

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



Make soil part of your life.

Learn more about careers in soil science at:
www.soils.org/careers

Sources/Career Sites USDA-NRCS
website:

<http://soils.usda.gov/education/facts/careers.html>

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



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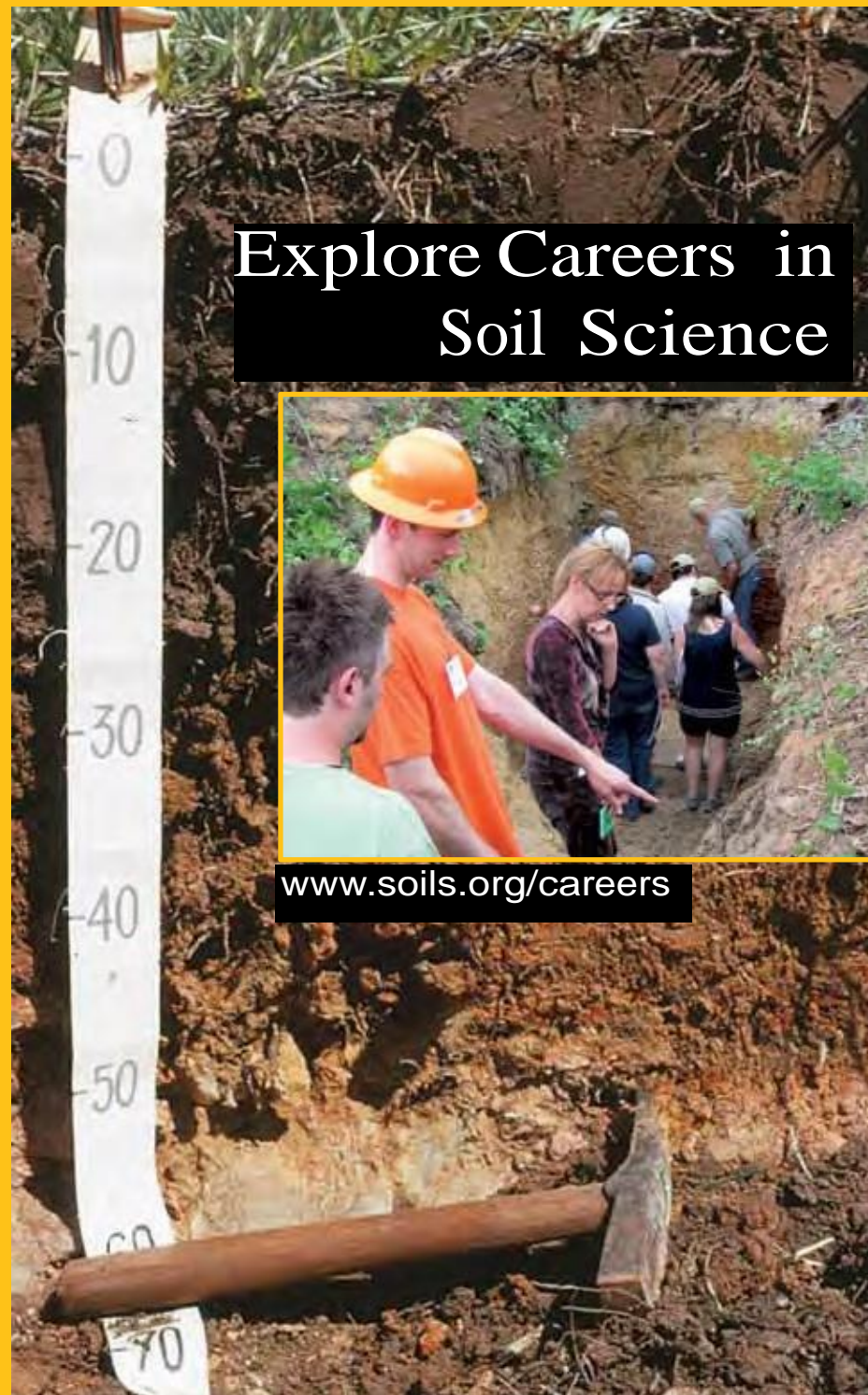
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Sherry S. Fulk-Bringman, Istockphoto.com/Kapsas.

Explore Careers in Soil Science



www.soils.org/careers





mAP



TeACh



CoNSUIT



ReSeARCh



PRoTeCT

Soil scientists explore and seek to understand the earth's land and water resources. Students of soil science learn to identify, interpret, and manage soils for agriculture, forestry, rangeland, ecosystems, urban uses, and mining and reclamation in an environmentally responsible way. Graduates can choose from a range of excellent professional opportunities and challenging careers.

People who become soil scientists...

- 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

Soil science . . .

- encompasses biology, ecology, and a variety of earth and other natural resource sciences.
- interfaces with geology and geography.
- focuses on understanding, managing, and improving land and water.

- 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.
- are employed with U.S. government and international agencies.
- may attend graduate school in soil science or closely related environmental, natural resource, or agricultural sciences.

Soil scientists may work on. . .

- 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
- 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
- regulating the use of land and soil resources by private and public interests

**Civilization itself
rests upon the Soil.**
Thomas Jefferson



Challenging Careers in the Natural Resources Conservation Service

Helping People Help the Land

**A lot of people talk about
protecting our Nation's
natural resources.**

But talk doesn't get the job done.

We at the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) need people who are committed to action. People who want to apply their education and experience to making sure that all of us enjoy the benefits of productive soil, clean water, clean air, and abundant wildlife that come from a healthy environment.



You can be one of us!

Who We Are

Before we describe the people and careers that make NRCS the Federal Government's conservation leader, here's some information for you about NRCS and what it means to America.

NRCS came out of troubled times—the Dust Bowl days of the 1930s. Dust storms ravaged the Nation's farmland, stripping away millions of tons of topsoil and carrying it all the way to the Atlantic Ocean. Since that time, NRCS has kept a commitment to protecting and conserving soil and other natural resources on America's private lands.

NRCS is known worldwide for its accomplishments and innovations in conservation. The people of NRCS are recognized for their talent, dedication, and ingenuity in making the Agency's programs work. Participation in NRCS conservation programs is voluntary—we help the people we serve take the necessary steps to conserve soil, protect wildlife, restore water quality, promote good land use, and implement other measures to conserve the Nation's natural resources for future generations.

At NRCS, we take pride in our partnerships. We work with local soil and water conservation districts and many other partners to let people know how important it is to conserve natural resources. And, together, we work with them on how to do it.



Conservation Careers

I'm a Conservationist...I wouldn't have it any other way!



“My time spent with conservation stewards is one of the highlights since coming to Ohio. They represent everything that farm life and being a conservationist is all about: the closeness of family, living on the land, and producing food in a way that sustains our natural resources for future generations.”

*Terry Cosby
State Conservationist
Ohio*

“I feel that I have helped people by producing tools—like soil maps and interpretations—that are used to make wise land use decisions and increase productivity. It’s about helping people help the land and the land helping us.”

*William H. Taylor
Soil Scientist
Massachusetts*



“My work is never boring. I get to evaluate grasses, look at plant diversity and production, and talk with ranchers about range management opportunities.”

*Dana Truman
Area Rangeland
Management Specialist
Utah*

NRCS offers career opportunities for those in college and those who have already graduated. Here's an overview of some of our jobs, along with information about what it takes to come on board.

SOIL CONSERVATIONIST

As an NRCS soil conservationist, you'll spend most of your time in the field working with farmers, ranchers, foresters, and other land users. You'll offer conservation planning and technical help to everyone from family farmers to local government officials. You'll suggest to them ways to conserve the soil, improve water quality, manage nutrients, restore wetlands, and protect and improve wildlife habitat.

You'll make presentations and demonstrate conservation to clubs and organizations and provide outreach for NRCS programs. You'll assist in setting local conservation priorities and then help carry them out. And you'll be able to see the results of your work on the land.

Qualifications: A bachelor's degree or higher that includes a major field of study (including 300 level courses) in soil conservation or a related agricultural or natural resource discipline such as agronomy, soil science, forestry, agricultural education, or agricultural engineering. The study must include 30 semester hours in a natural resource or agricultural field, including at least 12 semesters hours in a combination of soils and crops or plant science of which 3 semester hours must be in soils and 3 semester hours in crops or plant science (see Note on page 7).

SOIL CONSERVATION TECHNICIAN

NRCS Conservation technicians work directly with farmers, ranchers, and foresters. You'll survey and design conservation practices, oversee their installation, and ensure they meet our quality standards. The conservation technician is key to the success of NRCS, because most everything you do results in on-the-ground practices that directly improve, conserve, or restore our natural resources.

Qualifications: Knowledge of farm or ranch operations, or work experience that makes you familiar with conservation practices is desirable (see Note on page 7).

SOIL SCIENTIST

As an NRCS soil scientist, you'll map and classify soils. You'll identify problems such as soil moisture and erosion. You'll use digital and satellite imagery to map soils and write descriptions. You'll sample soils and evaluate their quality, and work with information on watersheds, water quality, and changes in land-use patterns.

Qualifications: A bachelor's degree or higher in soil science or a closely related discipline that includes 30 semester hours or equivalent in biological, physical, or earth science with a minimum of 15 semester hours in such subjects as soil genesis, pedology, soil chemistry, soil physics, and soil fertility (see Note on page 7).

"One of the most rewarding things I've done was working with kids to plant shrubs for wildlife winter and foraging cover. (This) will make an impression lasting their lifetime."

*Matt Walker
Area Biologist
Montana*



"I never meant to stay this long, but every project I've had the chance to work on has been better than the one before."

*Mark Clark
Regional Soil Specialist
Alaska*

"I understand that what I do here makes a difference on the land; that's what drives me...I like helping landowners reach their goals and see the positive results of the conservation work they've done."

*Erasmio Montemayer
District Conservationist
Texas*



"My greatest reward with NRCS is to see the smiles on producers' faces when they get approved for conservation practices...I believe this is the true meaning of the NRCS Mission Statement—Helping People Help the Land."

*James Currington
District Conservationist
Alabama*

"I help people help the land...by taking as much of the administrative burden off our employees as I can...so they can devote themselves to getting conservation on the ground. I may be a background player in the conservation game, but I have no doubt about the importance of my role."

*Eileen Jackson
Human Resources Specialist
Washington*



"Working with natural resources was never a job, it was always a calling. I simply love what I do."

*Jay Fuhrer
District Conservationist
North Dakota*

RANGELAND MANAGEMENT SPECIALIST

NRCS rangeland management specialists help plan grazing systems that improve the quality of forage and other grazing land functions. You'll suggest ways to use grazing animals as tools to improve and sustain natural resources. You'll offer advice on water management, invasive species control, and sustainable forage production. Whether landowners want to use their rangeland to support livestock, wildlife, recreation, or a combination of these, you'll tailor conservation plans that will help landowners meet their goals.

Qualifications: A bachelor's degree or higher in range management or a related discipline that includes at least 42 semester hours in a combination of plant, animal, and soil sciences and natural resource management, with at least 18 semester hours in range management; at least 15 semester hours of directly related courses in the plant, animal, and soil sciences, including at least 1 hour in each of these three scientific areas; and at least 9 semester hours of course work in related resource management subjects (see Note on page 7).

BIOLOGIST

As an NRCS biologist, you'll spend most of your time onsite working with private landowners, other agencies, and units of government. You'll provide technical support and advice on fish and wildlife habitat development or restoration. You'll suggest ways to manage fish and wildlife populations, restore streams and wetlands, and improve habitat.

Qualifications: A bachelor's degree or higher in the biological sciences, agriculture, natural resource management, chemistry, or other related disciplines (see Note on page 7).

ENGINEER

NRCS employs a large number of engineers who have specialized skills in erosion control, water management, structural design, construction, hydraulics, soil mechanics, and environmental protection. We also employ those with general engineering skills. Your job assignments may include restoring streams, controlling erosion, developing water systems for livestock, improving and conserving irrigation water, or restoring wetlands. As an NRCS engineer, you will help solve a host of natural resource problems, and may also become involved in helping communities recover from natural disasters.

Qualifications: A bachelor's degree or higher in engineering. Specialties include agricultural, environmental and civil engineering.

ENGINEERING TECHNICIAN

As an NRCS engineering technician, you'll be involved in planning, design, and construction work. You'll help with surveying the land, plotting survey information, and laying out construction measures. You'll gather data, make computations, and prepare maps and cross sections of profiles. You may serve as a construction inspector on a wide variety of projects.

Qualifications: Experience on a survey crew running levels and transits or on construction layout and inspection (see Note below).

Note: Qualifications for many jobs may be met with a combination of education and experience. Please contact your local NRCS Human Resources Office for details.

"I can't solve the world's problems, but I can help one individual...make some real positive changes that will have positive effects on a larger scale, and that is success."

*Brian Baiamonte
District Conservationist
Louisiana*



"Being a public affairs specialist allows me to celebrate conservation—highlighting the profound contributions of our land stewards while raising awareness in the community."

*Jolene Lau
Public Affairs Specialist
Hawaii (Pacific Islands Area)*

"I know we are helping people today, providing hope for tomorrow's generations, and building what many other employees have done in the past to give people and communities the opportunities to preserve pr natural resources."

Resource Conservation &

*Jay Kehne
Coordinator
Washington*

Other Careers in the Natural Resources Conservation Service

The Natural Resources Conservation Service also offers careers for people trained in the following areas:

ACCOUNTING
AGRONOMY
BUSINESS ADMINISTRATION
CARTOGRAPHY
CONTRACTING
ECOLOGY
FORESTRY
GEOGRAPHIC INFORMATION SYSTEMS
GEOLOGY
HUMAN RESOURCES
HYDROLOGY
INFORMATION TECHNOLOGY
LANDSCAPE ARCHITECTURE
LEGISLATIVE AFFAIRS
PLANT SCIENCES
PROGRAM AND ADMINISTRATIVE ASSISTANCE
PUBLIC AFFAIRS AND COMMUNICATIONS
PURCHASING
SOCIOLOGY
WATERSHED MANAGEMENT
WETLANDS SCIENCE



I'm a Conservationist...I wouldn't have it any other way!

NRCS Provides

TEAM APPROACH

At NRCS, we know that natural resource issues are often complex, and sometimes require a variety of skills to address a problem. That's why NRCS believes in an inter-disciplinary team approach. If you encounter a tough problem, you won't be alone. Regardless of your job title, you will have access to, and back-up from, NRCS specialists in all our disciplines. We believe that by working together—each of us contributing our skills—we can tackle the toughest natural resource challenges.

EQUAL OPPORTUNITY

NRCS is an equal opportunity employer. Applicants will be considered without regard to race, color, religion, gender, national origin, age, politics, disability, sexual orientation, marital or family status.

TRAINING AND ADVANCEMENT

You will get many chances for on-the-job and formal training. You'll set career goals and NRCS will help you achieve them.

There are promotion opportunities. How fast and how far you advance depends on you. Advancement opportunities broaden as you gain experience with varied work assignments in different locations.

PLACEMENT AND SALARY

NRCS has more than 2,500 field locations throughout the United States. Regardless of your location, there may be opportunities where you want to work.

Starting salaries are competitive with those of other government agencies and the private sector.



Employee Benefits

During your first 3 years of service, you'll earn 13 days of vacation leave each year. After 3 years, you'll earn 20 days. After 15 years, you'll earn 26 days.

Each year, you will also earn 13 days of sick leave. You may accumulate sick leave without limit to cover serious illnesses. Sick leave may also be used to care for family members.

Special benefits are available if you are disabled or injured while working.

QUALITY OF WORKLIFE

NRCS offers flexible work schedules and programs to help employees balance the demands of work with personal and family responsibilities. These may include various alternative work schedules, job sharing, and telecommuting. Employee assistance programs are also available.

HEALTH AND LIFE INSURANCE

NRCS pays a portion (approximately 80 percent) of your health insurance costs, and there are a variety of medical plans offered under this voluntary program. NRCS also offers new employees the opportunity to sign up for both long-term care insurance and tax-advantage savings accounts for dependent care and healthcare-related expenses.

Another voluntary program provides life insurance. The amount of insurance available to you depends on your salary, and again, NRCS pays part of the cost.

RETIREMENT

Federal employees hired today are covered by the Federal Employees Retirement System (FERS). This system has three components: Social Security, a basic annuity, and a tax-deferred Thrift Savings Plan. FERS employees may contribute any percent of their salary (up to the limits established by the Internal Revenue Service) to the Thrift Savings Plan, and NRCS will match up to 5 percent of that amount. Depending on your investment goals, you can invest in any combination of government securities, stock, and bond funds.



For Job Information

STUDENT CAREER EXPERIENCE

Each year, NRCS hires students under its Student Career Experience Program. If you are still attending college or graduate school, you may qualify.

You can alternate periods of work and study, or work on a part-time schedule while attending school. You'll work for, and learn from, NRCS professionals in your field of study. You'll learn by doing and earn while you learn.

NRCS also offers students other options such as internships and temporary employment opportunities. Participation in these programs could lead to a job offer and a full-time career when you graduate. For more information, contact your school's placement office or cooperative education department.

VOLUNTEERS—A VITAL PART OF THE TEAM!

NRCS also provides volunteer opportunities. The Earth Team—the volunteer workforce of NRCS—expands conservation work across America with volunteer time, talent, and energy. The Earth Team is continually looking for volunteers who want to help conserve, protect, and maintain our natural resources. Stop in and visit a local NRCS office or call 1-888-LANDCARE to learn more about becoming an Earth Team Volunteer.

**For information on how to apply,
contact your local NRCS office,
or visit us online at**

<http://www.nrcs.usda.gov>

See job opportunities at

<http://jobsearch.usajobs.opm.gov/a9nrcshqp.asp>

*Every day,
NRCS keeps its commitment to
protecting and conserving
natural resources
on America's private lands.*



United States Department of Agriculture
Natural Resources Conservation Service

Helping People Help the Land

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