



Soil and Plant Science Division

Technical Soil Services

North Central Soil Survey Region



NRCS Contributions to the University of Minnesota Field Studies Course

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

Purpose

During the week of May 18–21, the Duluth MLRA SSO staff assisted with the delivery of Field Studies of Soil, a course organized by the University of Minnesota-Twin Cities (UMN). Besides faculty and students from UMN, other participants included faculty and students from Fond du Lac Tribal and Community College, Leech Lake Tribal College, and Red Lake Nation College. More than 40 participants attended across the 4 educational institutions, representing a wide range of academic backgrounds and levels of experience in soil science. Staff from the U.S. Forest Service (USFS) and the Minnesota Department of Natural Resources (DNR) also took part in the training.

Background

The Duluth MLRA SSO staff identified four primary sites for backhoe pits in southern St. Louis County, with six pits at each location. These sites represented a variety of parent materials and glacial till sources, providing students with opportunities to observe differences in soil characteristics across the landscape. Pits were along a catena to allow students to view changes in drainage class down the hillslope.

Students worked in small groups, each led by an MLRA SSO staff member or faculty member from one of the participating educational institutions. The students learned how to accurately describe a variety of soil properties: they textured soils from sandy to fine-loamy, identified clay films and redoximorphic features, and determined parent material based on the soil properties (fig. 1). Students also learned the Minnesota DNR's Native Plant Community classification of each site, which corresponded to the parent material.

Key Outcomes

The students continued the Field Studies of Soil course at additional locations in northern Minnesota the following week, giving them a broader and more complete understanding of Minnesota's diverse soils. Students received documentation upon their completion of Field Studies of Soil.



Figure 1.—(Left) Jeff Kroll, USFS soil scientist, and Nic Jelinski, UMN associate professor of soils, presenting on landforms associated with outwash plains. (Right) Leech Lake Tribal College students working together to sample soil in a wet, depressional forest.