

# SOIL SCIENTIST

Work with the foundation of our ecosystems, food systems, water quality and climate stability—soils are so much more than dirt.

## WHAT IT IS

Imagine getting to the foundation of it all by using science and technology to understand Earth's land and water resources. You'll identify, interpret, and manage soils for agriculture, forestry, rangelands, ecosystems, urban development, and mining reclamation. Soil science combines biology, chemistry, physics, ecology, geology, geography, and microbiology to understand and improve land and water. You'll use high-tech tools for soil exploration, analysis, data interpretation, and modeling. Your work integrates people, food production, and environment. Your science becomes policy. Your data becomes action plans.



## A DAY IN THE LIFE

Soil scientists spend time both in the field and in a laboratory; the mix depends on your role and job setting. Your day may include:

- Conducting research on soil and water resource.
- Managing soils for crop production and erosion control
- Identifying farming practices that regenerate soils and ecosystems
- Designing hydrologic plans for development
- Evaluating nutrient availability for crops
- Managing mine reclamation and site restoration
- Regulating land use
- Mapping soil properties
- Consulting on environmental projects
- Educating the public on good soil practices

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**DIG IN. DO GOOD.**

## READY FOR SUCCESS

Your success begins a curiosity about digging into soil to see what makes it tick. Develop your analytical skills while learning to communicate clearly. Cultivate a hands-on approach to problem-solving and be equally at ease outside and in a laboratory. Seek out opportunities like soil judging contests and apply for internships related to soils.

## EDUCATION REQUIRED

This career leans heavily on applied scientific knowledge. **Most soil scientists major in:**

- **Soil Science**
- **Environmental Science**
- **Agronomy**

Look for classes in soil chemistry, physics or microbiology. Entry-level roles usually require a bachelor's degree, while advanced and research positions often call for a master's or Ph.D.

## JOB OPPORTUNITIES

Soil scientists work in incredibly diverse spaces, depending on their specialty and area of focus. Most work for the private sector, academia or government laboratories.

## GETTING STARTED

Excel in biology, chemistry, physics or math. Join environmental or ecology-related clubs. Seek internships with conservation districts, environmental mitigation companies, or government agencies.



## JOB OUTLOOK

Growing focus on sustainable land management, climate adaptation, water quality protection, environmental restoration means increasing demand as climate change and urban/commercial development pressure soil resources.



**\$83K**  
AS OF 2024

## AVERAGE SALARY

Soil and plant scientists earn a median annual wage of \$83,040, according to the Bureau of Labor Statistics May 2024.