SOIL AND PLANT SCIENCE DIVISION

Technical Soil Services

North Central Region

Stanton, Nebraska, Major Land Resource Area Soil Survey Office

Soil Survey Staff Assists with Pond Placement and Wetland Determination

Purpose

On April 4, 2023, Natural Resources Conservation Service (NRCS) staff from the Stanton Soil Survey Office assisted the Washington County, Nebraska, NRCS field office with evaluation of an area proposed for pond construction within Major Land Resource Area (MLRA) 107, Iowa and Missouri Deep Loess Hills. The team evaluated the soil properties for the centerline, the pool area, and the borrow area. Soil depth, texture (U.S. Department of Agriculture and Unified), soil color, presence of calcium carbonate concretions, redoximorphic features, and water table depth were recorded for three potential sites (see figures 1 and 2). This information will determine if the core trench will need a tile and if the material removed to create the emergency spillway is suitable material for the core structure.

Figure 1: Alec Haulotte (L), Ecologist and Patrick Cowsert (R), Soil Scientist describe soil profile.

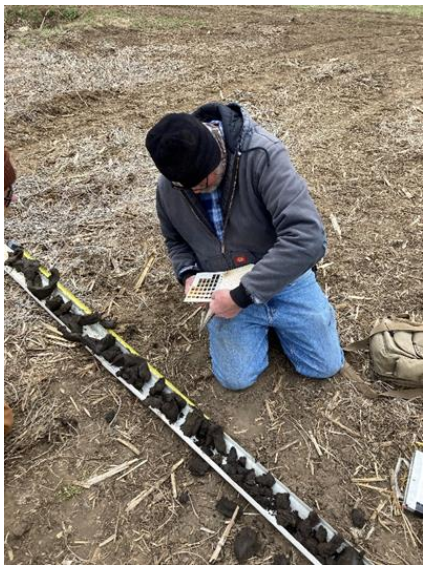

Figure 2: Patrick Cowsert, Soil Scientist coloring the soil horizons.

While in Washington County, the Stanton Soil MLRA Survey Office staff also assisted a member of the Nebraska Wetland Compliance Team with a difficult wetland determination (see figure 3). The area was a creek channel that was cut off and abandoned during a channelization project in the early twentieth century. The producer was seeking to clear the trees and level the area for crop production as had been done to adjacent parts of the abandoned channel at various points since the channelization project. While the producer will not be able to implement everything desired, options were provided that will allow full maximization of the desired use while remaining in compliance with pertinent U.S. Department of Agriculture regulations.

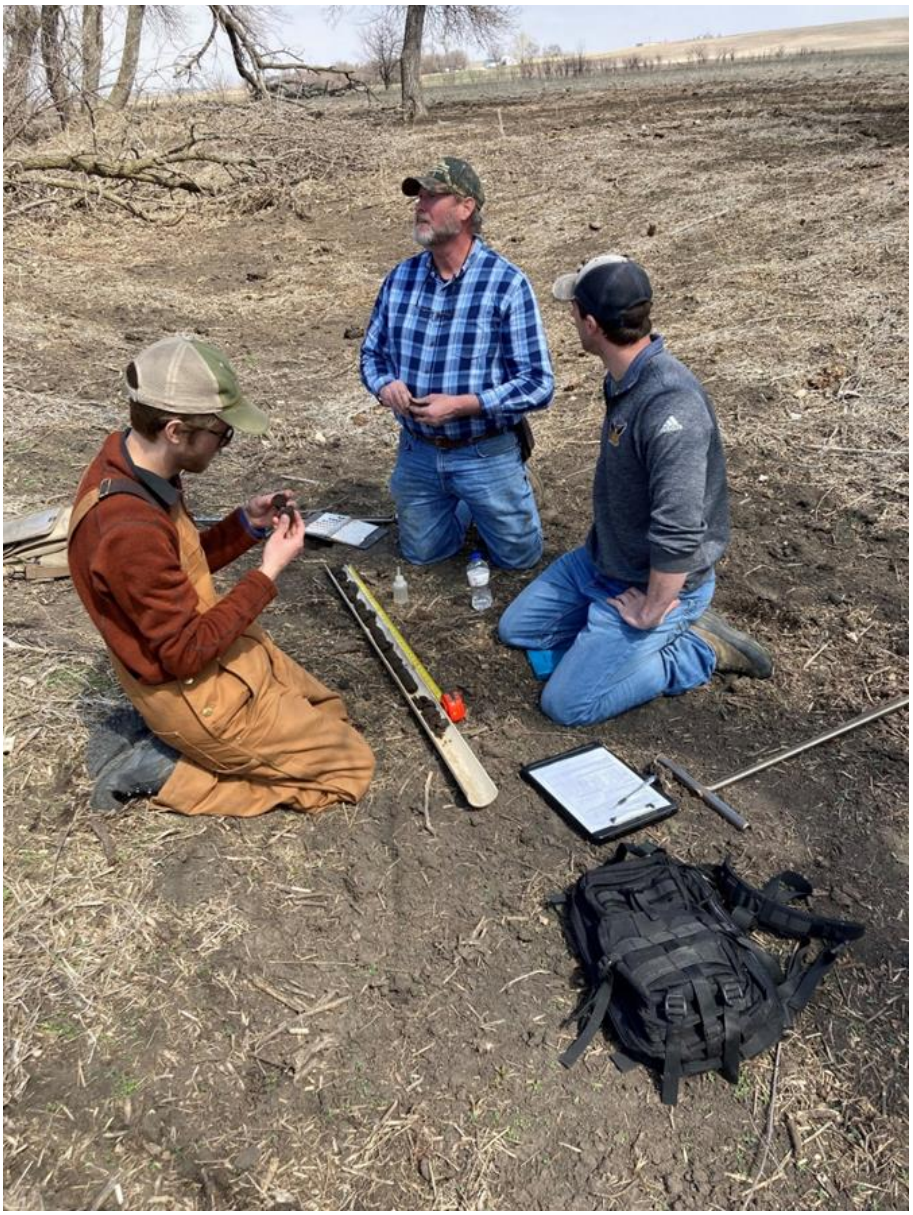

Figure 3: Alec Haulotte (L), Ecologist; Patrick Cowsert, Soil Scientist; and Chase Wickard (R), Wetland Specialist evaluating soil profile.

Key Outcomes

- Facilitated better science-based decisions for the proposed land use.
- Delivered needed assistance to fellow NRCS employees.
- Provided training and improved the soil knowledge of local NRCS staff.
- Educated local producers on the wetland compliance process.
- Provided science-based data to allow more informed decisions on wetland determinations.