

Earth Smart *"Farming for the Future"*

Forest Management

Primary direct GHG emissions associated with forest occur when forest lands are converted to other uses (deforestation) or when management intensity increases such that average standing biomass is reduced over the long-term. The greatest greenhouse gas emissions (GHG) occur when forests are converted to other land uses. Standing biomass can also be reduced when management operations change and maintain forest trees that are smaller and younger than before or the rotation length is shortened. Forest soils store about half the carbon in a forest and will retain most of this carbon if rutting or creation of large canopy openings are avoided during harvest operations. A modest portion of a forest's carbon is stored in deadwood (snags and logs).

Forest Certification Goals

- Increase carbon sequestration in the forest
- Maintain or increase forest productivity
- Protect water quality
- Maintain species native to the Northeastern United States

General Requirements

- Whole Farm GHG Assessment
- Whole Farm GHG Management Plan
- Allow regular on-site verification of practices to maintain certification
- Keep records of harvest and/or plantings.

Forest Management Requirements

- Forest Management Plan (FMP), including:
 - Carbon management plan that documents how carbon stocks will increase or not decline over time (optional for this program, required for offsets-carbon projections using accepted models).
 - Identify management practices that help protect soils and water quality and conserve native species.
 - Stand map with property boundaries, water bodies, landings, and access points for logging equipment identified on the map.
 - Ten year harvest plan (must include carbon management)
 - Current forest carbon inventory and carbon inventory every ten years.
 - Soil maps

Performance Standards

All Practices

- All acreage included in FMP is enrolled.
- All forest management operations must apply state water quality best management practices, as found in Best Management Practices for Forestry: Protecting Maine 's Water Quality, Maine Department of Conservation, available at:
http://www.maine.gov/doc/mfs/pubs/pdf/bmp_manual/bmp_manual.pdf.

Improved Forest Management and other forest management practices

- Maintain or increase carbon stocks over time.
- Harvest less timber than what your forest is growing for each ten year interval.

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- When managing and harvesting at the stand level, manage to achieve net increase in carbon stocks over 20 years.
- Retain 1/3 of the down and standing deadwood when harvesting.
- Practice low impact logging¹ to minimize soil rutting and excessive damage to residual trees in the harvested stand.

Afforestation and plantings

- Species native to the Northeastern United States shall be favored when tree planting, especially for afforestation, reforestation and establishment of plantations.

Certification points can also be awarded for:

- **Afforestation**-Planting tree species native to the Northeastern United States in cropping and forage areas no longer in production.
- **Afforestation**-Planting tree species native to the Northeastern United States in riparian areas lacking trees.
- **Conservation Easement**-Entering into a long-term conservation agreement to primarily sustain natural forest composed of naturally regenerated tree species native to Maine.
- General requirements as listed above must be met.

If there is an existing conservation easement on eligible property, credit for the remaining time (from the date of the certification) will be given

¹Low impact logging employs the following practices to minimize and control impacts to soils and:

- having a written forest management or stewardship plan
- planning roads and trails before the harvest
- employing directional tree felling
- cutting stumps low to the ground
- constructing roads and trails to minimum widths
- constructing landings to minimum size and spacing
- minimizing ground disturbance
- paying attention to aesthetics or how the site looks after harvest
- minimizing residual stand damage
- following state best management practices (BMPs)
- having a good understanding among landowner, logger, and forester
- of how the site will be harvested, what will be removed, how it will be removed and measures taken to protect and enhance the remaining stand of trees.

Points required for Forest Management Certification: 15

If a qualifying practice has been implemented on a farm within ten years prior to the assessment, it may be used for certification points if the practice is uncommon for the county in which the farm site is located. An "uncommon practice" is defined as one that is implemented on less than 25% of the same type of farm in the county. If a qualifying practice is classified as "common", in use by more than 25% of same type farm within the county, certification points can be awarded only if additional greenhouse gas reductions are made, such as extended rotations, change in crop, etc.

Certification Period: Ten years, renewable

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Verification Period: Five years

Opt out: Only for catastrophic event.

Accepted Practices

Practice	GHG Benefit	Co-Benefit	Cost, Payback	Certification Period	Verification	Points
Afforestation-Riparian Buffers and Cropland/Pasture Conversion	Long term carbon sequestration, emissions reductions	Increased wildlife habitat, less soil erosion, improved water quality. Can be used as offset	Long term payback. Payback period can be reduced by NRCS program assistance, other programs or by marketing offsets.	10 years	5 years	15
Improved Forest Management-meeting all performance standards	Long term carbon sequestration, emissions reductions	Increased wildlife habitat, less soil erosion, improved water quality. Can be used as offset	Moderate to long-term payback, depends on management plan. Payback period can be reduced by NRCS program assistance, other programs, and managed harvest and/or by marketing offsets.	10 years	5 years	15
30 year Conservation Easement with carbon sequestration requirements	Long term carbon sequestration, emissions reductions	Increased wildlife habitat, less soil erosion, improved water quality	Payback depends on \$, if any, received in return for the conservation easement.	10 years	5 years	15
In Perpetuity Conservation Easement - Avoided Development	Long term carbon sequestration, emissions reductions	Increased wildlife habitat, less soil erosion, improved water quality.	Payback depends on \$, if any, received in return for the conservation easement.	10 years	5 years	7
Conservation Easement in Perpetuity with carbon sequestration requirements.	Long term carbon sequestration, emissions reductions	increased wildlife habitat, less soil erosion, improved water quality.	Payback depends on \$, if any, received in return for the conservation easement.	10 years	5 years	20
Total Points						

Offset protocols require conservation easements, length depending on the protocol, as a way to insure lasting benefits. Typically, easements of a longer duration are more valuable as offsets.