

Soil Classification, Soil Profile Descriptions, Soil Nutrient Contents, and Coarse Root Biomass - EMEND Core Project

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Theme: Soils and Nutrient Cycling

Status: Continuing

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Participants

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Background

Description and chemical analysis of soils in representative stands is providing information about the nature and variability of soils, parent materials, and soil forming processes across the EMEND study area. This information will be used in the interpretation of vegetation and other above-ground site attributes. Soil carbon and nutrient contents throughout the soil profile are being determined. Coarse root distribution, biomass, and carbon content throughout the soil profile are also being determined.

Objectives

1) To classify and describe soils within the EMEND study area. 2) To determine nutrient and carbon contents from the soil surface to C horizons. 3) To describe the distribution and sample soils for coarse root biomass estimates.

Key Results

- Soil properties such as forest floor depth, mineral soil pH, and soil carbon content vary under different stand types under undisturbed conditions, and the effects of disturbance will likely vary with stand type (Figures 1, 2, and 3). - First-year results from variable retention harvesting treatments indicate that properties such as forest floor depth and extractable N are altered with increasing canopy removal within a stand type (Figures 4 and 5). - Results from burned treatments are under evaluation. Harvesting and burning effects on nutrient dynamics, interactions between disturbance and stand type, and long-term effects of disturbance continue to be monitored.