USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

Soil and Plant Science Division

Technical Soil Services

Southwest Soil Survey Region

NRCS Soil and Plant Science Division Staff Assist with San Pitch Watershed Education Days

Richfield and Price, Utah, Major Land Resource Area (MLRA) Soil Survey Offices (SSOs)

Purpose

The Utah Department of Agriculture and Food reached out to Richfield MLRA SSO staff about participating in San Pitch Watershed Education Days, a two-day event for fourth grade students of Sanpete County, Utah. The staff representing the MLRA SSOs included Soil Scientists Miles Coker, Keith Crossland, and Britney Allen and Ecologist Matthew Jimenez. The goal of MLRA SSO staff participation in the event was to teach fourth graders about the important role soil and plants play in our watersheds.

Background

The event was held September 2–3, 2025, at the fairgrounds in Manti, Utah. A Division of Wildlife Resources Conservation officer, Future Farmers of America students, MLRA SSO staff, and others set up teaching stations for the event. At the stations, volunteers and professionals shared educational information on a range of topics, including plant life cycles, ag drones, birds, livestock, and watersheds.

Twenty-one groups of fourth-grade students rotated through teaching stations representing the different organizations. Once a group arrived at the MLRA SSO station, staff introduced themselves and talked about the NRCS Soil and Plant Science Division. Then they provided basic information about soils, how soils form, and watersheds. MLRA SSO staff discussed how both soil and events, like wildfires, affect watersheds. Using a recent local wildfire as an example, MLRA SSO staff explained how wildfires can cause damage even after the fires are put out because of the lack of vegetation. When watersheds lose vegetation, water runs off faster than normal and can lead to flooding.

They then demonstrated how different soils filter out pollutants in a watershed. For the demonstration, MLRA SSO staff used three different soils: a coarse sand, a mineral soil, and an organic soil, and they used grape drink to demonstrate polluted water. They asked students to predict what soil was going to filter the polluted water best. Students also got to feel, smell, and see organic and mineral soils.

Key Outcomes

Through interactive activities, like the polluted water demonstration, students learned about watersheds and the importance of the soil and vegetation within the watersheds. MLRA SSO staff interacted with students and answered questions during these activities to help increase student learning and engagement.

Figure 1.—Britney Allen, Richfield MLRA SSO soil scientist, Keith Crossland, Richfield MLRA SSO soil scientist, and Miles Coker, Price MLRA SSO soil scientist, demonstrating soil as a filter to the students.

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