



Position Statement: Carbon Sequestration and Storage in Forests

**Formulated by the Forest Guild Climate Change Working Group.
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Summary

The efficient management of forests for carbon sequestration is closely related to sustainable and ecological forestry practices that use nature as a model, i.e. excellent forestry. Forests and forest products capture and store about 10 percent of all annual U.S. carbon emissions and could capture and store additional amounts by increasing excellent forestry practices. These practices are currently encouraged by state-level regulations, voluntary best management practices, certification, landowner support and other programs. Despite these programs and policies that currently support excellent forestry, guidelines that promote increased carbon storage are necessary. Financial incentives that directly target carbon emissions, like carbon offset trading, or indirectly target carbon emissions through tax credits, rebates, and grants or cost-share programs, similar to the Wildlife Habitat Incentives Program (WHIP), the Environmental Quality Incentive Program (EQIP) or Conservation Reserve Program, should be utilized to encourage excellent forestry. Similarly, any carbon tax initiative should be structured to also promote excellent forestry. Additionally, the full suite of ecosystem services provided by our forests should be recognized and valued to support continued forest ownership by private landowners.

Some critical elements of incentivizing and accounting for sequestered and stored forest carbon in cap and trade systems

Cap and Trade Systems

Cap and trade systems are one method of encouraging carbon sequestration. Forest carbon projects, including forest management, reforestation, avoided deforestation, and urban forestry, should all be included as possible offsets. Cap and trade systems are now being discussed or implemented on a national level and in various regions of the country. These complex initiatives provide the first opportunities to monetize the public service that forests provide through sequestering and storing carbon. The protocols that might best retain carbon in both our forests and forest products are currently the subject of much debate. At this time, the Forest Guild offers our perspective on those approaches that appear best suited to achieve the goals of these initiatives. The Guild will continue to closely monitor the discussion and will revise these policy suggestions as necessary.

The Forest Guild acknowledges that carbon offset trading may not be the most efficient way to address all of the opportunities to sequester and store carbon and to forestall climate change through forest retention and management. A systems approach is required that includes cap and trade systems along with an array of forest initiatives that are designed to balance carbon offset trading with full support for associated forestry programs that either have been established, or could be established, to address these issues. Funds acquired from auctioning carbon allowances through the cap and trade process could provide enhanced funding for these associated support programs.

Carbon Trading Offsets Through Forestry Protocols

Carbon trading offsets for a suite of forest management projects and avoided deforestation projects deserve strong consideration within cap and trade systems. Forest management projects are more complex and harder to qualify than other projects. All legitimate projects should offer offsets that are real, additional, verifiable, enforceable, permanent, and avoid leakage. There are three main types of forestry projects that should be considered in cap and trade systems:

1. *Avoided Deforestation* - The first and most important projects are those that avoid deforestation and the conversion of forestland to non-forested land. Projects that avoid deforestation should be eligible for offsets. The sequestered carbon that is offset should be permanently protected through a conservation easement that includes standard requirements for continuous sustainable management and maintenance of carbon stocks. An ownership protected from conversion may also be eligible for forest management offsets as outlined below.

2. *Forest Management* - The second category of eligible projects are those that improve forest management practices on working forestland to sequester and store additional carbon above a beginning level and eventually move above an established baseline that represents average carbon sequestration and storage on similar forests.

3. *Reforestation and Afforestation* - The third eligible project category, ecologically appropriate reforestation and afforestation, provides the benefit of a comparatively easy process to establish a reliable baseline.

Criteria for Forest Management Protocols

1. *Additionality and Baselines* - Eligible forest management projects must sequester and store additional carbon. Therefore, it is necessary to establish carbon baselines that must be exceeded to earn carbon credits for offset projects. One possible approach is to set standards at a rolling average of carbon stock in forests and/or forest products for similar properties and within recent years. Projects that commit to increase carbon storage above beginning levels and/or commit to maintaining carbon above the standard for an extended period would be eligible and supported. It is essential to verify that the total program results in an increase of regional or national averages over time. New project baselines would then be adjusted accordingly to ensure continued improvement.

Programs should allow for refinements of regional baselines where more detailed, reliable data exists that would permit development of standards that are tailored to the project property's characteristics, for instance, by forest type, ownership, and land use history. Appropriate baselines would allow cap and trade programs to:

- a. Achieve additionality;
- b. Provide economic incentives for landowners currently having inadequate or no management to enlist in these programs and to improve their forest management practices; and
- c. Provide economic incentives to landowners currently implementing excellent forest management to continue these practices and to further enhance them.

2. *Verification* - Eligible projects should also verify that they are guided by forest sustainability standards. Existing certification programs and/or other methods can accomplish this.

3. *Permanence* - The goals of the cap and trade system must be clearly established and linked to the critical phases and benchmarks for the buildup of atmospheric carbon and their associated effects on climate globally. While the Forest Guild supports storing sequestered carbon in forests for the longest time possible, keeping carbon out of the atmosphere during particular, shorter periods of the global climate crisis may provide significant benefits. The removal of atmospheric carbon for a minimum of 100 years should be considered permanent for the purposes of forest carbon offsets. However, public policy may determine that it is advantageous to keep carbon in forests and out of the atmosphere for a shorter time period, the next fifty years for instance, pending the development and utilization of other removal techniques. In such a case, government programs might be established as part of a climate policy package that provides incentives for forest landowners to provide temporary carbon reserves.

In the context of carbon offsets, a ton of forest carbon stored is exchanged directly for the right to release a ton of carbon from fossil fuel or other industrial emissions. Equivalence between the offset and the allowed emissions that it replaces, demands that both occur during a similar time period; permanence may be a barrier to some forestry sequestration projects. The Guild recommends that offset credits from temporary forest carbon sequestration projects be considered as an option, provided that the environmental integrity of the emissions reduction is assured. As temporary forest carbon storage contracts reach the end of their term, permanence requirements compel offset purchasers, or project aggregators, to replace the forest stores with new offset contracts or with unused emissions allowances. (This may be cost effective in the future as new low-emission technologies are installed.)

4. *Leakage* - Direct leakage of carbon through timber harvesting that emits carbon on other portions of the ownership of eligible projects must be avoided. Indirect leakage is more difficult to determine, hence the Guild's recommendation of a systems approach to carbon sequestration issues wherever possible. The Forest Guild is particularly concerned with delaying or eliminating harvests—whose potentially deleterious effects may encourage the use of materials that emit more greenhouse gas or that stimulate

replacement harvests elsewhere in the project region or globally—in order to achieve increased carbon sequestration.

5. *Accounting for Carbon in Forest Products* - Theoretical modeling indicates that managing forests for certain forest products may increase the total on- and off-site sequestration of carbon. The Forest Guild believes that forest products comprise a legitimate carbon sink; these should be included in the calculation of acceptable projects. However, additional research and modeling is required to adequately determine the importance of this pool. Research must address credible methods to monitor, to measure, and to verify carbon levels through time. For example, a full life-cycle accounting is necessary to include useful life, fossil fuel consumption, and the methane release in landfills. The analysis must also account for carbon storage dissipation rates as wood moves through its life cycle. Fundamental differences exist between on-site carbon and off-site carbon and their relation to healthy forests. Forest management that increases on-site biomass or carbon is more assuredly sustainable and ecologically sound than management practices that result in neutral or declining on-site biomass or carbon. Therefore, on-site carbon is more valuable to overall forest health, function, and to ecological co-benefits than off-site carbon. On-site carbon, from a holistic forest perspective, is therefore more beneficial to long-term carbon sequestration than off-site carbon.

6. *Affordability of Measurement and Verification* - Family forest holdings of smaller acreages contain much of our country's forestland and potential for carbon storage. The administrative cost of measurement and verification must be both affordable and enforceable on these small ownerships to effectively capture this carbon storage capacity.