



Brittany Huhmann

Bringing Science to the Senate (and other government bodies)

In mid-July, I walked into Senator Chuck Grassley's (R-Iowa) Washington, D.C. office, shook hands with him and his staffer, and sat down with them to talk about the problem of arsenic in Iowa's groundwater. A few months earlier, I had completed a master's degree at the University of Iowa, where I studied the chemistry of how arsenic moves in the environment. During the course of my research, I became aware that 8 percent of private wells recently tested in Iowa had arsenic concentrations high enough to endanger the health of the families who owned them. As I described this to Senator Grassley, he listened carefully to what I had to say and asked clarifying questions about the source of the arsenic contamination and the state's efforts to address the problem. In the midst of preparing a manuscript based on my research, I valued the opportunity to talk with him and other Capitol Hill decision-makers about this issue and its impacts on the health of rural Iowans.

This opportunity arose as part of a summer Geoscience Policy Internship with the American Geosciences Institute. Throughout three months of attending hearings and coalition meetings, preparing fact sheets for members of Congress, and talking with scientists and policy-makers about their work, I developed an understanding of how my research, and science more generally, can interact with the policy world.

A central part of my internship involved attending hearings in

the House and Senate and reporting on them for the geoscience community. During many of the hearings, I was frustrated to observe members of Congress who seemed to be more focused on providing sound bites than in building constructive dialogue and learning from the panel of experts called to testify. At other times, however, I was heartened to observe members engage with each other and the panelists in a spirit of cooperation. For example, I attended a Senate hearing on The Nuclear Waste Administration Act of 2013, at which Energy Secretary and MIT professor emeritus Ernest Moniz was asked to testify. The Act is a bipartisan bill designed to move the nation past the current gridlock on nuclear waste disposal, and members of both parties asked Moniz thoughtful questions about the science and policy of nuclear waste and the bill's expected impacts.

The internship also provided opportunities for me to talk with and learn from other individuals working at the science-policy interface. I heard from EPA employees about the joys and frustrations of shaping environmental policy, chatted with U.S. Geological Survey scientists about their roles in responding to natural disasters, and discussed with Bill Bonvillian his work as director of the MIT Washington Office. Through these and other conversations, I broadened my knowledge of the career options that might be available to me in science policy after completing my PhD.

An interest in science policy is a natural fit for my research focus on environmental contaminants, an area I've chosen to work in because of its ties to environmental decision-making and public health. In the past, I have investigated toxic element release during the disposal of coal ash from power plants, and radionuclide contamination at the Hanford Site, a decommissioned nuclear production complex in the state of Washington. Both projects have clear policy tie-ins, as the EPA decides whether to classify coal ash as hazardous waste, and federal policy-makers continue to debate how to deal with our nation's nuclear legacy.

This fall, I begin my first semester as a PhD student in MIT's Civil and Environmental Engineering Department, where I will build on my master's research on arsenic in the environment, under the mentorship of Professor Charles Harvey. I'm excited to complement my prior work on arsenic geochemistry with a deeper understanding of hydrogeology, and I'm looking forward to my first visit to the project's field site in Bangladesh. My summer in D.C. has laid the foundation for me to continue to engage with the policy implications of this work, and I look forward to building additional policy experience through MIT's Graduate Certificate Program in Science, Technology and Policy.

I plan to stay connected with the D.C. policy community as a graduate student, and I'm already planning my first trip back to Washington. Shortly after classes start this fall, I'll head to the Hill with researchers from across the United States in the annual Geoscience Congressional Visits Day, where we will talk with our congressional representatives about the national value of our scientific research.

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