

Soil and Water Conservation Society

*Guide for Students
and Early Career
Professionals in*
CONSERVATION



SOIL
AND WATER
CONSERVATION
SOCIETY

Welcome to Your Guide for Student and Early Career Professionalism in Conservation!

This guide is intended to help you navigate graduate school and first jobs and best set yourself up for success in your conservation career.

Inside, you'll learn about several relevant professional development topics. These include:

- The many benefits of a student or conservationist SWCS membership
- Important tools and resources available to you as you transition into grad school or a job
- Best practices for making and maintaining professional connections

In addition, we've asked those working in the field to weigh in with advice and recommendations. Current SWCS members span a wide range of career sectors and stages, and are eager to support the next generation of conservationists. The advice they provide here is just the beginning. We invite you to become involved in your local student chapter, state chapter, or to attend a professional conference. We can't wait to see where your career path leads!

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The Soil and Water Conservation Society Guide for Students and Early Career Professionals in Conservation is intended to serve as an evolving resource document for those in the early stages of pursuing conservation careers.

For more information about this document or SWCS, please email memberservices@swcs.org, call (515) 289-2331, or visit www.swcs.org.

The Soil and Water Conservation Society is a nonprofit scientific and professional organization that fosters the science and art of natural resource management to achieve sustainability. The Society's members promote and practice an ethic that recognizes the interdependence of people and their environment.

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Maximize Your Student Membership

Your student membership allows you to connect to the world of conservation professionals in many unique ways. To make sure you maximize your membership benefits, follow this easy guide!

Stay Up to Date on Cutting-Edge Information in Conservation



Journal of Soil and Water Conservation: Stay informed about the latest conservation research, tools, practices, and policy with the JSWC. With your online student subscription, you have access to hundreds of articles on conservation studies and projects completed around the world.



Conservation NewsBriefs: Keep up to date on the most recent conservation news and policy through Conservation NewsBriefs, a weekly compilation of conservation news delivered to your inbox each Thursday.



Conservogram Member Newsletter: Emailed monthly, the newsletter includes event information, articles from conservation leaders, discussion questions to ponder, and chapter and member spotlights.

Network

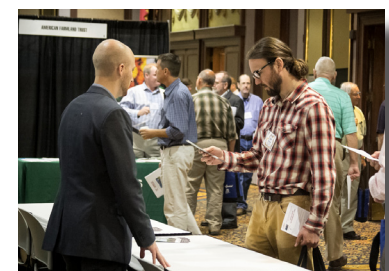
Membership to Local Chapter: By joining SWCS, you automatically become a member of your campus or state chapter. These chapters sponsor activities; provide a network for a broad range of conservation professionals; and offer training, technical assistance, and hands-on experience with demonstrations, projects, and workshops. Contact your chapter president, using the online directory, to become involved.

Annual Conference: Every year conservation professionals get together at the SWCS International Annual Conference to share ideas and to get to know one another. Students not only receive a discounted registration rate, they also have the opportunity to apply to the Student Moderator Program and attend for free!

Committee Service: As a student member, you can serve on SWCS committees. Working with peers in the field gives you invaluable networking experience. Additionally, you get to contribute to the world of conservation, right now!

Social Media Networks: SWCS is on Facebook, Twitter, LinkedIn, and Instagram. Follow @SWCSNews, tag us, and use hashtags #SWCS, #JSWC, #conservationjobs, and #SWCS18 to join the conversation.

Membership Roster: Complete your online member profile today and search for others in your area by using the SWCS membership roster.



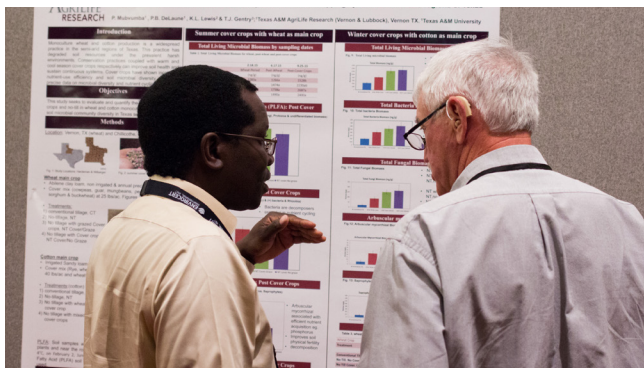
Advance Your Career

Conservation Career Center: The SWCS Conservation Career Center is more than a job board—you can post your resume, request resume review, and find advice to help you land a job or internship. Visit <https://www.swcs.org/careers> to learn more.

Awards and Scholarships: As a member, you can apply for SWCS' award and scholarship opportunities. We have three opportunities at the international level for scholarships: a research scholarship, a soil conservation scholarship, and a student leader scholarship. Many chapters offer scholarships too!

Trying to Publish? Publishing research as a graduate or undergraduate student can be challenging for a number of reasons, but as a member of SWCS, you can publish in the JSWC at a discounted rate.

SWCS is here to help connect you to the right resources and people throughout your education and postgraduate career. Reach out to memberservices@swcs.org or call 515-289-2331 with questions, suggestions, or feedback at any time. We love hearing from our members!



Networking 101

Networking is an important skill because it allows you the opportunity to develop relationships with people who share your passions and interests. Networking is a two-way street that helps people further their careers, gain knowledge, or contribute to and advance certain projects. When you make professional connections, you both broaden your perspective and serve as a resource to others in your field. Networking at your own universities is a great way to continue developing your skills after the conference.

1. Get Connected to Others with Similar Interests

- Join an SWCS committee!
- Ask those in your mentoring group to connect you with people that they know at the conference who have interests or careers that you share.
- Use the SWCS chapter online database to connect with members of chapters in your area and invite them to speak to your student chapter.



2. Start the Conversation

- Ask people questions about themselves instead of talking about yourself first.
- Ask the person seated next to you their thoughts on the previous session and how it applies to their work.
- After a presentation, ask the presenter a question and introduce yourself.

3. Meet New People in Addition to Connecting with Old Friends

- Research the people who will be attending a conference ahead of time. Identify sessions and speakers that relate to your interests.
- Try to meet at least two new people at each conference or event you attend.
- Ask someone you know well (perhaps your mentor!) to make an introduction between you and someone you would like to get to know at the conference.
- Sit at a table with a group of people you've never met.

4. Make an Effort to Remember Names and Details

- Write down names, job titles, organizations, and locations after meeting someone new. This will help you to connect later in the conference and will leave a positive impression of your effort to remember people.
- When you meet someone, find a way to repeat their name once within the conversation to help you remember it.
- Exchange business cards and take notes on your contact's card. When you pick up the conversation later, you can refer to these cues.

5. Continue the Conversation!

- Add the people you meet to your LinkedIn network with a personalized message including some of the details you discussed with them at the conference.
- Send a follow-up email after the conference to thank new contacts for chatting with you and to complete any open-ended conversation.
- When you see something or meet someone a contact may find helpful, forward the information. Used sparingly, this technique lets others know their work and success is important to you.

Conservation Funding Opportunities for Early Career Professionals

Grants can be a helpful source of funding for graduate research projects (though you don't need funding to apply for grad school) or for professional groups trying to get conservation projects off the ground and into the field. This list of grant resources includes various funding opportunities.

Agriculture and Food Research Institute: These grants support research, education, and extension activities as outlined in the Farm Bill. They are awarded based on available funding. <https://nifa.usda.gov/program/agriculture-and-food-research-initiative-afri>

Soil Science Society of America: The Soil Science Society has scholarship opportunities for both undergraduate and graduate students in soil sciences. <https://www.soils.org/awards>

Sustainable Agriculture Research and Education (SARE) Grant: These grants are for students, professionals, and farmers doing projects to further sustainable agriculture. The grants are region-specific. <https://www.sare.org/Grants/Apply-for-a-Grant>

McNair Scholars Program: This resource has information about how to become a McNair fellow and provides a great list of other funding opportunities for underrepresented groups in graduate school. <https://mcnairscholars.com/funding/>

The Conservation Leadership Program: This program is an international capacity building program supporting new conservationists, the majority of whom are working in their own countries, to undertake applied biodiversity projects in less developed countries. In addition to the CLP, this site offers a list of other funding sources that may be useful. <http://www.conservationleadershipprogramme.org/grants/other-funding-sources/>

Terra Viva Grants Directory: This group develops and manages information about grants for agriculture, energy, environment, and natural resources in the world's developing countries. <http://terravivagrants.org/>

The Conservation Alliance: This organization engages businesses to contribute financial support and partnerships for the protection of wild places with the goal of habitat and recreation preservation. <http://www.conservationalliance.com/grants/>

National Science Foundation Fellowship: This fellowship provides funding for three years to research-based graduate students at the master's level or above attending accredited universities in the STEM fields. <https://www.nsfgrfp.org/>

The Conservation Fund: This group supports small grants and provides training and resources for groups seeking to carry out conservation projects for the benefit of whole communities. <https://www.conservationfund.org/our-work/conservation-finance/conservation-grants>

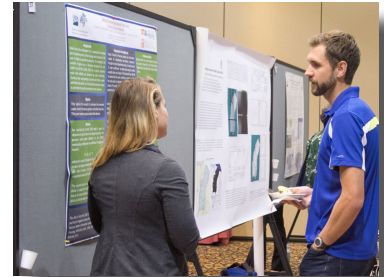
The Sustainable Forestry Initiative Conservation and Community Partnerships Grant Program: This program seeks to provide funding to groups interested in supporting biodiversity, community education, and forest protection projects. <http://www.sfiprogram.org/archives/conservation-community-partnerships-grant-program/>

Getting into Grad School

Deciding to go to graduate school can be a huge decision, and after that decision is made it can be challenging to wade through all of the available information about how to apply and where to go to find support. This guide will summarize some best practices and provide additional resources for prospective graduate students.

Developing an Edge as an Undergraduate

- Get undergraduate lab and field research experience, both because it gives you a skill set and because it helps you understand what type of research you might like.
- Develop great relationships with professors and supervisors so that you can be confident you will have specific and complimentary recommendations when you send in your application.
- Attend professional conferences, join professional societies, and look for opportunities to present your research or network with other professionals.
- In addition to completing required degree coursework, take in-depth courses in your area of interest; you may even complete graduate-level coursework.
- Work to get your grades and GPA where they need to be, with special attention to the major-specific courses in the last two years of your undergraduate degree.
- Be sure that you have studied and prepared before you take the GRE exam. While the GRE score is not the only gauge used for graduate admissions, it is an important component and should not be treated as an afterthought.
- Work with your research professor to publish as an article co-author.



Selecting a Program

- Think about your career goals and determine whether a graduate degree will help you achieve those goals. The best way to learn about potential career paths is by talking to people in the field you want to pursue.
- Research the professors who are working on projects that interest you. Look at their departmental pages, their research websites, and their publications. Your experience will be shaped by your major professor as much as, if not more than, the program and university.
- Apply to schools where you feel welcomed and supported—it's hard to know on a first visit, but similar to choosing an undergraduate school, your gut should have some say.
- Talk to other graduate students in the programs you are considering. Ask them about their experiences.
- Money isn't everything, but you really shouldn't choose a program that leaves you paying for the bulk of your time. Especially in science programs, they should pay you as you will likely be doing an assistantship.
- Apply to programs at a range of different schools, including at least one school where you have a high chance of acceptance.



Choosing an Advisor

- Pick a professor whose research you are passionate about. If you care about the broader topic but can't see yourself caring about the professor's specific research project, it's a good idea to explore a different project.
- Choose 6 to 10 potential advisors from different schools in the programs you want to pursue. It's best to identify these advisors based on conversations and advice from professors and mentors you trust and value.
- Learn everything you can about these advisors: read their papers, review their research or department websites, find their LinkedIn page, and talk to your connections who know them.
- Reach out to these advisors no less than a couple of months before all of your application materials are due with a letter of introduction and your resume explaining why you would be interested in working with them.
- Pay attention to how professors interact with you as you are making your first introductions. If you feel like they are hard to get ahold of or difficult to work with initially, this may be how they operate with their graduate students.
- Reach out to graduate students in their labs for their perspectives. Often these conversations can be a part of a campus visit.



Sending in Your Application

- Make a list of all the application deadlines for each of your selected programs.
- Fill out the application on the program website and be as thorough and specific as possible for each item you fill out.
- DO NOT recycle cover letters or other "generic" essays. The more specific and tailored it is to that school and the program you want, the better.
- Pay attention to how helpful and responsive the school is in general as you apply and reach out to admissions representatives. Nonresponsive universities can make for a bad experience even if the research team seems great.



To Accept or Not To Accept

- Be sure to review your offer package fully before making your decision.
- Don't settle for a back-up school just because you haven't heard from the other schools yet. If a deadline is approaching, determine if you can extend it.
- Whether you accept or don't accept, reach out with a thank you and your decision to everyone you met. You may work with them later!
- Be sure to follow your gut—don't forget to pick the school that feels most right for you!



Grad School Advice from SWCS Members

I encourage [grad school], but I also tell them that it's not for everyone. You're not a failure if you drop out after the first semester.

If you have an idea of a graduate school project, tell them your idea; they may already have a project they need you to work on, or they may have money to dedicate to your idea.

It's important to have a close group of peers in your grad program whom you can turn to for advice and to simply lean on when things get stressful.

If you are going to get a graduate degree in the sciences, you need to have a relationship and an understanding with a professor before you apply. You need to send an email to a potential professor stating your qualifications and interests and very directly ask them if they are accepting students and have funds for them.

Ask your professor about their expectations for you. Do they expect you to spend all your time working on your project, or are they okay with you taking other leadership positions? Do you have any flexibility in designing your research project, or are they going to hand you one? Will they pay for you to attend research conferences? About how long do they expect your degree to take? How often will you get to see them? Do you have regular meetings?

Talk to your potential professor's current or former graduate students. I have had many friends drop out of grad school because of bad professors. If the professor doesn't want you to talk to their students, that is not a good sign.

Internships and Jobs

Internships provide important experience for undergraduates and some graduate students (if your program allows for an internship). These experiences help you know whether a career path is right—or wrong—for you and help you get your foot in the door within a company and with others. Relevant experience gained while you are still in school also gives you a leg up for that final-year job search.

How Can I Score That Internship or Dream Job?

- Take a job in a lab or other department on campus. Even if it's not directly related to your career interests, a campus research position will provide you with experience and transferable skills.
- Make the most of your part-time jobs and internships when you get them and use the experience to do everything to the highest level possible.
- Know your advocates. Ensure that you have professors, previous employers, or volunteer coordinators who can speak to your abilities and strengths. Always request permission to list a contact as a reference, and provide your references with an updated resume or CV.
- Talk to your employers about getting experiences in the parts of their job that relate to your career interests.
- Email or call a company you are really interested in and ask if they may have need for an intern. Internships may be unpaid. If that is the case, talk to your university about any grants/scholarships they may have for students pursuing unpaid internships. Some universities also offer college credit for internships.
- Prepare for the interview. Arrive knowing all that you can about the company and the position. If you're interviewing to work in a different state, know about the specific natural resource issues and needs of the region, state, or city.
- Talk with professors or connections and ask if they know of any open positions or opportunities.
- Consider doing volunteer work over your spring break or fall break. There are cool conservation volunteer experiences that could give you great opportunities that you may be able to capitalize on later in your career.



Where Can I Find Internships and Career Opportunities?

Many schools have a career center you can visit, so it's always a good idea to reach out to your personal networks there. However, sometimes you will want to reach outside of your network to find new experiences. The following website list can be a good start:

- American Association for the Advancement of Science Careers
- SWCS Career Center
- American Water Resources Association Job Board
- Ecological Society of America Job Board
- Student Conservation Association
- USAjobs - Internships and jobs with various levels of governmental agencies
- Zintellect - Fellowships with federal government

Social Media

Check out LinkedIn and the following Facebook groups for opportunities:

- Sustainable Agriculture Jobs, Internships, Apprenticeships
- Conservation Job Board
- Conservation Jobs

Early Career Advice from SWCS Members

You have to find a place where you can feel comfortable. If you're intensely interested in research, and they've hired you as an extension specialist, you're going to be frustrated. I find great personal satisfaction in dealing with the public, answering their questions, and helping to solve their problems, so extension was a good place for me.

- Gary Steinhardt



Find someone you want to emulate. If you see a position that you want, reach out to that person and find out how they got into that position and what they see as the future of that position.

Join a professional network and have a vision for what you want to accomplish. Believe in yourself, believe you deserve it. And just work, work, work for it.

- Clare Lindahl



It comes back to leadership: We need to continue to mentor each other and help each other explore all opportunities connected with agriculture and life sciences.

- Dale Threatt-Taylor



You must never lose sight of your "why" no matter what job you are holding. For me, ensuring that I am working to champion agriculture and the environment is paramount. Holding true to the "why" has allowed me to have flexibility in the positions I have held.

- Martha Zwonitzer



Conservation Career Tracks

Conservation jobs will often fit in multiple career tracks, but it can be helpful to group careers by some overarching categories to identify your areas of interest. You can begin your job search based on your interest in each category. Make it a goal to meet someone in one of these positions or with connections to your area of interest at this conference!

Policy/Planning

People in this career track are interested in the back-end of conservation. They work to develop policies, regulations, best practices, and other such research-driven decision-making documents that inform the direction of the work done by other conservation professionals.

- Building, Planning, and Zoning Director
- Urban Conservationist
- Community Development Director
- Conservation Planner
- Consultant
- Environmental Planner
- Land Resource Specialist
- Land Use Planner
- Natural Resource Planner
- Policy Analyst
- Legal Aide
- Environmental Analyst
- Watershed Planner/Manager

Technician/Engineer

These people work in jobs that have a need for very specific technical skills. They use their expertise to design, plan, gather data, and make recommendations to other professionals.

- GIS Analyst
- Soil Technician
- Crop Adviser
- Forest Technician
- Engineer
- Program Coordinator
- Project Analyst
- Graphic Design
- Landscape Architect
- Environmental Technician
- Erosion Control Specialist
- Civil Engineer
- Environmental Engineer
- Geotechnical Engineer

Education

People in this field use their knowledge of conservation practices and their people skills to spread that knowledge to the rest of their community and sometimes world.

- Extension and Outreach Specialist
- Interpretive Naturalist
- Teacher
- Filmmaker
- Artist
- Professor
- Journalist/ Science Writer
- Grant Writer
- Water Conservation Specialist
- Camp Counselor

Field/Lab Work

People in this field have a boots-on-the-ground approach to conservation. We include researchers here because they are the boots-on-the-ground figuring out how we should practice conservation; the others listed here generally carry out recommendations made by researchers.

- Farm/Ranch Manager
- Park Manager
- Range Conservationist
- Range Management Specialist
- Resource Conservation Specialist
- Soil Conservationist
- Restoration Ecologist
- Land Steward
- Laboratory Specialist
- Research Associate
- Soil Scientist
- Land Reclamation Specialist

Career Direction Resources

- For those still affiliated with a university, your career center can be very helpful.
- Network with people at conferences and in your local SWCS chapter to be connected to information about jobs near you.
- NRCS Careers: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/careers/>
- Agriculture Research Service(ARS) Careers: <https://www.ars.usda.gov/careers/careers-in-ars/>
- USDA Food, Agriculture, and Natural Resources Careers: <https://www.agriculture.purdue.edu/usda/careers/index.html>



The Soil and Water Conservation Society Career Center is an online resource to help job seekers and employers make career connections within the conservation community.

Visit www.swcs.org/careers to search for a job, find expert advice, or post your resume today!

Tools for Continuing Your Education and Building Your Skill Set

A CEU is a measure of continued learning after you become a professional. There are different requirements for how many hours go into earning a CEU. This all depends on the professional certification that you might need. Some employers, like NRCS, require professional certifications as you move up in the ranks. Some professional societies or organizations have certification programs to recognize those members who are life-long learners. In addition, you may be interested in pursuing CEUs to simply build your skill set. The list below highlights a few opportunities to expand your skill set and make yourself more competitive!

Professionals in Need of CEUs

- Certified Crop Advisers
- Certified Professional Agronomists
- Certified Professional Soil Scientists
- Certified Professional Crop Consultant
- Certified Pesticide Applicators
- NRCS Pest Management Specialists
- Erosion and Storm Water Control Specialists
- Certified Grasslands Professionals
- Certified Professionals in Range Management
- Irrigation Professionals
- Landscape Architects

CEUs have different standards depending on the profession. It is best to look for CEU opportunities on the certifying organization's website in order to be assured that your learning will count. Below is a list of free resources for expanding your tool set. Some may be eligible for CEUs, but check on the certifying website.

SWCS Journal and Conference: Reading the journal and attending the annual conference provide valuable opportunities for you to stay up to date on current research and practices and make connections in conservation. <http://www.jswconline.org/> and <https://www.swcs.org>

State SWCS Chapters: Some SWCS state chapters provide opportunities to obtain CEUs through their programming. If you become part of an SWCS chapter, you could also participate in hosting your own CEU program for others in your field! Find your state SWCS chapter here: <https://www.swcs.org/about-us/our-chapters/>

Esri–ArcGIS: Esri offers free courses and webinars for practitioners in various fields. Use these courses to go deeper with ArcGIS online and gain skills in how to use online mapping for natural resource conservation. Some courses offer continuing education credits. <https://www.esri.com/training/catalog/search/>

Coursera: This online portal allows free and reasonably priced courses in a lot of areas, but the R programming courses stand out as being useful. If you are interested in building your data science and statistics skill set, these courses will serve you well. <https://www.coursera.org/>

USDA Conservation Webinars: USDA provides a wide range of sustainable agriculture and conservation webinars. Some webinars offer CEUs. The list for 2018 webinars is posted in full on the website. <http://www.conservationwebinars.net/documents/planned-conservation-webinars>

Career Profiles

SWCS has been collecting profiles of conservationists to help students and early career professionals learn more about the varied positions and career paths available within the field. Profiles are included for each of the individuals below. Visit swcs.org to find more profiles as they become available.



Leonard Jordan
Acting Chief, USDA-NRCS
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Gary Steinhardt
Professor of Agronomy
and Extension Specialist,
Purdue University
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Clare Lindahl
CEO, Soil and Water
Conservation Society
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Martha Zwonitzer
Agronomic Research
Specialist, Monsanto
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Doug Smith
Research Soil Scientist,
USDA-ARS
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Dale Threatt-Taylor
Director, Wake Soil and Water
Conservation District
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Leonard Jordan

Acting Chief, USDA-NRCS

Career Sector

Government

Degree

BS in Agronomy from Tennessee State University



Briefly describe your career path from college to today.

Graduated from Tennessee State University in 1977. Began full-time professional career with the Natural Resources Conservation Service (NRCS)-Indiana in June of 1977 as Conservation Technician. Served in various positions throughout Indiana until November of 1994. Transferred to Oregon NRCS in 1994 as an Assistant State Conservationist. In May of 1998, I became the State Conservationist for Washington State until July 8, 2001. Transferred to the State Conservationist position in Georgia in July 2001 through 2005. In January of 2005, joined the ranks of the Senior Executive Service (SES) as Division Director in Washington, DC. Held several positions as Division Director, Deputy Chief, and Regional Conservationist until December of 2012. In December of 2012, I became the Associate Chief for Conservation. I served in that capacity until asked to serve as Acting Chief January 20, 2017, until present.

What was the best advice you received regarding your career?

Strive to learn all that you can, be mobile, work hard, and to be willing to take on new challenges. Additionally I was always encouraged to seek mentoring and coaching from individuals both inside and outside the agency. I followed those recommendations.

Describe the best choices that you've made along your career path.

I chose a mentor/coach that was genuinely interested in seeing me succeed, and followed the recommendations. I've also been well-served by being mobile and capitalizing on opportunities that caused me to stretch.

How has SWCS impacted your career, or contributed to your continued education and/or professional development?

I have been an active member of the Society since 1979. The Society afforded me an opportunity to grow professionally, by taking on leadership roles and participating in many workshops and conferences. I strongly believe and know without a doubt the Society prepared me for greater leadership roles and responsibilities.

What advice do you have for college students or early career professionals who might want to work in a job similar to the one you have right now?

For college students, I would say to make sure their courses of studies align with their career objectives, affording them job opportunities. For early career professionals, be motivated to be the best you can be. Set goals that reflect over time an increase in responsibilities. Get a mentor and be flexible and mobile.

Gary Steinhardt

Professor of Agronomy and Extension Specialist, Purdue University

Career Sector

Academia

Degrees

BS in Agricultural Science from Michigan State University

MS in Soil Science from Michigan State University

PhD in Agronomy from Purdue University



Briefly describe your career path from college to today.

I did not start out in college thinking that I wanted to study soils. I was majoring in food science at Michigan State University, and one summer there weren't any summer jobs in the food industry. I got a wonderful letter from the Michigan Agricultural Experiment Station, because I had pretty good grades, asking if I would like to map soils. I didn't know if I wanted to map soils, but I knew I wanted a job. And that's how I initially got into soils, kind of by the back door. I completed my undergraduate and master's degrees at Michigan State, spent a few years in the army, and returned to academia to get my PhD at Purdue. Then after graduate school, I decided I wanted to be more involved in the National Cooperative Soil Survey, a project to map and inventory the nation's soils. As it turned out, Purdue had a job in soils and land use as an extension specialist. Well, a job is better than no job. It wasn't exactly what I wanted (or thought that I wanted), but I've had the greatest time with this career and it was really all by accident.

What is academic life like?

Well, there's lots of juggling. In order to get tenure now you really have to demonstrate your ability in research and writing and managing grants. It's very difficult to get tenure. You've got to be like Mary Poppins—nearly perfect in every way. As you go along, you get arguably better at juggling several balls in the air at the same time. When you have a three-way appointment in the land grant system—research, teaching, and extension—you're trying to get all those balls juggled. Everyone that you encounter thinks that the only thing you're doing is whatever they're interested in. Your students think all you do is teach. Your colleagues think all you do is research. And the public thinks that all you do is extension. It's a challenge, but if you love it, it can be very satisfying. Also, it's an exciting job; no day is ever the same. Today I'm going to teach my class, then I'm going to teach my lab, then I'm going to run down to Indianapolis for an extension meeting.

What changes in required skill sets do you anticipate in your current position?

If you go into extension, there's a lot that they don't teach you in graduate school in terms of interacting with people, planning things, and planning educational programs. You're not always prepared for the complexities of putting together an extension program and coordinating with people. The people part of it is the most important. The way to hone those people skills is just through doing. Joining a service club, like your local SWCS chapter, is a great way to get people skills. You're interacting on projects, and the pressure isn't as great as it will be later. If you're thoughtful, you can learn an awful lot. It doesn't matter what that experience is—designing the homecoming float, raising money for breast cancer, arranging a trip for the ski club—it can all help you understand what the real world is all about.

Clare Lindahl

CEO, Soil and Water Conservation Society

Career Sector

Nonprofit Organization

Degrees

BA in Landscape Architecture from Iowa State University
Post-bachelors certificate in Environmental Geographic
Information Systems (GIS) from Western Illinois University



Briefly describe your career path from college until today.

I started college in social work and was inspired by a video I saw on Chad Pregracke during a required environmental studies class. Chad is a Moline native (like me) who at the age of 23 founded Living Lands and Waters, a nonprofit dedicated to cleaning up the Mississippi River. It really connected with me because I grew up along the river in Moline and felt it had helped to raise me. It inspired me to do something for the environment. I went to Iowa State University (ISU) for Landscape Architecture, and it set me up perfectly for my work in conservation. It was centered on people and the land, and balancing the needs of both. It focused on creating plans for the land that best suits human needs but also protects those services—like wildlife and recreation—that the land provides. After ISU I went back to my home town of Moline and approached two organizations about internships. One of the organizations was a landscape architecture firm, and the other was River Action, a nonprofit dedicated to fostering the environmental, economic, and recreational aspects of the Mississippi River. After the internships, I got job offers from both. I was looking at my college loans, and the landscape firm was going to pay me much more than the non-profit. I took the landscape job... for two weeks. After two weeks, I missed the nonprofit work and I missed working for the river. I asked River Action if their job was still on the table (it was), and I began my career in Natural Resources.

What's the best advice you've received regarding your career?

I'm not sure who told me this, but somewhere along the line someone told me, "Follow your dreams, and then making a living will follow." That first decision I made, to work for a nonprofit over a higher paying private company, wasn't perhaps the most financially responsible decision to make, but it was where my passion was. Because of that passion and dedication to my work, I've been able to move up through the ranks and become the first female CEO of an organization that's been around since 1944.

What have you done to continue your education and professional development following college graduation?

Becoming a member of the Society was one of the first things I did when I became a conservation professional. I [became] a leader in my local SWCS chapter. I helped them redo the website and eventually became a board member. Which, in turn, taught me how to organize meetings and inspire board members to get things done. My experience on the local chapter empowered me to be a leader and to take initiative on different projects. One project was the Farm Progress Show, the national's largest outdoor farm event. Through the Iowa Chapter's involvement, and the name recognition that the Society brought, I was able to grow a demonstration cover crop plot, corral a diverse group of partners, and offer various education and outreach activities at the event.

Martha Zwonitzer

Agronomic Research Specialist, Monsanto

Career Sector

Industry

Degrees

BS in Crop and Soil Environmental Science from University of Arkansas

MS in Environmental Science from the Department of Agriculture and Biosystems

Engineering from Iowa State University

Completed all courses toward a PhD in Plant and Soil Science at Texas Tech



Briefly describe your career path from college until today.

In my final semester at the University of Arkansas, I began working for the Natural Resources Conservation Service (NRCS) on a wetlands project. I started my master's degree at Kansas State University but got married and moved to Virginia. I worked at Virginia Tech in small grains breeding. I took some time off from my career when I had children. Following Virginia, I worked for the Samuel Roberts Nobel Foundation in Ardmore, Oklahoma, in legume breeding. We moved to Raleigh, North Carolina, and I taught high school for three years. We moved to Iowa, and I managed the Water Quality Lab in the Agriculture and Biosystems Engineering Department at Iowa State University. I finished my master's degree there, working on antibiotic resistant bacteria from swine systems, and was hired by the Iowa Soybean Association with the Environmental Programs and Services team. When we moved to Lubbock, Texas, I worked for Texas A&M University with AgriLife Research and Extension. Finally, I took a job at Monsanto in Lubbock, where I work as an Agronomic Research Specialist. I get the opportunity to work with cutting-edge technologies and farmers every day. That is not what I wanted my career path to look like. Ideally, I would have found a great company or a great position and put in my 20 or 30 years. But, honestly, it took me a very long time to decide on a career. I've always wanted to be involved in agriculture and the environment, but I've never put limitations on what that looks like. Life takes you places, look for opportunities where you are located.

Describe the best choices you've made along your career path.

I've learned to be agile and unapologetic about my varied experiences. I used to always apologize for my resume, and then someone reminded me no two paths look the same. The other piece I would say is—and this is my mantra—it's all about the farmer. It doesn't matter what I'm doing, whether it's teaching or being a stay-at-home mom, I make sure that the people around me knew where their food, fuel, and fiber come from.

How has SWCS impacted your career or contributed to your continued education and/or professional development?

I started out young with SWCS, when I was an undergraduate. The annual conference was smaller and less intimidating to navigate than other conferences. Farmers and NRCS staff would present, and it was always a great reminder of why I had chosen my path. Not only was it a great source of information in real time, the farmers' perspectives allowed me to see behind the practice and understand why they were implementing it on their farm. The *Conservogram* is a great source of information. Of all the journals that I read, the *Journal of Soil and Water Conservation* is the easiest to navigate. I've had the opportunity to write articles, and I also call on it for research and understanding.

Doug Smith

Research Soil Scientist, USDA-ARS, Grasslands Soil and Water Research Laboratory

Career Sector

Research

Degrees

BS in Animal Science from Texas A&M University–Commerce

MS in Agriculture from Texas A&M University–Commerce

PhD in Soil Science from University of Arkansas



Briefly describe your career path from college until today.

Coming out of high school, I wanted to work with animals and majored in animal science for my bachelor's. My master's project was focused on composting manures and food waste and using the compost as a soil amendment. As I worked on that, I became increasingly interested in soil science and working to minimize the environmental impact of agriculture. I went straight through from my bachelor's to a PhD. My advisor worked for the USDA Agricultural Research Service (USDA-ARS), so I was aware of the great work they do and was very interested in a career in research. I was fortunate that my first job after completing my PhD was in research, when I was hired by USDA-ARS to work on source water (drinking water) protection at the National Soil Erosion Research Laboratory in West Lafayette, Indiana. The Source Water Protection Initiative started because of atrazine contamination in the drinking water source for Fort Wayne, Indiana. One scientist in our research group was focused on the pesticide component, whereas I was really interested in nutrients, particularly phosphorus. This was in 2002, so pesticides were really the main concern in the area. So I sort of dabbled around the edges of that project doing nutrient work, and then in 2010 they really started to get concerned about phosphorus losses from agricultural land in the region. The water that we studied went to Fort Wayne, and then to the Maumee River, which empties into Western Lake Erie, a major drinking water source in addition to being the focus of a more than one billion dollar per year recreation industry. At that time, Lake Erie was dealing with some large algal blooms as a result of an overabundance of phosphorus. I was in a position, having already completed a lot of work on phosphorus in that watershed, that I was able to provide some insights into what was happening up in the watershed. After about 12 years in Indiana, I moved to the Grassland Soil and Water Research Laboratory in Temple, Texas, where I work today.

What's the best advice you've received regarding your career?

My PhD advisor, Philip Moore, told me that your publications are your primary asset for a career in research, and I have found that to be true.

What advice do you have for college students or early career professionals who might want to work in a job similar to the one you have right now?

Publish, publish, publish. Opportunities are certainly out there, but you have to be open to the opportunities as they come along. I think there is an increasing need for GIS as farmers are getting more interested in precision agriculture. We need people with the skillsets to marry all the geospatial information—the massive amounts of data—that are coming in and to make the assessments from that.

Dale Threatt-Taylor

Director, Wake Soil and Water Conservation District

Career Sector

Soil and Water Conservation District

Degrees

Bachelor of Science in Conservation from North Carolina State University

Masters of Environmental Management from Duke University



Briefly describe your career path from college until today.

I received a Bachelor of Science in Conservation from North Carolina State University in 1991, then began my career as a Soil Conservationist with the USDA Natural Resources Conservation Service. I later joined the Wake Soil and Water Conservation District as a Conservation Technician and progressively moved into one of the Natural Resource Conservationist positions. I received a Masters of Environmental Management from Duke University in 2011.

How did you end up in the conservation field?

When I started at NC State, I was going to be a chemical engineer; it pays well. But a botany and zoology class clicked. It put all of the pieces together so that I understood how the environment works. I understood why the soil is important, why clean air is important, and that we humans are a piece of that. All my love of science came out when I took that one class. Once I got a hold of conservation, I haven't let go. I mentor young people and I tell them, "If you're not walking in the direction of whatever your thing is, or if you're going in some direction just because somebody else said, you need to refocus. You need something that you love to get up and go to." For me, conservation has been a wonderful career. As much as I love the science part, it's the collaboration and the partnership with people that's the best part of the job.

What is the number one thing you want people to know about conservation?

Everyone should consider themselves a conservationist—and then act on it. I believe every single person can be a natural resource conservationist on any level, no matter their profession, their family—no matter what! You can just find out what parts of the natural world you love. Do you cycle? Do you farm? Do you eat fresh vegetables and local foods? Do you breathe clean air and drink clean water? All of that has to do with conservation. We are raising the next generation of environmentalists, or at least a generation of children who are aware of their natural environment; for a while, they were only aware of a screen and a digital keyboard. Getting them outdoors and understanding—and loving—this one blue marble that we live on.

Is there anything else you would like to share?

There are so many different possibilities available in the College of Agriculture and Life Sciences (CALs); we don't want people to hear CALs and think "ag and biology," or something like that. Not only is it those two great areas, but so much more. If we could somehow really reconnect healthy food and healthy living to agriculture and life sciences—if we could just make those connections in a positive way — it could open their eyes.

This career profile interview was written by Dee Shore for NC State University's *College of Agriculture and Life Sciences News*. Reprinted with permission.



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