



SOIL AND PLANT SCIENCE DIVISION

Technical Soil Services

Southwest Soil Survey Region

Minden, Nevada, MLRA Soil Survey Office

Minden MLRA Soil Survey Office Provides Assistance for the Bureau of Land Management's Assessment, Inventory, and Monitoring Training

Purpose

Chris Savastio, Meghan Krueger, and Jessica Castiblanco, soil scientists from the Minden MLRA Soil Survey Office (MSSO), provided soils instruction and assistance to the Bureau of Land Management (BLM) on April 23, 2024, for its annual Assessment, Inventory, and Monitoring (AIM) training. The soil scientists showed the participants how to pick representative spots on the landscape to place soil pits, how to dig soil pits properly and efficiently, and how to accurately describe them. The AIM protocol is to correlate the soil pit to a soil component using published soil survey data. To accomplish this, the students collected a variety of soil properties, including soil texture, color, rock fragments, effervescence, and restrictive layers. Instructors, including members of the Minden MSSO, demonstrated how to accurately collect these soil properties.

The AIM data collection method requires descriptions of a subset of the soil properties that NRCS soil scientists typically collect. This allows BLM staff to be more efficient in their data collection, but it means they must rely heavily on published soil survey information. Correctly correlating a sample location to a soil component is critical to AIM work. The Minden MSSO staff demonstrated how to use soil property information collected at one spot on the landscape to choose a representative soil component for interpretive purposes. There are many factors to consider in this process, including the scale of mapping, adjacent map units, and minor components.

Correctly identifying the landform is a fundamental aspect of choosing a representative soil component as part of the AIM data collection scheme. To that end, instructors introduced the concept of geomorphology to the students, particularly the relationship between soil properties and landscape position. This is not something that can be fully understood in one training day, but the students now know to expect different soils at different positions on the landscape because



they are subject to different soil forming factors. Keeping this concept in mind will help the AIM personnel in their fieldwork and will broaden their understanding of soils as they collect data.

Background

The purpose of Assessment, Inventory, and Monitoring, or AIM, is to assess resource conditions on BLM land throughout the western United States. The AIM program provides scientific data to use as a basis for land management decisions. To complete data collection on such a large amount of land, BLM uses seasonal contractors to help with the workload. The purpose of AIM training is to provide these contractors with techniques to accurately inventory soils and plants to collect useful data. The Minden MSSO has been assisting the Carson City, Nevada, BLM office with the State-wide AIM training on soils for the last 7 years.

Key Outcomes

The purpose of collecting AIM data is to have a scientific basis for land management decisions. These decisions can be controversial, so it is very important that AIM data is accurate. By providing expert guidance on soil data collection and the use of soil survey information, NRCS is helping ensure that the data collected for the BLM is sound.

The people who work as AIM contractors may work for the NRCS or other government agencies someday, and this training provides them with a solid introduction to soils. Members of the next generation of soil scientists could very well be among them.

This training assistance is an excellent example of the cooperation of NRCS with other government agencies. It was a great opportunity to collaborate with the BLM instructors to ensure that soil survey information is being used correctly and to discuss future training needs for BLM employees.



Minden MSSO staff assist BLM AIM trainees with soils training in the Pine Nut Mountains of Nevada.