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Why am I passionate about clean water? The 3-3-3 rule: humans can live three minutes without air, three days without water, and three weeks without food. Seriously, water is life. For instance, proper sanitation and clean water can reduce child mortality by up to 50% and increase life expectancy by 20-30 years. Environmental engineers made this possible, quietly preserving our water and protecting millions of lives each year. The next challenge is remediating waters impacted by irresponsible human practices. Becoming a remediation engineer will allow me to apply my love of math and science to protect the health of our water and planet.

My passion for the environment began on the North Shore of Lake Superior, where I spent every summer growing up. Each year, I was saddened to see that ever-stronger winter storms caused by climate change were eroding the shoreline, turning the water rusty red for much of the summer. As my environmental awareness grew, I became fascinated by the PFAS contamination issues near my home in Minneapolis and alarmed to learn how widespread they were. Overwhelmed by others' lack of concern for water safety and the health risks of PFAS, I began to wonder how I could help — leading me to environmental engineering.

Inspired by my coursework and personal experiences, I sought to contribute to protecting and restoring our waters from PFAS contamination. I was awarded an REU and worked as an Undergraduate Research Assistant investigating various applications of HALT, a destructive technology for PFAS remediation. While disseminating my research at a conference, I noticed the lack of public knowledge about PFAS, the panic felt by operators facing regulatory limits, and the resistance to innovation in the consulting space. Yet, when I explained my work in layman’s terms, people were eager to learn and improve their approaches. I realized that the biggest obstacle to protecting humans from water pollution by trace contaminants is effective scientific communication.

After earning my B.S. in Environmental Engineering, I will pursue a Master’s in Environmental and Water Engineering at Mines. I hope to use my graduate degree to make a larger impact as a remediation engineer, leveraging my research background to bridge communication gaps between scientists, engineers, and stakeholders. This disconnect often hinders engineering efforts, wasting precious time and resources. In remediation applications, these assets come at a premium, and mismanagement puts lives and ecosystems at risk. Every drop of water and every human life matters, and I am eager to take on the responsibility of protecting them both.

I envision a future where site remediation engineers play a pivotal role in global water security, transforming contaminated environments into safe, thriving ecosystems. By driving sustainable remediation solutions and leading collaboration efforts with dedication and resilience, I hope to accelerate the adoption of innovative technologies and best practices. This collective effort can ensure clean water access for all and help mitigate the long-term impacts of contamination. Every body of water, from the shores of Lake Superior to local community reservoirs, is worth protecting.