

## **New insights about the influence of reactive nitrogen deposition on ecosystem processes**

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The family of NADP and CASTNET monitoring networks are the foundation for our understanding of atmospheric wet and dry nitrogen (N) deposition to landscapes. As such, empirical deposition measurements from these networks are commonly used in watershed N budget models and ecosystem studies. However, isotopic, remote sensing, and modeling studies indicate a more spatially heterogeneous pattern of reactive N deposition than is currently captured by these networks. In this presentation, we document variable rates of atmospheric deposition of reactive N across spatial scales using several approaches. We then examine the potential implications of such deposition patterns on ecosystem processes using examples from near-road environments, agricultural systems, and forested watersheds.