

SOIL AND PLANT SCIENCE DIVISION

Technical Soil Services

North Central Region



Dickinson, North Dakota, Major Land Resource Area Soil Survey Office

Soil Survey Office Assists with National Cooperative Soil Survey Tour Guidebook

Purpose

The 2023 National Cooperative Soil Survey (NCSS) national meeting, “Soil, Energy, and Agriculture for Resilient Ecosystems,” is being held in Bismarck, North Dakota. Field tours are being held on Sunday and Wednesday during the week of the conference. The Sunday tour is being held in Major Land Resource Area (MLRA) 54 (Rolling Soft Shale Plain) and 58C (Northern Rolling High Plains, Northeastern Part). To showcase the geology and soils of the MLRAs, MLRA staff created a printed tour book and a digital storymap. These hands-on tours are vital to facilitate the advancement of soil science within the NCSS.

Background

The Sunday tour will start in Bismarck, North Dakota, with stops near Belfield and Medora. Near Belfield, three soil pits in a sodic catena will be open for participants to view and discuss. After the soil pits, the tour will stop in the scenic town of Medora for lunch and a trip through Theodore Roosevelt National Park with discussions highlighting the geology of North Dakota’s Little Missouri Badlands.

Key Outcomes

Virtual and physical field tour material were created for the 200-plus in-person attendees and 100-plus virtual attendees. Dickinson MLRA Soil Survey Office staff utilized ESRI’s GIS online platform to create the virtual content in the form of storymaps. Attendees can use the storymap to view items of interest in soils, geology, agriculture, soil survey work done, history, and recreation on the two-hour drive from Bismarck to Medora via a scrollable digital map with attached photos and descriptions. See figure 1.

In-person attendees will have access to the storymap as well as a printed guidebook. This guidebook has a printed map of items of interest with descriptions along the bus tour but also includes in-depth data and information about the soils of MLRA 54 and 58C. The three soils in the sodic catena that participants will view at the soil pits are highlighted. See figure 2 for an excerpt from this guidebook.

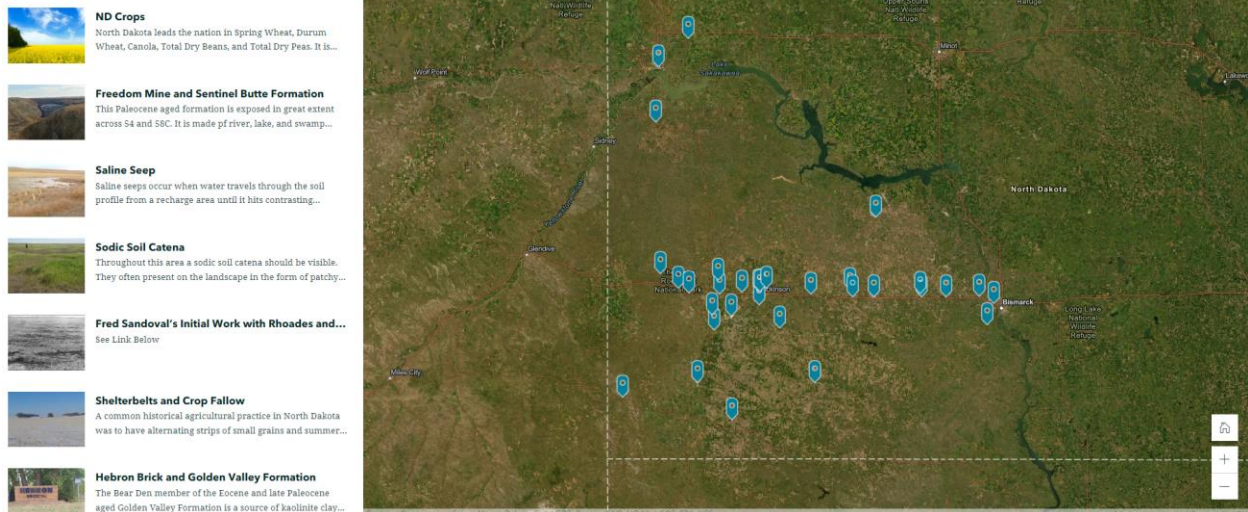


Figure 1: A screen capture of the storymap



Figure 2: A diagram of the sodic soil catena from the guidebook