow chambers, stem cavities, bark pockets, bark bowls, burls, resin flow, and bark bursts. Other elements of old growth include vertical

diversification with shade tolerant species in the understory and horizontal variability due to canopy gaps.

Because old growth forests are rare, if you find an area that looks like it may be old growth, it is worth noting where it is and reaching out to local forestry agencies or universities to age the trees.

Current status and threats

Old growth forests face the same threats as other forests such as natural and human disturbances including fire, insects, diseases, storms, and conversion to other uses. In addition, old growth forests are particularly threatened by the warming and drying of recent decades. Because of these threats and the difficulty of replacing old growth forests, they are declining across the world.

Management response

In general, old growth should be excluded from management except where restoration of disturbance processes, like low severity fire, are crucial to maintain old growth conditions. Forest management can help younger forests move towards old growth characteristics. For example, retaining and protecting individual large, old trees and large downed logs helps a mature forest develop old growth characteristics. While not appropriate in all areas, management to foster old growth characteristics may help offset the global decline of old forests.

Forests dominated by large, old trees, both live and dead, standing and fallen, that usually contain many other smaller trees.

Where: Old growth forests can occur anywhere, though usually they are found in areas protected from disturbance.

Importance:

- Biodiversity
- Wildlife habitat
- Carbon storage
- Hydrology
- Recreation, inspiration, awe, and spiritual values
- Old growth forests are rare and in decline globally.

https://www.blueridgeoutdoors.com/magazine/july-2005/ancient-appalachia-the-southeasts-old-growth-forests/

Ancient Appalachia: The Southeast's Old-Growth Forests

01 Jul 05

"It's all been logged."

That's what I was told when I asked if there were any old-growth forests left in the South. Growing up in rural Western North Carolina, I was intrigued by the tales of the huge trees that once grew in my neighborhood. The thought that not one acre of forest had been left unlogged for me to enjoy saddened me, and didn't fit with what I saw in the woods around me. Some steep, rocky areas and property boundaries had large and seemingly old trees. The more people I asked, the more complex the answers became. When I asked knowledgeable locals and outdoorsmen about specific areas like Spring Creek Gorge, I got promising answers like "Well I know that's never been logged in my lifetime."

For the past three years, I have been working in conjunction with the Southern Appalachian Forest Coalition and other conservation groups to document and protect the last vestiges of the original forest cover that blanketed the Blue Ridge when European settlers first arrived. Since 1994, this project has turned up over 114,000 acres of old-growth on the six National Forests of the Southern Blue Ridge – that's 4.5% of our local National Forests, or 1.5% of the Blue Ridge as a whole. At least 14 biologists, ecologists, foresters, botanists and citizen scientists who have worked for 12 years with little or no funding to protect these special places by giving them a voice.

The reason these ancient forests need advocates, is that occasionally, the U.S. Forest Service comes up with a project that proposes logging of old-growth. An example this year is the Globe Timber Sale in the Grandfather Ranger District of Pisgah National Forest. In such cases, conservation and recreation groups ask the Forest Service to exclude the old-growth sections from the logging proposal. The Globe Project is still being planned by the Forest Service and needs a lot of public input to keep the old-growth from being logged (see "Save the Globe" on page 24 for more details).

Environmental and recreational groups have succeeded in protecting old-growth in this manner for the past ten years. But the outcomes are not always successful. At Hoover Creek in Virginia's George Washington National Forest, 200 acres of old-growth were logged despite the outcry of locals. After the trees had been cut it was apparent that many had been over 200 years old.

In some cases, the Forest Service does not intentionally log old-growth, but simply does not have accurate information about the millions of acres of forest it manages. With the Forest Service receiving inadequate funding each year, citizens are left to do the work of identifying and protecting old-growth forests.

Almost all of the known old-growth sites in the Blue Ridge are still with us because of one or a combination of three factors: steep slopes, early purchase date (usually before 1925), and lack of commercial viability. Usually, steep slopes and noncommercial forests go hand in hand. Soils at such sites are dry, because they drain quickly, and are often leached of nutrients. Some sites, however, have rich soils or occur on gentler slopes above gorges, waterfalls, or other impediments to logging, and these sites grow not only old, but big trees. Finally, a different class of site, including many of the smaller tracts bought from farmers or seized from them by eminent domain, have old-growth forest for historical reasons. Some farmers kept their woods as places to hunt or to graze their livestock on chestnuts. Some, like Robert "Boogerman" Palmer, were simply reclusive and refused to sell their land to timber companies.

Serendipity is the final factor that saved some old-growth forests. Joyce Kilmer Memorial Forest is an example of this. Little Santeetlah Creek was on the verge of being logged several times, but the flooding of Santeetlah Lake stopped logging and then financial catastrophe to the parent logging company forced the land to be sold. The land changed ownership many times and finally, in 1936, Joyce Kilmer Memorial Forest was created, just as equipment was being moved to the area to log it.

Some are skeptical of the emerging picture of 100,000+ acres of National Forest old-growth, and rightly so, they have been told the same stories about the history of our forests that I have. The roots of this myth originate in the perception that all old-growth forests have giant, eight-foot-diameter trees. Unfortunately, those places were logged first. What we have left is less impressive size-wise, but just as inspiring in character.

Here is the criteria generally used to classify old growth:

1) A lack of human disturbance: Old-growth forests lack logging roads, skidder trails, and cut stumps. Consider that chestnut blight could be considered a form of human disturbance, and that American chestnut was important in most of our native forests, so every forest in the Blue Ridge has had some human disturbance. Uncut chestnut debris, however, can be a reliable indicator of a lack of historical logging.

2) The presence of old trees: All the sites in the SAFC data base have canopy trees whose ages are confirmed at over 150 years of age, and some have trees confirmed at over 300 years of age; a small handful are known to have trees in the 400+ year range. All of these sites are very remote, and unsuitable for agriculture. The big logging boom in the Southern Blue Ridge was 80-100 years ago, so 150 years is a reasonable proxy for old-growth status.

3) A mixed-age canopy: When trees die of old age, or fall because of a natural disturbance like a storm, they leave canopy gaps that allow younger trees to grow, creating a mosaic of tree sizes and ages.

4) The presence of coarse woody debris: Coarse woody debris is a fancy biological term for decaying wood. Old forests usually have copious amounts of decaying wood, varying from freshly fallen, to indistinguishable from soil.

5) Snags: Snags are standing dead trees. They provide important habitat for a number of wildlife species including woodpeckers and black bears. They tend to be more common in forests where trees are allowed to die of natural causes.

6) Complex character: The most difficult to quantify and reliable characteristic of old-growth forests is their structural and biological complexity. An example of this concept is that old-growth forests tend to have more diverse biological communities than second growth forests of the same type, because there is more physical structure, like snags, to utilize.

When the Eastern national forests were purchased around 1913, those responsible for acquiring them where looking for some of the most valuable, and therefore, least logged tracts of land. William Willard Ashe, one of the people most responsible for the surveying and acquiring of Blue Ridge National Forests, stated that "the larger portion of the lands which have been acquired have had the timber cut off, or at least some of the best timber has been cut, but a number of fine stands have been secured within which there has never been the sound of the lumberman's axe." But over the years, the knowledge that the national forests of the Southern Blue Ridge contain significant old-growth forests was shouted down by the myth that "It's all been logged." Because these forests have been essentially forgotten, the sum of old-growth present before 1940 has been reduced by Forest Service timber sales. Hopefully, as the American people become more aware of this great treasure on their public lands, the remainder can be protected in perpetuity.

HICKORY BRANCH TRAIL Nantahala National Forest

Highlights: Remote with excellent oak-hickory forest

Protection: Temporarily protected as "Large Patch Old-Growth" by Nantahala National Forest.

Directions: From Andrews, take Junaluska Rd. over Junaluska Gap. Approximately 1.4 miles past Junaluska Gap park at the pull-off on the right, and look for the unmarked beginning of the Hickory Branch Trail across the road. Topton Quad.

The lower reaches of Hickory Branch were heavily logged, but for some reason, perhaps the formation of Nantahala National Forest, there appears to have been no logging above 3680'. Counting rings on trees cut by the trail is fun and will reveal ages over 200 years. The montane-oak hickory and high elevation red oak forests here are classic. This trail can be combined with the London Bald Trail and Junaluska Trail to form a loop.

SNOOK'S NOSE TRAIL Pisgah National Forest

Highlights: Views, rare plants, dry forest communities

Protection: Protected as part of the Jarrett Creek Roadless Area.

Directions: From Old Fort go east on Hwy 70 and turn left on Curtis Creek Rd. Trail is adjacent to the new RV campground. Old Fort Quad.

The Curtis Creek area was part of the first purchase of National Forest in the East in 1913, and has some exemplary patches of old-growth because of it. The Snook's Nose trail is a great place to get a workout (potential 3000-foot elevation gain), see some rare plants (watch out for turkey beard and Carolina rhododendron), and see a beautiful view. Above 3200' the trail enters a dry and non-commercial forest that was never logged. Chestnut oak, black gum, red maple, black birch, table mountain pine, and Carolina hemlock, with thickets of mountain laurel and rhododendron, compose most of the forest. For those confident with their map-and-compass skills, there is a beautiful, open forest of tulip poplar and red oak NE of Laurel Knob at 4000 feet, in an area known as the "Rompous Bowl."

CENTER for BIOLOGICAL DIVERSITY

For Immediate Release, February 15, 2022

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Missing Link in Biden's Climate Agenda: Letting Older Trees Grow

Environmental Groups Call For National Forest Policy to Protect Mature, Old-Growth, Trees, Forests

WASHINGTON— A coalition of more than 70 groups launched a new campaign today called the Climate Forests Campaign and called on the Biden administration to take executive action to protect mature trees and forests on federal lands, which are critical in the fight against climate change.

"It's completely unacceptable that federal land managers lack strong policies to protect old trees and forests, given all we know about how critical they are to our climate and biodiversity," said Randi Spivak, public lands program director at the Center for Biological Diversity. "We're calling on President Biden to safeguard these beautiful, life-giving ecosystems to have a shot at a livable planet. It's cheaper, smarter and quicker than logging them. We just need to let them grow."

Today's campaign launch comes a year after Biden signed an executive order setting a path to achieve net-zero emissions economy-wide by 2050 and work with partners internationally to put the world on a sustainable climate pathway.

This month marks the 117th anniversary of the U.S. Forest Service. For more than a century, the agency has focused much of its resources on logging and timber sales. The Climate Forests Campaign is calling on the Biden administration to kick off a new era of climate and forest policy that values trees and forests as key pieces of the climate solution.

Forests, particularly older forests, store vast amounts of carbon and continue absorbing carbon as they age. Logging trees in these areas releases most of that carbon back into the atmosphere. Even under the best-case scenario, newly planted forests would not reabsorb this carbon for decades or centuries — timescales irrelevant to avoiding the worst consequences of climate change.

Older trees and forests also are more fire resistant and help curb the effects of climate change by slowing soil erosion and moderating temperatures.

Carbon-absorbing older forests are also the best habitat for thousands of wildlife species, including spotted owls, red-cockaded woodpeckers and pine martens.

The last comprehensive federal policy to protect national forests, the Roadless Rule, was enacted in 2001 under President Bill Clinton. The rule was adopted to protect nearly 60 million acres of designated roadless areas from logging and roadbuilding, safeguarding significant stands of remaining old growth. Though these areas act as a critical carbon sink, most older trees on federal land lie outside of roadless areas.

"Older forests on federal lands work as a natural climate solution, drawing down massive amounts of carbon dioxide from the atmosphere," said Spivak. "The science is clear that we should be protecting existing old-growth trees and allowing mature trees and forests to grow. This would show the world that Biden takes his pledge to end global forest losses seriously."

Members of the coalition include the Center for Biological Diversity, Earthjustice, Environment America, Natural Resources Defense Council, Oregon Wild, Standing Trees, Sierra Club, Southern Environmental Law Center and Wild Heritage.

Patrick Hunter & Zack Porter 4 min read

Eastern Forests: An Untapped Carbon Storage and Biodiversity Stronghold

"We are between two forested worlds–the natural forest of pre-[European] settlement North America and the recovered forest of the future… The earlier forested world is not dead. We are studying and struggling to preserve its living remnants. And we do not believe that the future forest is powerless to be born. These remnants–with our help–will become the seeds from which a renewed forest spreads."

\- Mary Byrd Davis,
Eastern Old-Growth Forests: Prospects for Rediscovery and Recovery

As two born-and-raised conservationists at different ends of the Appalachians, we can both recall our youthful naivete when it came to understanding the state of our Eastern US forests. Whether gazing out from an overlook on the Blue Ridge Parkway or a bald summit in New Hampshire's White Mountains, the view is stunningly beautiful: a multi-textured carpet of green unfurls as far as the eye can see.

We took that view at face value growing up, assuming the panorama hadn't changed much since time immemorial, and likely didn't question whether the green tapestry before us was a truly healthy forest, or in fact a forest in recovery. With a few more years under our belts and miles under our feet, we've come to realize a truth that, unfortunately, few Americans are ever taught in school: our forests are a fraction of what they once were, and few are managed to restore their former glory.

Our Eastern forests were decimated in the 19th and 20th centuries by logging. Centuries-old forests were liquidated, complex ecosystems vanished, rich topsoil eroded, and waterways were clogged with silt. Our forests today—as spectacular as they may be—play second fiddle to the forests that once were.

Adirondack Forest, Zack Porter

But from the massive bald cypress and tupelo gum trees in the blackwater swamps of South Carolina's Congaree National Park, to the sky-scraping old-growth white pines in the remote glacial eskers of New York's Five Ponds Wilderness, there are still living remnants of the Eastern forest that once dominated the landscape. Paddle or walk into their midst, and it's hard not to be overcome with awe and wonder. These remarkable, old-growth forests—remnants of what once was—must be preserved. They are also reminders of what could, with our help, someday be restored.

There are many good reasons to let our Eastern forests return to their former glory, and one of the biggest is their ability to store carbon. The East is the most forested region of the coterminous United States with some of the highest potential for storing carbon in trees. Storing carbon in mature and old-growth forests is one of the cheapest, most effective, and most immediate tools available to fight climate change. Older forests, in particular, are of outsized importance because they store much more carbon than younger forests. Fully utilizing these forests' abilities to trap and store carbon can help mitigate the impacts of climate change, which are already happening in the Eastern US and across the world.

Old forests are also critical when it comes to supporting native biodiversity, mitigating flooding and erosion, protecting drinking water supplies, and producing clean air. These forests are important wildlife habitats and are often used for recreation and spiritual renewal.

To use these forests to their full potential we have to stop cutting them down. Approximately six times as much carbon is released from eastern US forests due to timber harvesting than all other forest disturbances combined, including wildfire—and in some Eastern states, the difference is closer to twentyfold. Wood products can store some amount of carbon for a period of time, but this is only a fraction of the carbon stored in a standing tree or even dead wood left to decompose in a forest. There is no way to harvest an old forest without putting significant carbon into the atmosphere. And a new forest planted to replace the old, harvested one won't recapture the emitted carbon for decades or centuries at best—far too long to avoid the worst impacts of climate change. It is past time that we start recognizing our mature and old-growth forest for the carbon and biodiversity powerhouses that they are and stop cutting them down.

The easiest place to start is on federal forestlands. In the East, much of our best remaining old-growth and mature forest is on lands managed by the U.S. Forest Service. Many of these forests are vulnerable to logging and in recent years the Forest Service has proposed increasing the amount of timber harvest on public lands. This is a foolish proposition where federal public lands make up a relatively small percentage of the total land area and private lands are already managed intensively for wood products. It would be far wiser, in our view, to manage mature and old-growth forests for their carbon storage and biodiversity values, putting our National Forests on a long-term path towards recovery of the complex and awe-inspiring forests that once blanketed much of our home region.

We have a unique opportunity in the Eastern United States. National Forests across the East can play a globally-significant role in solving the climate crisis – all we have to do is let them grow.

Patrick Hunter, Associate Attorney at Southern Environmental Law Center
Zack Porter, Director at Standing Trees

CENTER for BIOLOGICAL DIVERSITY

For Immediate Release, January 13, 2022

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Petition Seeks to Protect Southern Bog Turtle Under Endangered Species Act

North America's Smallest, Rarest Turtle Has Nearly Disappeared Across Its Southern Range

ASHEVILLE, *N.C.*— The Center for Biological Diversity filed a petition today urging the U.S. Fish and Wildlife Service to protect the southern population of the bog turtle as a federal endangered species in Virginia, North Carolina, Tennessee and Georgia.

The bog turtle is North America's smallest turtle, measuring about the length of a human thumb. It is also one of the continent's most imperiled turtles: Its southern population has declined by at least 50% in the past two decades, and fewer than 2,000 individuals are left.

"These little turtles are on the brink of extinction, and they need help now," said Will Harlan, a staff scientist at the Center. "Bog turtles have been hunkered down in Appalachia for 20 million years, yet without federal protection they could be gone forever before we know it."

Habitat destruction and poaching are the primary causes of the bog turtles' steep decline. Bog turtles live in marshy wetlands that are being drained for development. Only 500 acres of mountain bog habitat remain across the turtles' entire southern range.

Bog turtles are divided into northern and southern populations. The northern population was listed as federally threatened in 1997, but the southern population was not, and in the past two decades, its numbers have plummeted. Only 14 viable sites remain across the turtle's entire five-state southern range.

Full protection as an endangered species would ensure that bog turtles and their remaining habitat are safeguarded. It would also require a federal recovery plan to restore bog turtle populations.

"Bog turtles are nearly gone. That's on us," said Harlan. "But there's still time to save them if we act now. With Endangered Species Act protections, these tiny turtles have a fighting chance."

THE GARDEN CLUB of AMERICA

THE GARDEN CLUB OF AMERICA POSITION PAPER

The Garden Club of America supports independent, academic, peer-reviewed scientific research as the basis for formulating responsible public policy and legislation, as well as appropriate funding to ensure quality results. The Garden Club of America is a nonpartisan, issue-oriented advocate for a beautiful, healthy planet.

NATIONAL PUBLIC LANDS

The United States maintains four public lands systems: the National Forest System, managed by the US Forest Service; the National Park System, managed by the National Park Service (NPS); the National Wildlife Refuge System, managed by the U.S. Fish and Wildlife Service, and the National System of Public Lands, managed by the Bureau of Land Management (BLM). Federal public lands are held in trust for all Americans and the GCA supports the goal of managing our lands for the long-term health of both the land and citizens.

While Forest Service and BLM lands permit uses such as logging and mining, NPS lands are specifically required by the Organic Act of 1916 to conserve park resources "unimpaired" for the enjoyment of future generations. The National Wildlife Refuge System is held to an even higher standard, reserved for the "conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats."

Because all Americans are the beneficiaries of sound public lands management, The Garden Club of America advocates for resource protection and preservation as a top priority in public lands policy. Public lands sustain fish and wildlife and provide clean air and a source of water for all Americans. They also support local communities by providing millions of outdoor recreation jobs.

The Garden Club of America supports federal, state, and local legislation, policy, and individual action that address the following:

STEWARDSHIP

- Prioritize management practices that mitigate the effects of climate change, foster biodiversity, and protect native plant communities and endangered species.
- Connect public and private lands to create wildlife corridors for migration of plants and animals.
- Encourage the use of native plants and prevent, control, and eradicate invasive species with minimal use of toxic herbicides.
- Employ adequate land use planning techniques that maximize wildlife corridors and habitat, encourage recreation, and preserve historic and cultural resources.
- Replace, where feasible, aging infrastructure with natural infrastructure and environmentally sound alternatives.
- Provide adequate financial support for the agencies that manage public lands to ensure that qualified personnel, including plant scientists, are available to adequately steward the lands.
- Encourage a review of ways to improve revenue generation in and self-funding of public lands.

LAND CONSERVATION

- Increase the pace of overall land conservation efforts, both public and private, to protect ecological resources.
- Encourage collaboration between government managers and private owners of parcels adjacent to public lands and provide incentives for such landowners to follow good conservation practices.
- Support federal and state tax incentives for private conservation of adjacent or infill holdings of land.

- Support planning efforts that rebuild/utilize brownfield areas rather than converting open space for development purposes.
- Provide full, permanent funding for the Land and Water Conservation Fund of 1965 and use the federal portion of the funding for its intended purpose.

ENFORCEMENT

- Support landmark environmental laws such as the National Environmental Policy Act, the Clean Water Act, and the Clean Air Act.