

Keeping People and the Environment Safe



TREVOR CORNISH

Helping people work safely and protecting the environment is at the heart of what Trevor Cornish does all day. While pursuing a degree in environmental resources engineering, Trevor took advantage of several summer internships offered through his degree program.

It was during these internships that Trevor learned about environmental health and safety (EHS), a specialized field that ensures chemical and engineering companies are following federal, state, and local regulations. He says the critical thinking skills he developed in chemistry courses are vital to his day-to-day work. —*Raye Wiegel*

TREVOR CORNISH

B.S.: Environmental Resources Engineering, SUNY-College of Environmental Science and Forestry (ESF)

M.S.: Environmental Health and Safety Management, Rochester Institute of Technology (RIT)

WHAT HE DOES NOW: Staff environmental engineer at Arcadis, a design, engineering, and consulting firm, and adjunct professor at RIT

This interview was edited for length and clarity.

Can you tell us a bit about what you do in general?

I'm an environmental engineer and associate project manager with Arcadis. I do EHS compliance, so it's all about helping our clients comply with the U.S. Environmental Protection Agency (EPA), the Occupational Health and Safety Administration, and state-level regulations to protect the environment and provide a safe and healthy working environment.

Additionally, I help clients with EHS auditing and management systems to manage these important issues.

How does chemistry play a role in what you do?

It's the most basic things about chemistry that play into what I do. At a high level, chemistry teaches you critical thinking skills: How to think, how to simplify things to the most basic concepts, and solve a problem based on a few principles that you really understand. While I don't draw Lewis Dot diagrams or balance chemical reactions daily, it's the basics that I still rely on every day: Unit conversions and dimensional analysis.

It's so important to be able to understand data—to interpret it and find its meaning—and apply what was learned from the data to a

complex problem to promote good decision making. Regulations are complex, and critical thinking is a key tool to identify which parts of a regulation applies and how. Chemistry classes train you for this kind of thinking.

Do you have any words of wisdom, or anything that you would like to share with high school students who might be interested in taking the track you did.

One of the biggest things that high school students should do is focus on a few different principles or concepts or tools, and once you truly understand them, you'll be amazed at how much you can extrapolate from there. Take advantage of every special opportunity, such as internships, to learn more than what's offered in traditional classroom settings.

Can you tell us about a project that impacted you?

Usually, clients come to us with a problem that they can't solve. We work with them, we ask them questions, we do some research, and usually we go to their site and make observations. Then, we think like a scientist or engineer and present them with some solutions.

One specific case, in the Buffalo, New York, area, involved a client who approached us with some significant EHS compliance issues. They really hadn't had strong management in that

area for quite a while. Their program was in poor order; they didn't know what they didn't know.

We started with an environmental audit to look at their compliance with regulations and we got all the findings on the table, and over the next year, we worked with them to disclose the compliance issues to the governing agencies. Then, we worked with the client and their attorneys to get corrective actions in place; we helped them build processes to manage their compliance obligations.

Did you always know that you wanted to do what you're doing today, or was it gradual?

It was a gradual thing. I'm in the minority of what ESF graduates do. I think most people do site remediation-type work, or more design-based work for water and wastewater treatment systems. For me though, EHS work was a perfect fit; I like managing processes and developing systems.

What are the impacts that this has on people?

Working people in America want to go home at the end of their workday in the same or better condition than when they arrived to work that day. Having no negative environmental impact is also important to them. These are reasonable expectations, so what we're doing is making sure that management knows how to make them happen.