Appalachian Landscapes Protection Fund

Forest Carbon Resource Guide

Conservation organizations have a responsibility to address climate change. Land protection can be an effective tool for carbon mitigation. Open Space Institute (OSI) compiled this forest carbon resource guide for applicants to the Appalachian Landscapes Protection Fund (ALPF) and any organization or agency interested in retaining stored carbon and increasing sequestration on the lands they protect or steward. This list is not comprehensive and focuses on resources relevant to the geographies where the ALPF has Focus Areas. Please contact OSI if you have suggestions of resources to add to this guide.

Land Protection for Carbon Mitigation

Meeting the Challenge of Climate Change: How Land Trusts, Policymakers, and Public Agencies Can Achieve Carbon Goals through Strategic Forestland Protection

Open Space Institute, American Forests, The Nature Conservancy, and the Land Trust Alliance

Aimed at helping practitioners and policymakers address climate change through strategic forest protection, this report offers guidance on the selection, completion, and management of land protection projects for the successful capture and storage of carbon.

Six Simple Steps: Evaluate the Contribution of Your Land Protection Project to a Low Carbon Future

Open Space Institute

This short ‘how to’ guide walks through a series of steps for using an online tool to evaluate how much carbon a forest land protection project stores today, and how much additional carbon could be sequestered by 2050.

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Forest Carbon Stewardship

OSI requires projects funded through the ALPF to have a plan for long-term stewardship that will maintain or increase carbon storage and sequestration through either passive or active management. There are many ways to achieve this goal. The specific practices that are appropriate for your project will vary according to the region, forest type, and site conditions present. The following section includes references that may help conservation organizations and grant applicants craft stewardship plans that protect forest carbon.

**Forest Carbon Menu of Adaptation and Mitigation Strategies and Approaches (National)**

*Northern Institute for Applied Climate Science*

The Practitioner’s Menu of Adaptation Strategies and Approaches for Carbon Management is a guide for forest managers that offers a flexible set of approaches to maintain or enhance carbon stocks and sequester carbon. The practices outlined in the Menu are based on principles appropriate in a range of geographic settings, and that land managers can adapt to local site conditions.

**Exemplary Forestry (New England)**

*New England Forestry Foundation*

Exemplary Forestry is a sustainable forest management approach developed by New England Forestry Foundation (NEFF) to prioritize long-term forest health and protect the ecosystem services that forests provide. Exemplary Forestry practices are designed to 1) enhance the role forests can play to mitigate climate change, 2) improve wildlife habitat, and 3) grow more and better-quality wood. NEFF has tailored the Exemplary Forestry approach to conditions in the Acadian Forest, which covers a broad swath of northern New England into Canada. Read the full report describing implementation of Exemplary Forestry practices in the Acadian Forest region, or a synthesis of the standards and metrics.

**Southern New England Forest Management in an Era of Climate Change**

*Yankee Division of the Society of American Foresters*

This position statement, developed and adopted by the southern New England division of the Society of American Foresters, synthesizes scientific research and forest stewardship strategies for carbon storage and sequestration to guide management that contributes to climate change mitigation and adaptation.

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Forest Carbon - An Essential Natural Solution for Climate Change
University of Massachusetts, Amherst and University of Vermont
A primer on forest carbon for landowners and stewards on the impacts and tradeoffs of various land use and management decisions on carbon storage and sequestration.

Forest Carbon Data

A number of free, publicly available carbon datasets are useful for understanding how much carbon a property currently stores, how much additional carbon could be sequestered in the coming years, and the risks of carbon loss. All of these factors are important to consider when developing a stewardship plan to maintain or increase carbon storage. The online tools described below make these data readily available.

Resilient Land Mapping Tool
The Nature Conservancy
This tool lets users view The Nature Conservancy’s climate resilience analysis results alongside forest and soil carbon estimates across the lower 48 U.S. states. Data are displayed at the 30-meter scale. The site allows the user to upload a parcel or draw a polygon to calculate total carbon stored based on estimates for 2010 and 2050. The data were developed by Dr. Christopher Williams at Clark University based on U.S. Forest Service Forest Inventory and Analysis (FIA) data and models. Note that this tool supplies the data OSI’s Fund requires in their proposal preparation.

Forest Carbon Map
The Trust for Public Land and American Forests
This tool uses FIA data and runs on a simple web platform that allows users to view carbon stocks at the county, state, and national scale. The analysis can be further broken down by where the carbon is stored and by ownership types. In addition, users can analyze threats to carbon loss and potential co-benefits. Note: to access this mapping tool, users are required to create a free user account.

Forest Carbon Offset Projects

Where land protection results in verifiable avoided carbon emissions or enhanced carbon absorption, landowners can explore the option of selling carbon credits to offset additional emissions from polluters. While there is no net benefit to the atmosphere if the credit sale offsets existing emissions, it can help finance additional forest protection and management. The following resources are useful for finding programs to support carbon credit sales on small to mid-sized projects and in understanding how market sales can successfully align with permanent protection.

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Carbon Offsets in Conservation Easements: The Essentials for Land Trusts
Land Trust Alliance
This report provides detailed guidance for land trusts on drafting conservation easements that are compatible with the development of carbon offset projects. We summarize a few key considerations here but strongly suggest consulting the full document and/or a carbon offset developer to discuss a specific project. Please note that the Alliance charges non-members for this publication. OSI will cover the cost of this document for applicants to OSI’s ALPF if needed.

- **Clearly assign ownership:** To avoid ambiguity and potential conflict, the conservation easement, or a separate legally binding agreement, should define who owns the carbon stocks on the property and the rights to any carbon credits generated.

- **Timing:** Getting the timing of the conservation easement (or fee purchase) and the carbon offset project right is essential to be sure that the land is still eligible for both.

- **Study offset program requirements:** If the landowner is considering registering a project with a carbon-crediting program in the future, the easement should be drafted with awareness of the protocol requirements to avoid potential conflicts. Easement drafters should carefully consider how restrictions within the easement may impact future carbon deals.

- **No double dipping:** Although landowners can be compensated for protecting their land and for selling carbon rights, funders (including OSI) and carbon crediting programs may need assurance that landowners are not paid twice for the same action. The landowner should, therefore, account for any harvesting restrictions contained in their conservation easement when calculating carbon credits and should disclose compensation being received for carbon credits.

Carbon Market Assistance Programs
Compiled by Open Space Institute
For many landowners, cost, complexity, and acreage requirements have long posed barriers to entry into carbon offset markets. Several programs in the U.S. seek to overcome these challenges by providing landowners with the direct support and technical assistance needed to access carbon markets and generate forest carbon offsets. This guide summarizes a selection of these carbon market assistance programs designed to meet the needs of landowners with varied land holdings and objectives. For more information about any of the programs listed we encourage you to visit the linked websites and contact a program representative.

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