



Sustainability

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UNH Student Expands Impact of Program in the Community

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If you had asked me three years ago what I thought I would be doing today, my answer would've been very different than what I'm actually doing. I was a first-year graduate student in the Physics PhD program at UNH. It was during this first year of grad school that I realized that while I enjoyed learning about physics and space, it was not what I was *passionate* about. The truth is, at that point, I really didn't know what exactly I was passionate about—so I started doing some exploring.

I found a Sustainable Engineering course that was offered through UNH in the summer of 2019 and decided to give it a try. It was even better than I could've ever imagined! I was hooked! After finishing this course,

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I decided to change to the master's program in physics (which I will be finishing up this semester) and focus on getting some more experience in the field of sustainability.

I was so excited when I found out about the Summer Sustainability Fellowship program and had the hardest time deciding which projects to apply for because every single one sounded like it was everything I wanted to do. The project that I ended up doing turned out to be absolutely perfect for my strengths and interests! During the summer of 2020, I worked with the UNH Sustainability Institute — specifically with the SIMAP team and was mentored by Jenn Andrews and Alley Leach. SIMAP is an online tool, created and run by UNH, that colleges and universities can use to track their carbon and nitrogen footprints. Most accounting tools only focus on the direct greenhouse gas emissions associated with the combustion phase of energy production, but these emissions are only a piece of the total lifetime emissions of our energy sources. My project focused on analyzing the upstream (or indirect) emissions from fuel oil and natural gas, with the goal of calculating emission factors that could be used in SIMAP. By understanding and measuring these previously overlooked emissions, we can make more informed decisions about how to reduce our carbon and nitrogen footprints most effectively and be able to truly get to net zero emissions.

I can honestly say that my summer fellowship with the Sustainability Institute was life changing. Throughout the summer I was constantly learning new things about the field, about myself, and about the countless opportunities available to positively impact my community and beyond. Even though everything was virtual, I was able to connect with so many amazing and inspiring people — fellows, mentors, and alumni. Everyone was so willing to help each other, and I know that the connections I made over this past summer will last a lifetime. Throughout the fellowship, we were encouraged to think about the bigger picture, and I gained totally new perspectives about social justice and how to tie it into our sustainability solutions.

My summer fellowship also opened two exciting new doors for me.

During this fall semester, I have another Sustainability Fellowship, working with the town of Durham to conduct a community-wide greenhouse gas inventory. While this may be the first GHG inventory that I have personally worked on, I've reconnected with some of the other fellows who worked on inventories over the summer, and their reports and advice have been extremely helpful! Throughout this fellowship I have been able to see first-hand how a community works towards their sustainability goals, and I am loving every minute of it!

I am also starting a PhD program in the Natural Resources and Environmental Sciences Department at UNH in the spring. I will be working with Dovev Levine and the New England Municipal Sustainability (NEMS) Network helping smaller New England towns with their sustainability initiatives. While I haven't figured out the exact details of my project yet, I know that I will be incorporating the experiences and perspectives that I've gained throughout these two fellowships to help make sustainable changes in these communities!

Emily is part of UNH's Changemaker Collaborative programming through her participation in the summer 2020 Sustainability Fellowship. We're excited to see her pilot the first-ever academic semester Sustainability Fellowship position; something we hope to continue in the future!

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