



IRA-GHG Quantification Action Area #1

Soil Carbon Monitoring and Research Network with an above-ground perennial biomass component

Overview of the science delivery mechanism/data stream

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Goal

Establish a national soil carbon monitoring network, with a perennial biomass component, for advancing NRCS mitigation outcomes and improving the national inventory

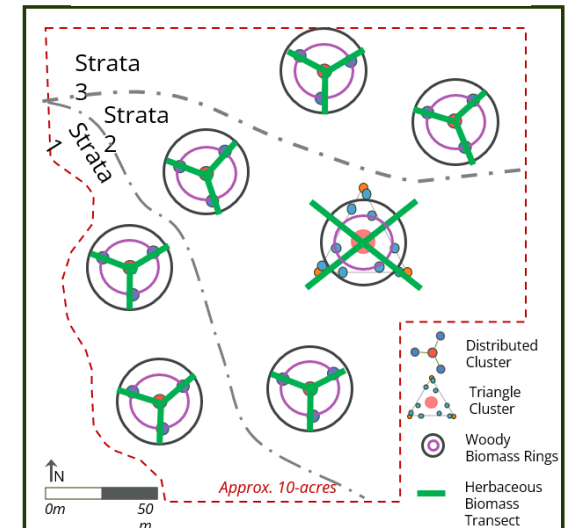
Approach

Network with Three Components:

- National Resources Inventory (NRI) sampling
- Opportunity sampling
- Node sampling



SCMN Opportunity Site Design



How it is/could be related to the Entity Guidelines Forest Management Chapter

It doesn't appear to be directly related.

- The forest management chapter usually omits soil carbon estimates.
- The IRA GHG Quantification SCMN is focused on croplands and grazing lands.



Chapter 5 Quantifying Greenhouse Gas Sources and Sinks in Managed Forest Systems

Forest SOC

Table 5-3

For most North American forest types, **soil carbon accumulation may be omitted**; it is likely to change at a slow rate and is an expensive pool to measure. Accruals within the first 25 years may not represent a significant proportion of carbon stocks, and therefore could be considered *de minimis* in many cases. Exceptional cases, such as wet high-carbon peatland forests, may need more consideration.

For background, the soil organic carbon approach in the cropland and grazing land system chapter uses DayCent for most soils and crops.

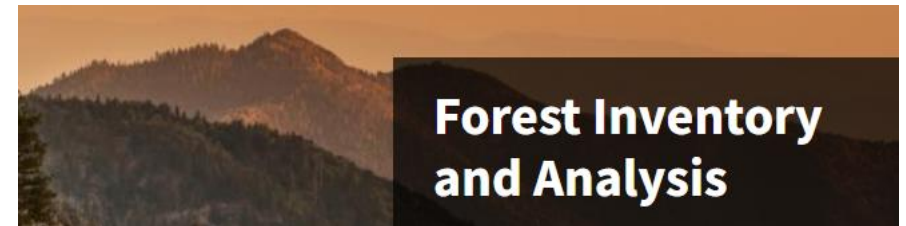
The SCMN data will support additional calibration and validation of DayCent.

Table 3-2. Overview of Sources and Selected GHG Estimation Methods for Cropland and Grazing Land Systems

Section	Source	Method
3.2.3	SOC stocks for mineral soils	An IPCC Tier 3 method is used to estimate the SOC stock changes to a 30 cm depth for most crops and mineral soils using the DayCent process-based model (See U.S. EPA, 2020 for information about the Tier 3 model). SOC stock changes for other crops and mineral soil types are estimated with an IPCC Tier 2 method to a 30 cm depth (Ogle et al., 2003). Biochar soil amendments impacts on SOC are estimated with a Tier 2 method (Ogle et al., 2019a; Woolf et al., 2021).
3.2.3	SOC stocks for organic soils	Carbon dioxide emissions from the drainage of organic soils (i.e., <i>Histosols</i>) are estimated with an IPCC Tier 2 method for the entire soil profile (Ogle et al., 2003).

Ongoing efforts and/or opportunities for collaboration/integration

- Continued opportunities for collaboration with the Forest Service, including the Forest Inventory and Analysis program on data and sampling.
 - For example,
 - Sampling protocols
 - Documentation
 - Data sharing approach



Thank you and look forward to the meeting!



The image shows a YouTube video player interface. At the top, there is a video thumbnail with a USDA logo in the top left corner. The thumbnail contains several images: a person in a hat standing in a field of sunflowers, a close-up of hands holding a sunflower, and a close-up of a sunflower head. Below the thumbnail, the video title is "Inflation Reduction Act GHG Quantification - Overview of Action Areas" with a small "by USDA" text below it. The channel name "TheUSDANRCS" is displayed below the title, followed by "7 videos 640 views Last updated on Jun 11, 2024". At the bottom of the player, there are two buttons: "Play all" and "Shuffle".