

Natural Resources Conservation Service

Soil Science Division

Rocky Mountain Soil Survey Region 4



Powell, Wyoming, MLRA Soil Survey Office

Soil Survey Office Leader Trains NRI Contractors and Trainers

Purpose

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), gathers onsite rangeland data as part of the natural resources inventory (NRI). Information about the condition of the land and related natural resources at many different scales is needed to inform decision-makers.

On May 8, 2018, Daniel Wood, MLRA Soil Survey Office Leader from the Powell office, assisted the NRCS-Wyoming State and area rangeland management specialists in training State NRI contractors and trainers. The training consisted of the basics of digging soil pits and describing soils for NRI data collection. Ten contractors and seven trainers were in the group of trainees.

The training included proper techniques for excavation to orient a soil pit and the spoils for maximum sun exposure and to preserve the face of the pit for describing the profile. The proper way to clean and photograph a pit face was also demonstrated.

Key Outcomes

Participants were trained to accurately measure a soil profile, differentiate the horizons, and set soil samples of each horizon into a spade to keep them organized for texturing.



Clean pit face.



Samples of each horizon in a spade.

Texturing soils was demonstrated by placing a small sample of wetted soil in the palm of the hand and by using soil ribbons. The content of rock fragments was estimated by using a small sieve, and the size of the rock fragments was determined by using the Field Book for Describing and Sampling Soils as a reference. Finally, 1 M HCL was used to demonstrate the effervescence of the soil. The amount of bubbles, or foam, that formed determined the effervescence class.

The NRI data will be used to monitor the rangeland health; non-native plant species, including invasive species; amount of bare ground; gaps in the canopy; and aggregate stability of the soil surface. The NRI program was created to provide critical information about the nation's natural resources and to supplement the soil survey program. This data will help NRCS determine the best management practices to improve and preserve the nation's native rangeland.



Instructors and NRI trainees.