

Starting with K-12 to build the conservation workforce

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Supporting Careers in Conservation: Workforce Training, Education, and Job Opportunities

“We on the SSSA K-12 Committee are committed to finding and supporting the items found in a portfolio of solutions to help fill the pipeline with our next generation of soil science and conservation careers and stewards of our natural environment. We love soils, and we want others to love it too!”

During a hearing of the House Agriculture Subcommittee on Conservation and Forestry in May, Dr. Margaret Holzer, founding member of SSSA’s K-12 Committee, was among the six panelists selected to share their perspectives on different stages in conservation workforce development.

Few students grow up dreaming of becoming soil scientists or agronomists. In fact, working in agriculture and conservation is rarely discussed as a career path, and most students are never exposed to the option of working in these fields. For those who do find their way to a career in soil science, agronomy, or similar fields, many stumble upon these disciplines somehow in college. Higher-education institutions have worked to build curriculum and experiences to prepare students for the conservation workforce, but a worker shortage still exists. Exposing more students to soil science, agriculture, and conservation at an earlier age is critically important to meet workforce needs.

In May, the House Agriculture Subcommittee on Conservation and Forestry held a hearing titled, **“Supporting Careers in Conservation: Workforce Training, Education, and Job Opportunities”** to address these needs. In opening statements of the hearing, Rep. Abigail Spanberger (VA) highlighted that voluntary conservation practices can play a strong role in addressing climate change but that workforce is key. Staffing at the USDA-NRCS has decreased by 25%, showcasing the need to grow the number and diversity of participants in the conservation workforce. Rep. Doug LaMalfa (CA) pointed out that the farm bill’s conservation title provides \$6 billion in funding for voluntary conservation programs and that the people providing technical assistance for those programs are critical in meeting conservation needs.

Spotlight on SSSA’s K-12 Committee

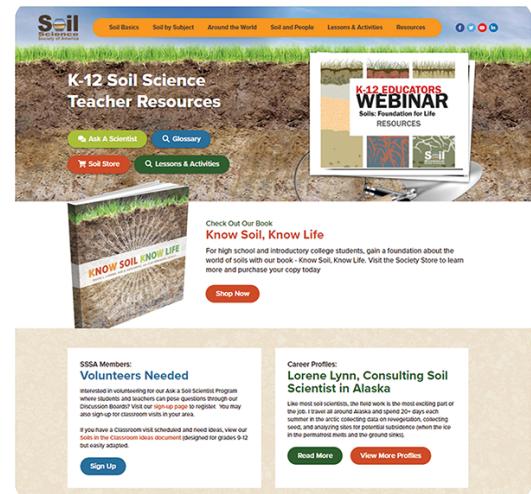
Dr. Margaret Holzer was among the six panelists selected to share their perspectives on different stages in conservation workforce development. Dr. Holzer is a founding member of SSSA’s K-12 Committee, tasked with increasing interest and awareness of soil science and related sciences as a scientific pursuit and career choice. During the hearing, Dr. Holzer shared what has worked well for the K-12 Committee over the past

16 years and what gaps still exist for teachers and students.

Dr. Holzer had the opportunity to highlight the many accomplishments of the SSSA K-12 Committee to members of Congress. The members of the K-12 Committee have worked diligently to develop resources for K-12 students and educators to build awareness of soil science and conservation and the career possibilities in each. Key accomplishments of the committee include:

- Launched three K-12 websites (with more than 800,000 visits in 2020)
- Published four K-12 focused books (for use in formal or informal classrooms or at home)
- Developed two train-the-trainer workshops, two webinars, and two teachers' guides
- Curated more than 200 lessons, activities, and reading resources for K-12 teachers
- Developed state soil booklets for all 50 states and Guam
- Partnered with other organizations to develop and disseminate materials for K-12 teachers
- Produced 1 "Heart" Soil stickers in 15 languages and distributed more than 500,000 stickers
- Developed twelve 2-minute animated videos on various aspects of soil, as part of the 2015 International Year of Soils.

The members of the K-12 Committee have worked diligently to develop resources for K-12 students and educators, including the primary K-12 outreach site, www.soils4teachers.org, which is dedicated to providing ready resources for



classrooms.

Engaging Classrooms, Supporting Teachers

In addition to her experience with the SSSA K-12 Committee, Dr. Holzer has taught high school and college-level earth and environmental science classes for more than 30 years. "I personally love soil science and connecting my students with the role soils play in every aspect of their lives," said Holzer during her testimony. "But how do we engage classrooms located where the landscape includes lawns, asphalt, and concrete, and agricultural products come in little cellophane-covered trays?" Teachers need support from conservation experts to teach these topics to their students. "Our K-12 Committee efforts have most certainly played a role in this needed support, but those state and local entities that can share their expertise [and] provide access to soil samples and basic laboratory supplies, their efforts are welcome too. Teachers need to know that these resources are available, and county extension offices might consider an awareness campaign to alert schools to the resources they may have to offer," Holzer said.

Dr. Holzer's testimony was well received by the subcommittee members. Rep. Spanberger asked Dr. Holzer to further elaborate on how partnerships with NRCS, state agencies, and public land grant universities could help to bolster the curriculum that the K-12 Committee has developed. Rep. Chellie Pingree (ME) thanked Holzer for her testimony and said she was a self-proclaimed "soil geek." Rep. Lou Correa (CA) asked Dr. Holzer how teachers can get kids outdoors and exposed to these potential careers.

Through her responses, Dr. Holzer continued to highlight the work of the K-12 Committee and proven solutions seen during her years as an educator. "We on the SSSA K-12 Committee are committed to finding and supporting the items found in a portfolio of solutions to help fill the pipeline with our next generation of soil science

and conservation careers and stewards of our natural environment. We love soils, and we want others to love it too!"

Thank you to Dr. Holzer for her service to the SSSA K-12 Committee and for representing SSSA during this hearing! You can read her full testimony on the SSSA Science Policy webpage (<https://bit.ly/3zaMv93>).

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Back to issue

Back to home

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