

Asia L. Downtin

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I am currently a doctoral candidate in the University of Delaware's Department of Geography, where I am a member of the Ecohydrology Group led by Professor Delphis Levia. My dissertation research investigates the role urban trees play in cycling water and solutes through remnant forest fragments in metropolitan areas. Based in the greater Wilmington, Delaware region, my work specifically investigates how the physical characteristics (i.e., shape, size, structure) of these fragments help determine how precipitation, nutrients, and pollutants are both captured by and distributed within urban wooded ecosystems. My current work is motivated by a desire to better understand how trees can be used more effectively to regulate water quantity and quality (i.e., mitigate risks for flash flooding) in expanding metropolitan areas. In addition to the research I am currently conducting, my broader research interests include regional hydroclimate, regional water resource management, and societal effects of variability in water availability. Upon earning my PhD, it is my goal to obtain a tenure track position in Geography or a closely related field. When I'm not wrapped up in the research, I truly enjoy exploring places near and far through adventures out in nature (i.e., hiking and canoe trips), trips to local farmers markets, and the occasional spontaneous weekend road trip.