NSPIRE

Rebecca Martin





BS Biology (Arizona State University)
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The NSPIRE IGERT Program is a multidisciplinary student doctoral training program designed to create a new generation of scientists with broad and rigorous training in nitrogen cycling who seamlessly integrate nitrogen cycle science for effective communication with public policy makers.

Research title: Nitrogen transport from land to surface water and the bioavailability of dissolved organic nitrogen

Rebecca is interested in studying nitrogen transport from land to surface water, with particular focus on organic nitrogen. Organic nitrogen can comprise a large fraction of total dissolved nitrogen in surface water, but the potential for dissolved organic nitrogen to be available to aquatic organisms and contribute to eutrophication in streams, rivers, and coastal ecosystems is not well known. Transformations of organic nitrogen along terrestrial flow paths may alter its bioavailability, so hydrology likely plays an important role in the delivery of bioavailable organic nitrogen to surface water. Specifically, Rebecca is hoping to study the transport of dissolved organic nitrogen from agricultural fields to surface water. This research will improve our understanding of the timing and mechanisms of the delivery of biologically reactive nitrogen to surface water from non-point sources.

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