

Thinking about a Career in Soil Science?

Soil Science ...

- Deals with soils as a vital natural resource on the surface of the Earth including soil formation, classification, and mapping; and physical, chemical, biological, and fertility properties; in relation to the use and management of the soils.
- Encompasses biology, ecology, and a variety of earth and other natural resource sciences,
- Interfaces with geology and geography,
- Uses chemistry, physics, microbiology, and mathematics, as well as high technology tools for soil exploration, analysis, data interpretation, and modeling of soil and landscape processes,
- Integrates concerns for people, food production, and the environment.

Soil Scientists ...

- Bring science and technology to issues involving soil and water resources,
- Are well versed in the natural sciences,
- Play key roles in public and private decisions related to soil and water resources,
- Are employed in the private sector with environmental and agricultural consulting firms, with local/state/federal agencies, at universities, and internationally and domestically.

There are many exciting professional opportunities and challenging careers in soil science—both in the US and abroad!

Career Paths in Soil Science



Start by being part of an Envirothon Team!

**Education Research Mapping Conservation
Environmental Consulting Agronomic Consulting
Field & Lab Technician**

A soil scientist's job may involve:

- conducting research in public and private research institutions
- managing soils for crop production, forest products and erosion control management.
- teaching in colleges and universities
- predicting the effect of land management options on natural resources
- advising land managers of capabilities and limitations of soils (e.g., timber sales, watershed rehabilitation projects, transportation planning, soil productivity, military maneuvers, recreation development)
- recommending soil management programs
- helping to design hydrologic plans in suburban areas
- evaluating nutrient and water availability to crops
- managing soils for landscape design, mine reclamation, and site restoration
- assessing environmental hazards
- regulating the use of land and soil resources by private and public interests

Photos front side: Top: Soil Science Stream: Stan Buol. L to R: <http://SoilScience.info/J.Kelley>, Sherry S. Fulk-Bringman, Cristine Morgan, Sherry S. Fulk-Bringman, Istockphoto.com/Kapsas. This page L to R: Envirothon, Envirothon. Sherry S. Fulk-Bringman.

What kind of people become soil scientists?



People like you.

Those who

- have a love of science
- enjoy working outdoors
- have an enthusiasm for maps and relationships in nature
- desire to be integral in environmental decisions related to soil conservation, land use, water quality, or waste management
- have a willingness to communicate their knowledge about soils and the environment to all aspects of our society

How do people become soil scientists?

Most soil scientists have earned at least a bachelor degree from a major university. At many universities, two choices are available for specialized training in soils. The Soil Science option prepares students to enter the agricultural sector as farm advisors, crop consultants, soil and water conservationists, or as representatives of agricultural companies. The Environmental Soil Science option prepares soil scientists for careers in environmental positions dealing with water quality concerns, remediation of contaminants or for on-site evaluation of soil properties in construction, waste disposal, or recreational facilities.



Skills and Knowledge Needed

Knowledge

Biology
Chemistry
Mathematics
Education/Training
Computers & Electronics
Communications & Media
Geography
Physics

Work Styles

Attention to Detail
Integrity
Initiative
Dependability
Independence
Persistence
Adaptability
Innovation

Skills/Abilities

Science (rules & methods)
Active Listening
Critical Thinking

Communication Skills

Judgment & Decision Making
Reading Comprehension
Complex Problem Solving
Active Learning
Systems Analysis
Writing
Reasoning
Observation

Sources/Career Sites

USDA-NRCS website:
<http://soils.usda.gov/education/facts/careers.html>

O*Net website:
<http://www.onetonline.org/link/summary/19-1013.00>

Soil Science Society of America
www.soils.org/careers
www.soils4teachers.org

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