

SOIL AND PLANT SCIENCE DIVISION

Technical Soil Services

Southwest Soil Survey Region and Arizona NRCS

Flagstaff, Arizona, Major Land Resource Area (MLRA) Soil Survey Office (SSO) and Arizona NRCS Ecological Sciences Team

NRCS Assists with Arizona Envirothon and Hualapai Youth Soil Health Field Day

Purpose

The Arizona NRCS Ecological Sciences Team partnered with the Flagstaff MLRA SSO staff to assist with the 25th annual Arizona Envirothon competition on April 21, 2023, at the Highlands Center for Natural History near Prescott, Arizona. Mikayla Allan, Soil Scientist from the Flagstaff MLRA SSO, and Rob Wilson, Resource Soil Scientist (RSS) from the Arizona NRCS Ecological Sciences Team located in Phoenix, Arizona, worked at the Soils and Land Use Eco-station.

Later that month, Allan and Wilson teamed up again alongside Carl Fuller, Soil Scientist from the Flagstaff MLRA SSO, at the Hualapai Youth Soil Health Field Day in Peach Springs, Arizona. This event was done in partnership with the Intertribal Agricultural Council (IAC) and the University of Arizona.

Key Outcomes

Students performed hands-on soil related skills, such as evaluating soil color and soil texture, along with extracting data from a published NRCS soil survey (figure 1). At each of the five eco-stations, the Teams asked a series of questions that required the students to perform a test using provided instruments, observe a condition, or answer a question based on knowledge they have gained through study.

Allan and Wilson briefed students on what was expected of them, especially the hands-on portion. Allan was the timekeeper, graded the tests, and presented plaques to the first, second, and third place teams during the award ceremony (figure 2). Wilson was one of the judges for the oral presentations, which consisted of a presentation followed by a question-and-answer session between the judges and presenting team.

Prior to the competition, Wilson and Emily Yulga, RSS from the Ecological Sciences Team, helped prepare students for the competition and hosted a NRCS informational booth for students to see potential career or volunteer opportunities (figure 3). Wilson also wrote the test for the Soils and Land Use Eco-station that were fundamental to the overall success of the Envirothon.

At the Hualapai Youth Soil Health Field Day, Allan led students through a rainfall simulator demonstration. Students then got their hands dirty while learning how to hand texture soil. Once the excitement of soil texturing was over, the students proceeded to explore the soil tunnel set up by Wilson and Fuller, looked at soils and fungi through a microscope, and made “dirt” cups (yogurt, crushed sandwich cookies, and gummy worms, YUM!).

In all, these two outreach events were action packed and gave Allan, Wilson, and Fuller the opportunity to share their excitement for soils while hopefully instilling that same excitement in the next generation.



Figure 1. High school students gathered with their team to discuss different elements of the Soils and Land Use Eco-station.



Figure 2. Mikayla Allan, Flagstaff MLRA SSO Soil Scientist, and Rob Wilson, Arizona NRCS RSS, presenting awards to the top three winners of the Soil and Land Use Eco-station.



Figure 3. Mikayla Allan, Flagstaff MLRA SSO Soil Scientist, and Rob Wilson, Arizona NRCS RSS, at the NRCS informational booth after a successful day at the 25th annual Arizona Envirothon.



Figure 4. Hualapai youth, NRCS staff, and IAC staff standing under the soil tunnel.