

Advice from Geoscience Professionals

Do you want to explore career options in the geosciences, but don't know where to start? Are you stuck in the middle of a job search and need some guidance? Check out some of these tips from geoscientists! The following are some pieces of advice about starting, pursuing, building and transitioning into a geoscience career. The following provides some basic information of six professionals that we interviewed who wanted to share some of their experiences and advice with students, recent graduates and early-career geoscientists.

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Profile Information

Carrie Suffern, National Weather Service, Sterling, VA

Carrie is a meteorologist at the National Weather Service (NWS) in the Washington DC area, which forecasts for the Baltimore, Washington DC metro area, most of Maryland and Northern Virginia and the eastern West Virginia panhandle. In addition to looking at weather observations coming into the office, she conducts hydrologic forecasts as well as long term and short term forecasts.

Juan Herrera, Schlumberger, Houston, TX.

After having received his PhD in Geology from Purdue University in 2012, Juan went on for a full time position at Schlumberger. Juan's expertise lies in the areas of sequence stratigraphy of siliclastic rocks, fluvial sedimentology, field mapping and geocognition. Juan is part of a geology team at Schlumberger Petrotechnical Services in Houston. His main tasks involve the processing and interpretation of different well log data and borehole images, as well as conducting stratigraphic and structural analysis in single well and multi-well projects. He works in close collaboration with petrophysicists to inform client decisions on exploratory and development wells.

Mike Lawless, Draper Aden Associates, Blacksburg, VA.

As the Vice President of Draper Aden Associates, an Environmental Engineering Consulting Firm in Virginia, Mike works with clients from local, state and federal government organizations, private organizations and folks from industry as well. He specializes in hydrology, environmental assessment and remediation projects, to name a few.

Mike Loudin, ExxonMobil, Houston, TX.

Most recently, Mike was the Geoscience Project Manager for the ExxonMobil Houston Campus Project, which involved development of a brand new facility for most of the ExxonMobil employees in Houston. In 2012, Mike served as a Director for the Society of Exploration Geophysicists Foundation - which is the part of SEG that raises money for and oversees several charitable programs, including many for students.

Vicki McConnell, Geological Society of America, Executive Director, Boulder, CO.

Vicki recently accepted the position as GSA's Executive Director. Previously, Vicki was the State Geologist of Oregon and Director of the Oregon Department of Geology and Mineral Industries (DOGAMI) since 2004, Vicki was responsible for guiding the Geologic Survey and the Mineral Lands Regulation and Reclamation Program, as well as serving as the geoscience advisor to state agencies and the Governor's office.

John Copeland, Two Dogs and a Horse, Inc., Producer/Writer/Director, Santa Ynez, CA.

To gain a different perspective about careers in the geosciences, we interviewed John Copeland, a Television Producer who has worked with geoscientists on a variety of documentaries and dramatic television series and productions. John has created a "think tank" of scientists (several being geoscientists) from CalTech and NASA's JPL on the science fiction television series "Crusade." Additionally, he has relied on geoscientists for advice on how to most accurately represent paleo-environments and other planetary bodies for various productions. John also produced the popular geoscience documentary titled "Faces of Earth," which premiered in 2007 as a TV miniseries.

Advice about Networking

Is networking really that important? How do I build a network if I know few people in my field?

"The word of the 21st Century: Networking ... Attend conferences, career fairs, etc. I started my PhD and my Schlumberger job by approaching recruiters in conferences. Always approach them with honest enthusiasm." - **Juan Herrera, Schlumberger, Houston, TX**

"If students want to get into the environmental or consulting field, I would recommend that they do an internet search to find engineering and consulting firms in their area. And not necessarily look for somebody that is advertising, but just find a contact with each company, send a cover letter and a resume, and then follow up with an email and a phone call. A lot of opportunities don't get advertised. If your resume crosses a desk, and somebody's looking to fill a position, you can get a job without having to wait for something to be advertised ... That's the networking thing: Get your qualifications out to as many people as you can [and] talk to as many people as you can." - **Mike Lawless, Draper Aden Associates, Blacksburg, VA**

"One way students can separate themselves from others is by taking advantage of internship opportunities. Similar to my comment about many job opportunities not being advertised, many private companies offer internships but do not advertise them. We hire 5-10 interns each summer just through word of mouth. So it would be beneficial for students to contact firms during winter break and ask if they hire interns. Most internships are filled by spring. It's a great experience and most are paid positions." - **Mike Lawless, Draper Aden Associates, Blacksburg, VA**

Advice about Learning and Applying Skills

What skills do I need to start a geoscience career? What if I have interests and skills outside of the geosciences - how can I incorporate them?

"At the end of the day, the most important [elements to being extended a job offer are] a combination of your technical skills plus your people skills. Clicking with a recruiter is the most important step to go forward in the interviewing process ... A recruiter friend of mine told me, 'I know with[in] only the first 2 minutes of meeting a candidate if I will call him/her for a second interview.'" - **Juan Herrera, Schlumberger, Houston, TX**

"COMMUNICATION, communication, communication. When you're in undergrad for a technical degree you're sitting there and you're stressing over, 'how am I going to be a better forecaster and what computer language do I have to learn next?' Honestly, at my job I spend most of the day communicating with customers. And it was nerve-wracking at first, learning how to explain technical information to a lay person is really important, and that's something you don't learn in undergrad." - **Carrie Suffern, National Weather Service, Sterling, VA**

"[Communication] is definitely a huge part of my job: maybe 70% of it. And that's important! You can't sit there as a forecaster, or at any job, and sit in your cubicle and not talk to anybody." - **Carrie Suffern, National Weather Service, Sterling, VA**

“Written and verbal communication are important because every project that we do results in a written report. We generally have to present those findings verbally to ... our clients ... Ultimately, your job is to convince people that your findings are correct. So the ability to communicate clearly and concisely is very important. The biggest challenge has been to find people who are good writers.” - **Mike Lawless, Draper Aden Associates, Blacksburg, VA**

“Understanding your audience and being able to communicate the points that you want to make are really, really important. When I interviewed, each person had to give a presentation. When I was offered the job I was told that it was absolutely my presentation that nailed the job for two reasons: first, I understood ahead of time that I was going to have a very broad audience, so I was able to communicate well. Second, I knew what they were looking for at the Survey, so my presentation emphasized the things I knew they were looking for: that I had finished the project on time, and under budget. Know what they want to know.” - **Vicki McConnell, Geological Society of America, Boulder, CO**

“One of the things that I will absolutely tell everyone and all the students, ‘do not graduate in any of the geosciences without being able to say on your application that you have training and skills in GIS systems.’ Absolutely, we don’t hire anyone that cannot work in map info and ESRI products. We send people out into the field and we expect people to be able to do their own mapping.” - **Vicki McConnell, Geological Society of America, Boulder, CO**

“It’s great to identify what [your] dream job would be, and it’s great to pursue it, but don’t pursue it too doggedly so that you don’t see other opportunities out there ... The one thing that everyone should take away from every job they’ve ever had is that you learn something in anything you do: you should be developing some skill set that comes out of that. And you build on that. I learned much of my people management skills from being a bartender!” - **Vicki McConnell, Geological Society of America, Boulder, CO**

Advice about Career Options and Opportunities

Don't know what you want to do? Don't know what options are out there for geoscience careers? The opportunities are endless - literally.

“Don’t get discouraged. Going out when you are an undergrad and getting as much experience as possible in the job you think you want to do is really, really important ... It’s important to figure out what you want to do and what line of work you want to be in. You don’t just want to jump into something and get 15 years down the line and think, ‘Well I wish I would have taken the time to figure out what I want to do.’” - **Carrie Suffern, National Weather Service, Sterling, VA**

“When I graduated with my Master’s, I fully intended on going into the petroleum industry, but it was during one of the downturns when there were no geology jobs in petroleum ... in environmental, there were a lot of career opportunities then ... and that’s one of the exciting things about geology ... the general principles that you learn in undergraduate and graduate school can be applied to a wide variety of career opportunities because the stratigraphy and structural geology that I had learned that would have helped me in the petroleum industry was directly applicable to the environmental industry. Instead of oil flowing through the rock, I was looking for water flowing through the rock.” - **Mike Lawless, Draper Aden Associates, Blacksburg, VA**

“It took me really sitting down and saying to myself, ‘Okay, you know, working as an academician is not the end all of what you can do in a geoscience career. [Think about] what really floats your boat, about the interest that you have [in] what you’ve been doing to get your training, and then follow that! Follow your interest in your heart and don’t worry too much about how it looks to anyone else.” - **Vicki McConnell, Geological Society of America, Boulder, CO**

“Be totally up front about what you’re looking for... Be up front, say ... this is something I’m interested in, what would you suggest [which] road that I follow? ... That’s a better way to approach it ... Do it hat in hand, and kind of humbly.” - **John Copeland, Two Dogs and a Horse, Inc., Film Production, Santa Ynez, CA**

“Something an earth science student could look at getting into [is] computer animation, as well as filmmaking. [These] are things that can help them visualize and tell a story of their area of science.” - **John Copeland, Two Dogs and a Horse, Inc., Film Production, Santa Ynez, CA**

“There are three really important things: [First] be really good at the science. It’s really hard to go anywhere if you don’t have that ... [Second] facility in the English Language ... you have to focus on being really good at communicating in English. The English Language is the “lingua franca” of both science and of business ... [Third], what we’ll be looking for, at least at ExxonMobil, is a cultural fit ... The primary cultural piece is the willingness and ability to challenge the scientific status quo.” - **Mike Loudin, ExxonMobil, Houston, TX**

“[I would tell] new graduates, ‘each and every one of us has got a lot left to learn!’ Always stay open to it ... learning new things about your science. Certainly, scientific orthodoxy today is a lot different than when I graduated ... It’s also learning about yourself. What are some of the gifts you have that you didn’t know about, and what are some of the things you thought you knew about but didn’t know enough about.” - **Mike Loudin, ExxonMobil, Houston, TX**

One piece of advice for a young professional: “Commit to learning new things every day... always keep an open mind...and keep on questioning what it is you’ve already learned. Never be satisfied with what you know, because things will change.” - **Mike Loudin, ExxonMobil, Houston, TX**

Do you have advice for us to share?

Experts: Do you have any other advice you'd like to share with students, recent graduates or new hires?

Early Career Geoscientists: Do you have any experiences or advice to share with your peers? Let us know!

Email AGI's Workforce staff at workforce@americangeosciences.org.
