

SFI REQUEST FOR PROPOSALS - ROUND 1

FUNDING:

Data Sharing Supplement

Successful applicants will be required to engage collaboratively with SFI for evaluation and monitoring of activity outcomes. Applicants will not be tasked with carbon modeling; however, a sufficient level of data sharing determines the ability of SFI and project partners to undertake relevant carbon modeling and analysis efforts encompassing this overall project. To be eligible for consideration, applicants must be willing to provide required data for option 1, as described in this document (see below). Applicants will receive preferential consideration in the selection process for willingness to provide, through a cooperative agreement, additional project information. This additional project information for proposed treatment areas may include data as described for options 2a and 2b (see below). We encourage applicants to indicate extent of their ability to meet the highest applicable level of data sharing as described in the options below.

Options for modeling carbon implications of forest management

There are several different methods available to quantify the impact of forest management on ecosystem carbon (stocks and fluxes). Each different methodology requires a different level, volume, and specificity of data related to the current forest inventory and management practices, as well as any planned business-as-usual (BAU) or alternative future management actions. We recognize that not all landowners or applicants for this program possess the kind of detailed forest inventory and management data which would be required for the more advanced methodologies, and that some may not feel comfortable providing detailed forest inventories or management plans to an external party. As such, we have developed three optional methodologies, each with progressively more detailed data requirements. In turn, each option will allow for progressively more detailed estimation of ecosystem carbon stocks and fluxes through time.

Option 1: Ecosystem carbon is estimated according to [Level 1 of the 2024 USDA Entity Scale Guidelines for GHG Flux in Agriculture and Forestry \(Chapter 5\)](#)

Using this methodology, we will estimate current and projected ecosystem carbon stocks and fluxes on a per-acre basis in five-year increments.

Required Data

If multiple unique combinations are present, please specify a unique response for each.

- Location of management activities (US state and county)
- Area subjected to management (in hectares or acres, please specify)
- FIA Forest Type Group (see list [HERE](#))
- Stand origin (planted or natural)
- Forest age class (20-year increments, e.g., 0-20, 21-40, etc)

- Planned/BAU forest management which would be carried out in the next 20 years in the absence of this grant
 - Commercial harvest
 - Years until harvest
 - Harvest volume and unit (if known)
 - Percent of the area subject to management which will be harvested (if known)
 - Wood type (hardwood or softwood, if known)
 - Timber products produced (sawlogs, pulpwood, fuelwood, if known)
 - Prescribed fire or other surface fuels treatments
 - Years until treatment
 - Percent of the area subject to management which will be treated (if known)
 - Treatment return interval (if known)

Option 2a: Ecosystem carbon is estimated using the [Forest Vegetation Simulator \(FVS\)](#) from a representative baseline sample of FIA plots

Using this methodology, we will estimate ecosystem carbon stocks and fluxes on a per-acre basis in one-year increments for up to 50 years. We will compare your BAU forest management to the alternative forest management practice which you are applying for, and provide an estimation of the difference in carbon stocks and fluxes which could be expected over this timeframe. Because this methodology relies on a representative baseline, estimates will have a range of uncertainty provided.

Required Data

*If multiple unique combinations of stand conditions are present, please provide a unique management polygon and specify unique attribute data for each. Data marked with * may be inferred from site location data if not known, however local estimates for all data are preferred.*

- Site condition(s)
 - Location of management activities (latitude and longitude)
 - Footprint of management area (ESRI shapefile or geojson)
 - Slope*
 - Elevation*
 - Ecological region, section, and subsection* (see [reference map](#))
 - FIA Forest Type Group* (see list [HERE](#))
 - Stand origin (natural or planted)
 - Land ownership (public or private)
 - Horizontal distance to nearest improved road*
 - Estimated stand age
 - Estimated site productivity (cubic ft/acre/year)
 - Estimated quadratic mean diameter*
 - Estimated live trees per acre*

- Estimated growing stock stocking*
- Any relevant forest management or disturbance which has occurred in the past 20 years
 - Tree damage/mortality
 - Relative severity of this damage
 - Causal agent
 - Time since damage occurred
 - Prescribed thinning
 - Level of thinning
 - Diameter limit(s) for thinning
 - Time since thinning last occurred
 - Commercial harvest
 - Harvest type (even or uneven-aged)
 - Diameter and/or age limit(s) for harvest
 - Harvest volume (and unit)
 - Percent of the area subject to management which was harvested
 - Use of fire or surface fuels treatment
 - Time since thinning last occurred
 - Percent of the area subject to management which was treated
- Planned/BAU forest management which would be carried out in the next 20 years in the absence of this grant
 - Commercial harvest
 - Years until harvest/harvest schedule
 - Harvest type (even or uneven-aged)
 - Diameter and/or age limit(s) for harvest
 - Harvest volume and unit (if known)
 - Percent of the area subject to management which will be harvested (if known)
 - Wood type (hardwood or softwood, if known)
 - Timber products produced (sawlogs, pulpwood, fuelwood, if known)
 - Prescribed thinning
 - Years until thinning/thinning schedule
 - Level of thinning
 - Diameter limit(s) for thinning
 - Time since thinning last occurred
 - Use of fire or surface fuels treatment
 - Years until treatment/treatment schedule
 - Percent of the area subject to management which will be treated

Option 2b: Ecosystem carbon is estimated using the [Forest Vegetation Simulator \(FVS\)](#) with a custom forest inventory, management history, and management prescription *Using this methodology, we will estimate ecosystem carbon stocks and fluxes on a per-acre basis in one-year increments for up to 50 years. We will compare your BAU forest management to the alternative forest management practice which you are applying for, and provide an estimation of the difference in carbon stocks and fluxes which could be expected over this timeframe. Because this methodology uses a custom/applicant provided forest inventory, management history, and management prescription, estimates will have a much smaller range of uncertainty than option 2a.*

Required Data

*If multiple unique combinations of stand conditions are present, please provide a unique management polygon and specify unique attribute data for each. Data marked with * may be inferred from site location data if not known, however local estimates for all data are preferred. When providing a site inventory, please ensure that all methodological and tree level data are provided. If the data provided are insufficient to assemble a model inventory, the methodology outlined in option 2a may be used.*

- Site condition(s)
 - Location of management activities (latitude and longitude)
 - Footprint of management area (ESRI shapefile or geojson)
 - Slope*
 - Elevation*
 - Ecological region, section, and subsection* (see [reference map](#))
 - FIA Forest Type Group* (see list [HERE](#))
 - Stand origin (natural or planted)
 - Land ownership (public or private)
 - Horizontal distance to nearest improved road*
 - Estimated stand age
 - Estimated site productivity (cubic ft/acre/year)
 - Estimated quadratic mean diameter*
 - Estimated live trees per acre*
 - Estimated growing stock stocking*
- Site inventory
 - Inventory methodology (this information will be essential to understand and scale the inventory appropriately)
 - Description of inventory design
 - Basal area factor (for variable radius plots)
 - Fixed plot area (for large trees)
 - Fixed plot area (for small trees)
 - Critical diameter when fixed plots are used to measure small trees and variable radius plots or different fixed plots are used to measure large trees

- Number of inventory plots
 - Number of non-stockable plots
- Variables that must be reported for all trees in the inventory
 - Identification for the plot on which the tree was measured
 - Species
 - Current DBH
 - Total tree height
 - Tree history
 - Tree damage and severity level (up to 3 pairs per tree)
 - History of harvest or management
 - Cull/decay status
- Variables that may be sub-sampled or omitted from the inventory
 - Number of trees represented by a record (when a single record is used to represent a class of trees, or when trees-per-acre values are provided)
 - Periodic diameter increment
 - Tree height to broken or dead top
 - Periodic height increment for seedling and sapling-sized trees
 - Crown Ratio
 - Tree Value Class
 - Woodland stem count (if applicable)
- Any relevant forest management or disturbance which has occurred in the past 20 years (not otherwise reported in the site inventory)
 - Tree damage/mortality
 - Relative severity of this damage
 - Causal agent
 - Time since damage occurred
 - Prescribed thinning
 - Level of thinning
 - Diameter limit(s) for thinning
 - Time since thinning last occurred
 - Commercial harvest
 - Harvest type (even or uneven-aged)
 - Diameter and/or age limit(s) for harvest
 - Harvest volume (and unit)
 - Percent of the area subject to management which was harvested
 - Use of fire or surface fuels treatment
 - Time since thinning last occurred
 - Percent of the area subject to management which was treated

- Planned/BAU forest management which would be carried out in the next 20 years in the absence of this grant
 - Commercial harvest
 - Years until harvest/harvest schedule
 - Harvest type (even or uneven-aged)
 - Diameter and/or age limit(s) for harvest
 - Harvest volume and unit (if known)
 - Percent of the area subject to management which will be harvested (if known)
 - Wood type (hardwood or softwood, if known)
 - Timber products produced (sawlogs, pulpwood, fuelwood, if known)
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 - Years until thinning/thinning schedule
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 - Diameter limit(s) for thinning
 - Time since thinning last occurred
 - Use of fire or surface fuels treatment
 - Years until treatment/treatment schedule
 - Percent of the area subject to management which will be treated