



Soil and Plant Science Division

Technical Soil Services

North Central Soil Survey Region



Basic Soils and Landscapes for Conservation Planners: Advancing Conservation Through Hands-On Learning

Duluth, MN, Major Land Resource Area (MLRA) Soil Survey Office (SSO)

Purpose

In May 2026, the Duluth MLRA SSO had the opportunity to assist NRCS Minnesota State Soil Scientist Joe Brennan in teaching the 2026 session of the Basic Soils and Landscapes for Conservation Planners training, offered by the Minnesota Board of Water and Soil Resources. This multi-day training was designed for professionals and stakeholders in natural resources, conservation, and land management. The training emphasized hands-on learning and collaborative exercises in order to advance the understanding and practical application of soil survey information in conservation planning.

The primary goal was to equip participants with the skills to interpret soil maps, analyze soil properties and qualities, and apply ecological site descriptions to real-world conservation practices. Through a blend of classroom sessions, fieldwork, and group exercises, the 30 students in attendance gained valuable insights into northeast Minnesota's diverse soils and landscapes, fostering stronger connections between scientific data and conservation action.

Background

The event spanned three days (May 26–28, 2026) and was held at the Minnesota Board of Water and Soil Resource Office in Duluth and at various field locations. The event featured a comprehensive agenda:

- Day 1 focused on building foundational soils knowledge in the classroom through learning how soils are mapped, how to interpret soil data and properties, and how soil data and properties affect conservation planning. Participants ended the day with a Web Soil Survey exercise.

- Day 2 delved into ecological site descriptions, surficial geology, geomorphic concepts, and how these affect conservation practices. Participants engaged in hand texturing exercises (fig. 1) and field orientation, culminating in group soil profile activities.
- Day 3 was dedicated to fieldwork, with site station rotations and practical mapping exercises. Attendees described soil profiles, summarized findings, and reviewed site contexts, integrating classroom learning with real-world application (figs. 2 and 3).



Figure 1.—Duluth MLRA SSO Soil Scientist Alena Wallin (far end) leads students in soil texturing exercise.



Figure 2.—Group photo of Basic Soils and Landscapes for Conservation Planners training participants.

Key Outcomes

This event highlighted the importance of collaborative learning, field-based observation, and the integration of soil science into conservation strategies. By rotating through diverse sites and engaging in group discussions, participants deepened their understanding of northeast Minnesota's soils and landscapes. The collaborative format encouraged peer learning and strengthened regional networks among soil scientists, planners, and resource managers.



Figure 3.—Duluth MLRA SSO Soil Scientist Lindsey Weiss shows students how to determine sand percentage in a soil sample.