

Soil Scientist DITL Video CC Text

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| [Narrator] Welcome to NRCS. | End: 00:00:04:00 Begin: 00:00:02:00 |
| We protect, conserve, and restore America's natural resources. | End: 00:00:10:00 Begin: 00:00:06:00 |
| We help people help the land. | End: 00:00:18:00 Begin: 00:00:16:00 |
| There are many people who work together on a conservation team. | End: 00:00:25:00 Begin: 00:00:22:00 |
| Take some time to explore a day in the life of an NRCS Soil Scientist. | End: 00:00:30:00 Begin: 00:00:26:00 |
| [Narrator] Soil is the basis of life. No trees, no crops, no cities would exist. | Begin: 00:00:33:00 |
| The health of our soil directly affects our air, our water, our landscape, and our wildlife. | Begin: 00:00:40:00 |
| Soil science affects all Americans - everyone from Wall Street to Main Street. | Begin: 00:00:47:00 |
| NRCS is the premier agency charged with mapping the nation's soil, expanding our knowledge, and advancing the science of soil. | Begin: 00:00:52:00 |
| Join me as we share with you the job of a soil scientist. | Begin: 00:01:01:00 |
| [Jim Marshall, NRCS Soil Scientist] Hi, my name is Jim Marshall, and I am a Soil Scientist with Natural Resources Conservation Service. | Begin: 00:01:07:00 |
| What am I doing in this hole you might ask? | Begin: 00:01:13:00 |
| Well, I am here as part of a county soil survey doing a characterization of this soil in the background. | Begin: 00:01:15:00 |
| Today we're going to look at soil horizons, organic matter content, and other properties of this soil as we document what soils are like in this county. | Begin: 00:01:21:00 |
| [Narrator] Soil scientists' work is broad. | Begin: 00:01:30:00 |
| Their knowledge is used in all areas of NRCS' mission - from large-scale landscape mapping and planning down to field-specific information that is used by landowners and NRCS employees alike. | Begin: 00:01:33:00 |

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| There are two types of soil scientists within NRCS. | Begin: 00:01:46:00 |
| One that works with the local conservation teams, made up of District Conservationists, Engineers, and Technicians, which install conservation practices on the ground. | Begin: 00:01:50:00 |
| This team of people can solve the majority of the resource concerns that are found on the land. | Begin: 00:02:00:00 |
| MLRA soil scientists spend a vast majority of their time working on special projects, such as the Carbon Sequestration Study or updating the original soil survey information. | Begin: 00:02:07:00 |
| MLRA staff are also responsible for keeping the Web Soil Survey up-to-date, which is used by landowners, regional and state planners, and other federal agencies. | Begin: 00:02:19:00 |
| [Marc, NRCS Soil Scientist] Hello! I'm Marc. I'm a Soil Scientist for the NRCS. | Begin: 00:02:32:00 |
| I work out of an MLRA office. I have a degree in plant and soil science from Southern Illinois University. | Begin: 00:02:37:00 |
| [Matt, NRCS Soil Scientist] My name is Matt. I'm an MLRA office leader for NRCS. I received a degree from Michigan State University. | Begin: 00:02:44:00 |
| [Matt, NRCS Soil Scientist] Early soil surveys were produced with limited resources and to relatively shallow depths. | Begin: 00:02:55:00 |
| But as time progressed, so did the soil surveys. And you ended up with more detailed soils information to deeper depths, until by the 1990s, you ended up with a publication similar to that. | Begin: 00:03:02:00 |
| And in the early 2000s, for a while they produced CDs with the soil surveys on them. And these days, the Web Soil Survey is our final product. | Begin: 00:03:16:00 |
| And it's where the public can go to to access soils information on their own property or property they're interested in. | Begin: 00:03:29:00 |
| Soils information is useful for a variety of purposes. | Begin: 00:03:39:00 |
| If you're interested in putting a house on a piece of property, you can find out how high the water table comes during different parts of the year. | Begin: 00:03:46:00 |
| [Marc, NRCS Soil Scientist] Today we are working on a soil survey update project, and we use ArcGIS software in this process. | Begin: 00:03:59:00 |

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| [Matt, NRCS Soil Scientist] We also use NASIS, which stands for the National Soils Information System, and we update the tabular data behind the soil survey. | Begin: 00:04:06:00 |
| [Matt, NRCS Soil Scientist] We're using LIDAR, which stands for Light Detection and Ranging, which is basically a highly detailed, digital elevation model. | Begin: 00:04:20:00 |
| And then we're able to use that to create hill shade and slope maps that help us when editing the soil lines. | Begin: 00:04:30:00 |
| [Marc, NRCS Soil Scientist] And when we're in the field, we use a tablet computer that has specific software designed for it called Pedon PC for data entry. | Begin: 00:04:38:00 |
| [Matt, NRCS Soil Scientist] We also use GPS units out in the field for recording field observation points and just for generally keeping track of where we're at in the field. | Begin: 00:04:48:00 |
| [Narrator] Soil is the foundation. | Begin: 00:05:02:00 |
| It is the foundation to the farmer and rancher who, from the soil, grows the crops and raises the livestock, which is his livelihood and is our food. | Begin: 00:05:05:00 |
| It is the foundation of our forest, which supports the trees that make our lumber and provides habitat for our wildlife. | Begin: 00:05:14:00 |
| It is the foundation for your home, as it determines where you can build and how your lawn will grow. | Begin: 00:05:21:00 |
| It is the foundation for all of civilization. | Begin: 00:05:27:00 |
| The prosperity of a nation is directly related to the quality of its soil - its ability to grow and supply the items needed to sustain life. | Begin: 00:05:31:00 |
| [Jim Marshall, NRCS Soil Scientist] Being a Soil Scientist is an outside job. | Begin: 00:05:40:00 |
| If you like being outside and you like physical activity, this is the job for you. | Begin: 00:05:44:00 |
| The job involves having good personal skills, because, remember, almost 70% of the land that I work on is owned by private landowners. | Begin: 00:05:49:00 |
| You need to ask permission, build relationships with them, before setting foot on their property. | Begin: 00:05:58:00 |
| It's also a career that caters to those who like to travel. | Begin: 00:06:03:00 |
| As a Soil Scientist, you get to see a lot of different places and work on a lot of great projects. | Begin: 00:06:07:00 |

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| [Jim Marshall, NRCS Soil Scientist] You know, the work of soil scientists is very important. | Begin: 00:06:14:00 |
| Our work is the foundation of all the other services that Natural Resources Conservation Service offers. | Begin: 00:06:17:00 |
| Charles Kellogg explained, and it is well said, “Essentially all life depends on the soil. All life begins and ends here. | Begin: 00:06:24:00 |
| The goodness that we have here on earth is dependent on this soil and keeping it in place.” | Begin: 00:06:32:00 |
| That is our work here at Natural Resources Conservation Service. | Begin: 00:06:37:00 |
| [Narrator] Over the last 75 years, NRCS has been moving toward the completion of mapping the nation’s soils. | Begin: 00:06:42:00 |
| As that goal is realized, the soil scientist staff’s work will change. | Begin: 00:06:49:00 |
| The focus of how the soil is changing due to human influence, invasive species, and climate change will become priority as we rise to meet the challenges of the 21 st century. | Begin: 00:06:54:00 |
| The job of a soil scientist can be demanding physically. | Begin: 00:07:06:00 |
| Oftentimes, they work in remote locations, carry heavy equipment, and are alone for hours or days at a time. | Begin: 00:07:10:00 |
| Even with these conditions, there are numerous rewards to their work. | Begin: 00:07:17:00 |
| Thank you for sharing your time today. | Begin: 00:07:23:00 |
| The work of a soil scientist is an integral part of NRCS and its mission to teach landowners about good land stewardship. | End: 00:07:32:00 Begin: 00:07:26:00 |
| [Narrator] For more information, please visit our Web site at nrcs.usda.gov . | Begin: 00:07:36:00 |
| NRCS is an equal opportunity provider and employer. | Begin: 00:07:43:00 |