

Measuring the Climate Mitigation Benefits of Improved Forest Management

At Bois Forte, the climate mitigation benefits of forestry are being measured using a new carbon accounting methodology, Verra's "Methodology for Improved Forest Management Using Dynamic Matched Baselines from National Forest Inventories" (VM0045). This methodology provides an intuitive research design and higher confidence in results than traditional methodologies based on models and historic assumptions. **Here's how it works:**



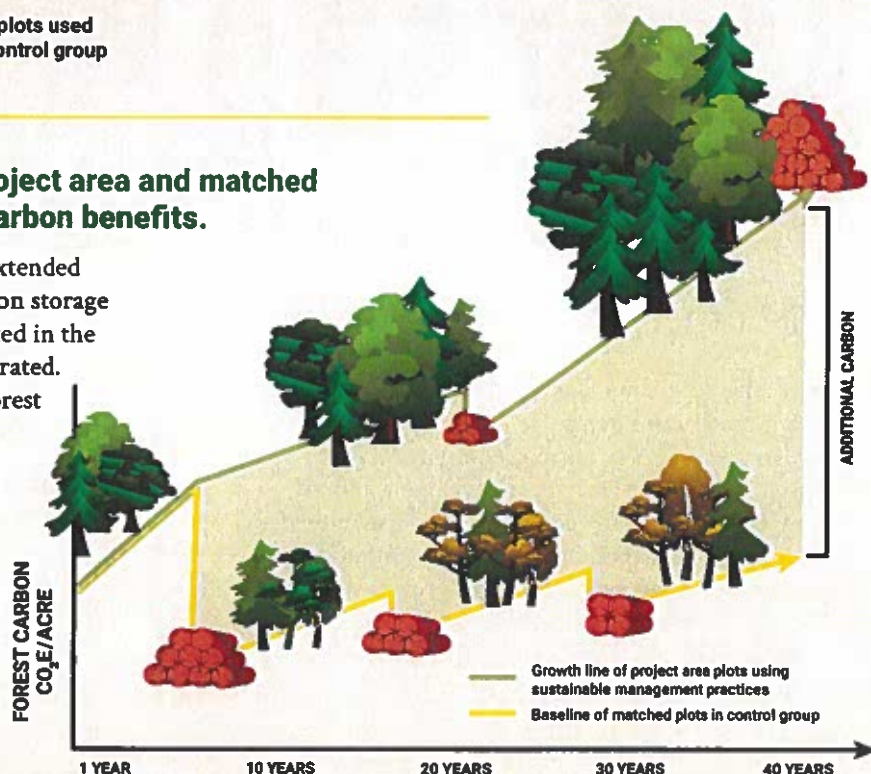
- Project area property
- Project area plots
- Similar plots
- Matched plots used to form control group

1 Identify similar forest areas outside the project area that can serve as controls.

To set a starting point for comparison, we first find forests outside the project area that are very similar. These are forest inventory plots in the U.S. Forest Service's National Inventory and Analysis (FIA) database, part of the Nationwide Forest Inventory, that are matched to forest inventory plots in the project area on the basis of 14 variables including similar ownership, forest type, site productivity class, stand age and stocking. This group of matching plots is called the control group, and it provides a strong, real-time baseline reference for comparison.

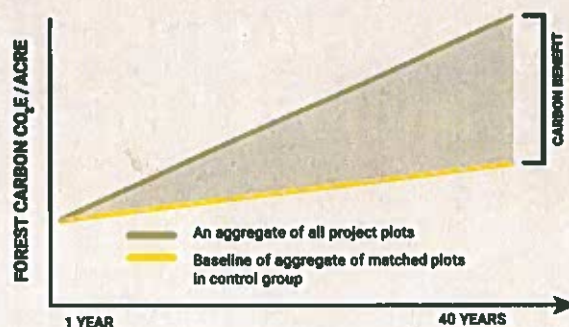
2 Compare forest growth in project area and matched control plots and calculate carbon benefits.

Where forest management practices like extended rotations or set-asides improve forest carbon storage relative to "common practice," as represented in the matched controls, carbon benefits are generated. To assess the carbon benefits of improved forest management, the forest inventory plots in the project area and their matched FIA controls are periodically remeasured and compared. The difference between the two represents the carbon benefit attributable to the improvements in forest management carried out in the project area, as compared to common practice.



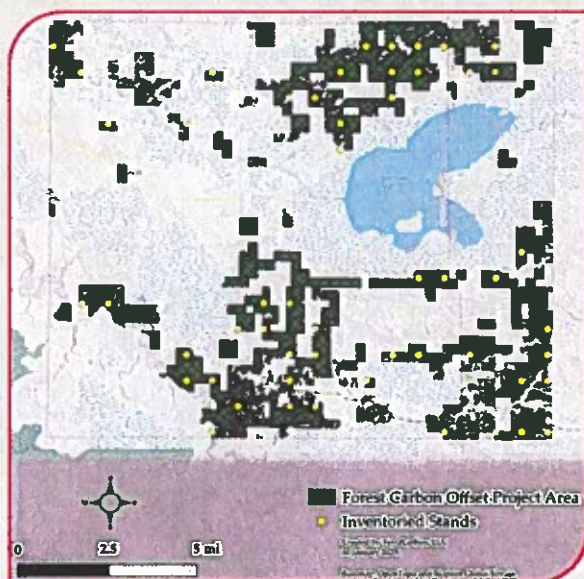
3 Report and verify carbon benefits.

Calculated carbon benefits are then reported to Verra and subject to rigorous third party auditing before being eligible for issuance as Verified Carbon Units (VCUs) that can be sold on the voluntary carbon market. Carbon benefits are calculated and reported, and eligible for issuance as VCUs, on monitoring and verification cycles of from one to five years.

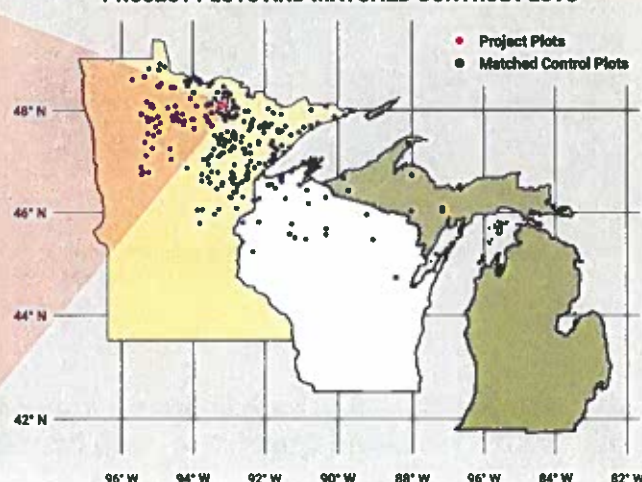


The Bois Forte Forestry Project

The application of the VM0045 methodology is underway at Bois Forte. In the winter of 2023–2024, an intensive forest carbon inventory was carried out by Green Timber Forestry, under the direction of Bois Forte Forestry and TerraCarbon, measuring 4,664 trees on a representative sample of 250 plots. Bois Forte plots were then matched to 273 similar FIA plots, that will serve as controls for the life of the Bois Forte project, representing forest conditions under common practice management.



PROJECT PLOTS AND MATCHED CONTROL PLOTS



A dynamic forest management plan to meet current and future goals. With help from The Nature Conservancy, and in consultation with the band, Bois Forte Forestry is developing a forest management plan that will balance a diverse suite of objectives, from carbon storage to the creation and maintenance of moose habitat. This process is being informed by modeling and evaluating the outcomes of management proposals using the U.S. Forest Service Forest Vegetation Simulator.

FOR MORE INFORMATION:

VM0045 Methodology

<https://tinyurl.com/xusb8crp>

U.S. Forest Service Forest Inventory and Analysis Program, Nationwide Forest Inventory

<https://research.fs.usda.gov/programs/nfi>

Forest Vegetation Simulator

<https://www.fs.usda.gov/fvs>