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# Work, School, and Training in the Environmental Health Field: A Lifelong Relationship

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**Editor's Note:** In an effort to provide environmental health professionals with relevant information and tools to further the profession, their careers, and themselves, NEHA has teamed up with the American Academy of Sanitarians (AAS) to publish two columns a year in the *Journal*. AAS is an organization that “elevates the standards, improves the practice, advances the professional proficiency, and promotes the highest levels of ethical conduct among professional sanitarians in every field of environmental health.” Membership with AAS is based upon meeting certain high standards and criteria, and AAS members represent a prestigious list of environmental health professionals from across the country.

Through the column, information from different AAS members who are subject matter experts with knowledge and experience in a multitude of environmental health topics will be presented to the *Journal's* readership. This column strengthens the ties between both associations in the shared purposes of furthering and enhancing the environmental health profession.

Jennifer Dobson is the environmental health services manager at the Yukon-Kuskokwim Health Corporation in Bethel, Alaska. She became a diplomate of AAS in 2019. Jill Shugart is a senior environmental health specialist and program coordinator for the Emergency Responder Health Monitoring and Surveillance Program at the Centers for Disease Control and Prevention/National Institute for Occupational Safety and Health in Atlanta, Georgia. She became a diplomate of AAS in 2019. Katie Bante is an environmental health officer currently transitioning from the U.S. Coast Guard to the U.S. Department of Health and Human Services in Washington, DC. She recently applied to become a diplomate of AAS.

## Introduction

Whether responding to foodborne outbreaks, conducting high risk facility inspections, or providing technical assistance to municipal water supplies, envi-

ronmental health (EH) professionals must be ready to protect public health with the appropriate knowledge and skills. The term “jack of all trades” underscores the career of a true EH professional, with field skills

spanning across subject matter specialties. The EH profession is often divided into subdisciplines such as industrial hygiene, food safety, vector control, and radiological health. What do these disciplines have in common? They share a solid foundation in hard sciences and require technical skills usually learned by conducting specialized work experience by way of internships or shadowing opportunities.

As the field of EH constantly evolves, practitioners are required to address topics of greater complexity (Centers for Disease Control and Prevention [CDC], 2003; Harrison & Coussens, 2007; National Environmental Health Association, 2013). Emerging topics, such as impacts of climate resilience or occupational health and safety for developing technologies, were not well recognized within the profession until recently (National Institute of Environmental Health Sciences, n.d.). Practitioners entering the field now are required to have even more diverse knowledge and skills than ever before.

You might find yourself wondering what education and skills are required to be a modern day EH professional. Much like the definition of EH, the answer is surprisingly complex. Most EH professionals working at health departments hold a bachelor's degree, but are likely to be in a field other than EH, and much of the workforce functions in the role of a generalist spanning multiple subject areas (Gerding et al., 2019). Within the environmental health officer category of the U.S. Public Health Service (USPHS), there has been a shift among applicants in recent years. For example, the number of individuals coming in to USPHS with traditional

EH undergraduate degrees is steadily being replaced with master's and doctoral degrees. Even among those with graduate degrees, the need for practical field skills within the many diverse subdisciplines exists. These findings reinforce the need for development and training among EH professionals in all sectors (CDC, 2003; Gerding et al., 2019).

The gold standard of full-time students pursuing education at a brick-and-mortar school is changing; traditional students are now vastly outnumbered by working learners (Carnevale, Smith, Melton, & Price, 2015). Today's working learners are more likely to be mature students (30 years or older) and many work in jobs related to their studies (Carnevale et al., 2015). Numerous advanced training and graduate programs have developed options that cater to working professionals, from part-time course work to distance delivery and independent study opportunities. These changing trends might be of benefit to working EH professionals.

At some point in your career, you may find yourself contemplating the need for advanced training or wondering how to integrate graduate school with full-time work. How does one work and dedicate substantial time to studies? How does one simultaneously practice and study our profession? We are here to assure you that it can be done. Here are our stories of working professionals' pursuits of training and education.



**Jill M. Shugart**

I was very fortunate to learn about the EH field early on. I toured Ohio University's EH department and Dr. Franklin Carver showed me a video of what you can

do with an EH degree. Getting to learn about the environment and help people at the same time? I was immediately sold. I had no idea where this degree was going to take me or how many twists and turns it would hold but I knew it was for me.

I completed a Commissioned Officer Student Training and Extern Program (COSTEP) assignment with the Indian Health Service (IHS) and learned how to apply what I learned in the classroom to the field. The experience, however, showed me

how much I still didn't know. I found myself going back to school. I thought, "That's it, I'll take more classes in EH." I learned more about EH but it was not even close to being enough. Having used the Centers for Disease Control and Prevention's website and resources as one of my mainstays in graduate school, I thought it would be a great idea to try to work there and really learn EH. While fulfilling a fellowship at the National Center for Environmental Health, I received some of the best advice of my career. The message from my esteemed colleagues was clear, "You've got this cushy job in Atlanta but you are not practicing EH. You need to get in the field."

I drove my car across I-40 West and had fleeting moments of doubt. I wondered if my brilliant trailblazing EH mentors had led me astray. When I arrived on the Hopi Indian Reservation, the oldest continuously occupied settlement in North America, to fill the sanitarian position that had been vacant for more than 4 months, the staff greeted me quite cheerily and said, "Thank goodness you are here, we have been waiting for you." I had arrived.

This assignment would prove to be one of the most instrumental jobs of my life and helped me grow tremendously as an EH professional. It helped shape my career track as a generalist and aid in my love of learning. As a result, I have been able to tackle EH problems or the bug du jour (as I like to call it) across the U.S. and even overseas. Never did I think I would conduct ship sanitation and construction inspections or be able to write health and safety guidance or provide recommendations to protect emergency responders before, during, and after a response. Taking challenging assignments, setting aside time for training courses, shadowing subject matter experts to close knowledge gaps, conducting outbreak investigations and field deployments, and obtaining multiple credentials have allowed me to find my passion in this field.

I challenge, however, that even if you have the combined technical field expertise and necessary knowledge to be the best EH practitioner you can be, it is still not enough. What are you doing with all of your knowledge and experience? Are you a mentor? Are you sharing your subject matter expertise with your peers and colleagues? Are you sponsoring interns and fellows and providing shadow-

ing opportunities? I hope so because we need EH leaders. We need you! This need has been well documented (CDC, 2003; Gerding et al., 2019) but it cannot be overstated. We all have what we need to succeed but how much more can we do by getting that small steady prod of encouragement? Someone to tell you to "keep grabbing the brass ring" as one of my mentors told me. How are you making sure that you and those that will come after you are ready for that next EH challenge?



**Katie L. Bante**

Like so many others, I sort of fell into EH. Through an undergraduate introductory class, I learned about all the subdisciplines of EH. It was the variety of work

that piqued my interest. I was also studying behavior change and how we might better adapt EH work to connect the human component with the science. I double majored in health education and promotion and EH to bridge these two bodies of knowledge.

Early in my career I leaned heavily on my health promotion expertise and it served me well in opportunities to contribute to EH interventions. Through an internship and two assignments with IHS, I gained valuable field experience in EH. In particular, I increased my technical skills in drinking water, occupational health, children's EH, vector/pest control, and emergency management. Gaining this experience came in part from the agencies and geographic regions I served, which were areas of greatest need when I was in those positions.

The other part of gaining experience came from seeking additional opportunities to expand my skills. Attending advanced training was helpful. It was also useful to be well connected with colleagues to collaborate on solutions to address some of the more challenging issues. For example, bed bugs in rural Alaska had become a widespread problem that many tribal EH programs were working to address. I partnered with colleagues from another agency to receive funding for a pilot project. Because we were the project leads, we became the subject matter experts in this area. This project provided the chance to learn even more about the topic through exposure

to international experts and allowed us to present our work at national and statewide conferences. Accepting a leadership position on a project can be a great way to enhance your technical expertise.

I completed my Master of Public Health (MPH) 10 years after I completed my undergraduate degrees. This approach was the best for me as it gave me time to develop my professional acumen before pursuing graduate-level study. I focused my MPH in disaster management. Unexpectedly through my coursework, however, I developed an interest in industrial hygiene. Having no prior experience in industrial hygiene, I knew the only way I could garner those skills would be to seek an industrial hygiene-centric position. Fortunately, that interest lined up with a U.S. Coast Guard vacancy. I opted to complete a graduate certificate in industrial hygiene to round out my educational background in preparation for this position. Like before, I had the chance to work as a project lead but this time I worked on an industrial hygiene project. This experience provided many occasions for me to learn and practice industrial hygiene in the field.

My education is ongoing. Attending training or taking classes is not the culmination of acquiring expertise. Even hands-on training is limited to the constraints of the classroom or scenario. Applying skills in the field is a necessary component to grow as an EH practitioner but it need not be limited to early on in your career. Seek occasions to be a subject matter expert. Take advantage of openings that are outside of your comfort zone and tailor your educational pursuits accordingly.



**Jennifer Dobson**

After developing an early interest in ecology, my true introduction to the EH field began during my undergraduate studies. Years later, I still recall my excitement

after attending formative water and wastewater lectures. Although grateful that I had found my academic passion, I was always quite the pragmatist and became consumed with answering the question, “What kind of job/career is this degree preparing me for?” In an effort to answer that question, I took

it upon myself to complete four internships. This opportunity allowed me to work up close and personal in diverse subdisciplines such as vector control, food safety, occupational health, and institutional health. I relied strongly on the process of elimination and eventually found my professional calling after completing a COSTEP assignment within IHS. The opportunity provided everything I could have hoped for—community-based field work with underserved populations. Check!

After graduation, I entered the full-time workforce as an EH professional within the tribal health system in Alaska. I was working as a true generalist with a focus on water and sanitation in one of the most remote regions in the country. I loved the breadth of requests for services that we received, from water sampling and safety surveys to infectious disease investigations. In order to get up-to-speed as a new professional, I benefited from both on-the-job and specific skill-based trainings.

I began my graduate education (via distance) 3 years later. Looking back, it’s hard to say exactly why I began graduate school at that very moment. At first, it didn’t even translate directly to the work I was doing at that time. Rather, I wanted to learn. As I continued working, changed positions, and received additional skills training, I slowly plodded ahead with course work each semester. I found more and more opportunities to integrate work and school, and I still use some of the outputs today. Despite taking far too long (in my own opinion) to complete my practicum, I earned an MPH after 5 years. After developing an interest in global health initiatives, I completed a global health graduate certificate. The vast majority of my time within the profession has been spent juggling work and school. I fully expect to be a lifelong learner.

A few of my hard earned lessons are as follows.

- Identify opportunities that fit your needs, schedule, and interests. The world of graduate education is now more accessible than ever to EH working learners.
- Find ways to merge the worlds of training and work. I’ve often been advised to try to adapt class topics to make them applicable to work. Better yet, my advice is to bring your work into the classroom.

Find a real-world data set to analyze for a class or an actual research question from your position.

- Take it slow, if needed. Remember the adage about the tortoise winning the race.
- Actively seek mentoring. Mentors have played a profound role in my life and career. Put simply, go find someone that does what you want to do and find out how they got there. I like to call this guerrilla mentoring. I cannot think of a more highly esteemed organization in which to seek mentoring than within the American Academy of Sanitarians, an organization in which I am a proud new diplomate.

**In Closing**

There is always going to be an environment in which we live in and there will always be people we can help. That is the beauty of EH. Sometimes you get to pick what area of EH you get to work in and sometimes it picks you. No matter if you are working at the local, state, tribal, territorial, or federal levels, or in the private sector, it is critical to build the knowledge and skills to excel at the EH work you are doing and to share your passion and successes with others. So, what about you? How are you doing EH? We invite you to share your stories, tips, and training resources to show how you do EH. 🐢

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## DAVIS CALVIN WAGNER SANITARIAN AWARD



**The American Academy of Sanitarians (AAS) announces the annual Davis Calvin Wagner Sanitarian Award. The award will be presented by AAS during the National Environmental Health Association's (NEHA) 2020 Annual Educational Conference & Exhibition. The award consists of an individual plaque and a perpetual plaque that is displayed in NEHA's office lobby.**

Nominations for this award are open to all AAS diplomates who:

1. Exhibit resourcefulness and dedication in promoting the improvement of the public's health through the application of environmental and public health practices.
2. Demonstrate professionalism, administrative and technical skills, and competence in applying such skills to raise the level of environmental health.
3. Continue to improve through involvement in continuing education type programs to keep abreast of new developments in environmental and public health.
4. Are of such excellence to merit AAS recognition.

**NOMINATIONS MUST BE RECEIVED BY APRIL 15, 2020.**

**Nomination packages should be e-mailed to**

**Gary P. Noonan at [gnoonan@charter.net](mailto:gnoonan@charter.net).**

**Files should be in Word or PDF format.**

**For more information** about the award nomination, eligibility, and the evaluation process, as well as previous recipients of the award, please visit [sanitarians.org/awards](https://www.sanitarians.org/awards).